Details of Major Publications

S.No.	Title of Paper	Author(s)	Journal/Conference Name	ISSN/ISBN	Indexing (Scopus, WoS, UGC-CARE, etc.)	Year
1	Influence of Indian Entertainment Content on Global Cultural Perceptions	Mr. Vighnesh Shaji	Worldwide International Interdisciplinary Research Journal	2454-7905	PEER REVIEWED	2025
2	Automation and its Impact on wage Inequality	Sonali Jha	India's Global Evaluation : Transforming Culture, Education, Arts, Trade , Technology , Innovation ans Sustainability	2454-7905	PEER REVIEWED	2024
3	A Study on Global Learning Platforms	Asst. Prof. Sanobar Shaikh	worldwide international inter disciplinary research journal	2454-7905	PEER REVIEWED	2024
4	Role of AI in Accounting and Finance	Asst. Prof. Sanobar Shaikh	IJAIR	ISSN-2394-7780	ugc care	2024
5	Trade Agreements and & Its Impact	Asst. Prof Vinita. P. Kathe	India's Global Evolution: Transforming Culture, Education, Arts, Trade, Technology, Innovation and Sustainability	ISSN-2454-7905	PEER REVIEWED	2024
6	A STUDY ON ROLE OF INDIA'S SOFT POWER DIPLOMACY IN EASTERN EUROPE IN 21ST CENTURY	VIJENDRA GUPTA	Worldwide International Inter Disciplinary Research Journal	ISSN-2454-7905	PEER REVIEWED	24-25
7	Ease of doing business in India	Asst.Prof. Kiran Gupta	worldwide international inter disciplinary research journal	2454-7905	ugc care	2025
8	Harnessing AI for Customer Support Excellence in Marketing	Asst.Prof. Kiran Gupta	IJAIR	2394-7780	ugc care	2025
9	Achieving Sustainability Goals through ESG Bond Markets: A Case Study on Indian companies w.r.t ReNew Power, IRFC, HDFC Ltd., and Tata Power in India	Ifa Khan	Worldwide International Interdisciplinary Research Journal	ISSN – 2454 - 7905	UGC-Care	2024-25
10	Social Responsibility Initiative	Dharmishta Mistry	Worldwide International Interdisciplinary Research Journal	2454-7905		2025
11	Innovation Hubs in India: Catalysts for Economic Growth and Technological Advancement	Ms. Apeksha Chitari	Worldwide International Interdisciplinary Research Journal	ISSN-2454-7905		2025
12	"India's Path to Sustainable Urbanization: Innovations and Challenges in Creating Smart Cities"	Aanchal Suresh Jain	Worldwide International Inter Disciplinary Research Journal (A Peer Reviewed Referred)	ISSN – 2454 - 7905	A Peer Reviewed	2025
13	Integrateing Artificial intelligence ans Systematic approaches for Sustainable E-Waste Management in educational Institutions	Aarti Anand Patkar	World wide internatioanl inter deciplinary Research Journal Vol. 1	ISSN-2454-7905	Peer Reviewed	2024
14	Cybercrime and Justice The evolving role of cyber law in India	Poonam Kunal Parmar	World wide internatioanl inter deciplinary Research Journal Vol. 1	ISSN-2454-7905	Peer Reviewed	2024
15	Secure Me: Women's Safety Using AI and IOT	Shivani Samar Bahadur Maurya	World wide internatioanl inter deciplinary Research Journal Vol. 2	ISSN-2454-7905	Peer Reviewed	2024
16	EternaHerb Hair Oil : A Comprehensive analysis of its Natural ingredients for hair Strenthening	Jermin Shaikh	World wide internatioanl inter deciplinary Research Journal Vol. 3	ISSN-2454-7905	Peer Reviewed	2024
17	Herbal Harmony: A Comprehensive analysis of its Natural ingredients for Healthier Tomorrow	Madhura Patade	World wide internatioanl inter deciplinary Research Journal Vol. 4	ISSN-2454-7905	Peer Reviewed	2024
18	Enhancing Medical Data security and Analyticsas woth Blockchain and Big Data Intergration	Rab Nawaz	World wide internatioanl inter deciplinary Research Journal Vol. 5	ISSN-2454-7905	Peer Reviewed	2024
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21	"From Jingle to Playlist: The Influence of Music on Brand Recognition and Loyalty	Shavy Shrivastava	World wide internatioanl inter deciplinary Research Journal Vol. 7	ISSN-2454-7907	Peer Reviewed	2024
22	Indian Dance Forms on the Word Stage	Mrudula Songire	World wide internatioanl inter deciplinary Research Journal Vol. 8	ISSN-2454-7908	Peer Reviewed	2024
23	Job satisfaction Among College Librarians: A Gender Based analysis in Unaided Colleges Affiliated to Mumbai and Thane District	Kavita Salve	World wide internatioanl inter deciplinary Research Journal Vol. 9	ISSN-2454-7909	Peer Reviewed	2024
24	A study of Internet Marketing: An Effective Tool for Sales Promotion in India."	Dr. Seema S. Waghela	World wide internatioanl inter deciplinary Research Journal Vol. 10	ISSN-2454-7910	Peer Reviewed	2025
25	A Study of Adoption of Artificial Intelligence in Small, and Medium -sized enterprises: Challenges and Opportunities"	Dr. Seema S. Waghela	Printing Area: Interdisciplinary Multilingual Referred Journal	ISSN- 2394 5303	Peer Reviewed	2025
26	Pradhan Mantri Kaushal Vikas Yojana: An Overview	Afreen Moazzam Ali Siddiqui	World wide internatioanl inter deciplinary Research Journal Vol. 9	ISSN-2454-7909	Peer Reviewed	2024
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पुस्तकांसाठी ISBN नंबर उपलब्ध.

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ISSN 2454-7905
9 772454 790004

Worldwide International Inter Disciplinary Research Journal (A Peer Reviewed) Vol. I ISSUE - CXI Year - 10, 09 Jan. 2025

ISSN : 2454-7905
MAH/NAN/10936/2015
SJIF 2025 - Impact Factor : 8.542

Worldwide International Inter Disciplinary Research Journal

(A Peer Reviewed)

Vol. I ISSUE - CXI Year - 10, 09 Jan. 2025

Special Issue

India's Global Evolution : Transforming Culture, Education, Arts, Trade, Technology, Innovation and Sustainability

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Quarterly Research Journal

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Influence of Indian Entertainment Content on Global Cultural Perceptions

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Abstract:

This research examines the evolving influence of Indian entertainment content on global cultural perceptions, focusing on its transformative impact in shaping international audiences' understanding of Indian society and culture.

The study analyzes three key dimensions: Bollywood's role in crafting cultural narratives, the emergence of digital streaming platforms, and the growing accessibility of regional content. Through analysis of recent literature and case studies, the research demonstrates how Indian entertainment has transcended geographical boundaries to foster cross-cultural dialogue and challenge prevailing stereotypes. The paper highlights how streaming services have democratized access to diverse Indian content, enabling authentic representations of Indian culture to reach global audiences. Special attention is paid to Bollywood's dual role in both reflecting and shaping societal norms, particularly in its portrayal of nationalism, gender, and social issues. The findings suggest that Indian entertainment content serves as a powerful medium for cultural exchange, contributing to a more nuanced and comprehensive understanding of India's cultural identity in the global context. This study contributes to the broader discourse on cultural globalization and media influence, while offering insights into the future trajectory of Indian entertainment's global impact.

Key Words: Indian Entertainment Industry, Cultural Globalization, Digital Streaming Platforms

I. Introduction

The global landscape of entertainment has undergone a significant transformation in recent years, with Indian content emerging as a powerful force in shaping cultural perceptions worldwide. As Bollywood films, regional cinema, and an array of streaming platforms showcasing Indian narratives gain international audiences, they actively contribute to a broader understanding of Indian culture and society. This growing visibility not only challenges prevailing stereotypes but also highlights the country's diverse traditions, languages, and social dynamics. Furthermore, Indian entertainment content serves as a medium for cultural exchange, enabling viewers to explore the rich tapestry of India's customs and values. As a result, the influence of Indian entertainment transcends mere amusement, fostering cross-cultural dialogues and promoting a nuanced appreciation of India's unique identity on the global stage. It becomes imperative, therefore, to analyze the impact of this collective narrative on global cultural perceptions and their implications for international relations.

A. Overview of Indian entertainment content and its global reach

The landscape of Indian entertainment has undergone a significant transformation, leading to its increased global prominence. Originally dominated by regional content, the proliferation of digital platforms has facilitated the widespread dissemination of Bollywood films, regional cinema, and streaming series, transcending geographical barriers. This global reach has resulted in a burgeoning interest in Indian narratives and cultural themes, as evidenced by international collaborations and the adaptation of Indian storytelling techniques in foreign films and series. Furthermore, studies indicate that soap operas and similar formats have gained international traction, highlighting a shared human experience within diverse cultural contexts (Soukup et al., 2016). Such developments not only enhance the visibility of Indian content worldwide, but also challenge and reshape perceptions of Indian culture, allowing audiences to engage with and appreciate its nuances in unprecedented ways. This dynamic exchange fosters a richer understanding of cultural identities, reinforcing India's influence on global cultural narratives.

II. The Role of Bollywood in Shaping Cultural Narratives

Bollywood's contribution to cultural narratives extends far beyond mere entertainment; it significantly shapes perceptions of identity, gender, and social norms both within India and globally. Through films that blend traditional themes with contemporary issues, Bollywood crafts narratives that resonate with diverse audiences, fostering a global dialogue around culture and values. For instance, the adaptation of the masala formula by Tibetan filmmakers living in exile illustrates an innovative approach to cultural translation, where entertainment is tailored to reflect the aspirations of the Tibetan diaspora while maintaining an entertaining essence akin to Bollywood (Matta et al., 2018). Conversely, the portrayal of item songs highlights the complexities of gender representation and sexual politics, revealing how such sequences reinforce problematic societal norms while simultaneously serving as a lens for critique (Mathew et al., 2023). As Bollywood continues to evolve, it remains a pivotal platform for both celebration and reflection of societal issues, influencing perceptions across different cultures.

A. Bollywood's portrayal of Indian culture and its impact on international audiences

The portrayal of Indian culture in Bollywood films significantly shapes the perceptions of international audiences, impacting their understanding of India and its diverse societal dynamics. This is evident in how well-known films have altered perceptions of European destinations, as indicated by research showing that landscapes featured prominently in Bollywood can elevate these locations' appeal among Indian viewers (Dutta et al., 2014). The emphasis on themes such as nationalism and religious identities in contemporary Bollywood narratives, particularly during the tenure of Prime Minister Narendra Modi, further complicates global cultural perceptions. Films like Raazi, PM Narendra Modi, and Gully Boy highlight not only a sense of patriotic pride but also weave complex social narratives centered around class and cultural identity (Khan et al., 2020). Thus, through these cinematic interpretations, Bollywood plays a pivotal role in both reflecting and shaping international audiences' views of Indian culture and its multifaceted identity.

III. The Rise of Digital Platforms and Regional Content

The rapid rise of digital platforms has fundamentally transformed how regional content, such as Indian entertainment, is produced, consumed, and disseminated globally. These platforms, including streaming services and social media channels, have not only democratized access to diverse media but have also enabled local narratives to reach international audiences. As a result, Indian films, television shows, and digital series have gained significant traction beyond national borders, influencing cultural perceptions worldwide. The extensive reach of these platforms aids in promoting authentic representations of Indian culture, traditions, and values while simultaneously challenging stereotypes often perpetuated in mainstream media. Such exposure has important implications for global cultural discourse, fostering a greater understanding and appreciation of Indian socio-cultural dynamics. Moreover, media representation serves as a vital catalyst for promoting interconnectedness and mindfulness, further enhancing the global conversation surrounding sustainable development and cultural diversity (Dhiman et al., 2023), (Dhiman et al., 2023).

A. How streaming services have facilitated the global consumption of Indian regional films and series

The rise of streaming services has significantly transformed the global landscape for Indian regional films and series, enabling unprecedented access to diverse narratives and cultural expressions. By breaking geographical barriers, platforms like Netflix and Amazon Prime Video have allowed international audiences to engage with regional Indian content that would otherwise remain obscure. This phenomenon is crucial as it not only democratizes access to entertainment but also fosters cross-cultural dialogue and understanding. As pointed out in previous studies, the high quality of content produced for these platforms aligns with viewers' increasing demand for authenticity and diverse storytelling ((Brown et al., 2024)). Moreover, such exposure has altered perceptions about India, enhancing the global audience's understanding of its rich cultural tapestry

(('University of Pretoria - Department of Philosophy', 2022)). Consequently, streaming services serve as pivotal agents in expanding the global consumption of Indian regional films, shaping cultural perceptions while celebrating the country's varied cinematic landscape.

IV. Conclusion

In conclusion, the global reach of Indian entertainment content has significantly shaped cultural perceptions, transcending geographical and social barriers. As audiences increasingly engage with Bollywood films and television series, they encounter narratives that reflect both traditional Indian values and contemporary social issues, fostering a deeper understanding of Indian culture worldwide. This cultural exchange is evident in the adoption of themes such as servant-leadership, portrayed through characters like Mohan Bhargava in the film *Swades: We, the People* (Gowariker, 2004), which illustrates the transformative power of cinema in conveying universal values that resonate across cultures (Reynolds et al., 2013). Furthermore, the international fascination with Indian soap operas underscores the diversity and richness of global storytelling, amplifying interest in various cultural expressions and practices (Soukup et al., 2016). Ultimately, the influence of Indian entertainment not only enriches global cultural landscapes but also fosters a more inclusive dialogue among diverse audiences.

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Automation and its Impact on Wage Inequality

Sonali Jha

Abstract

Automation, driven by advancements in artificial intelligence (AI), robotics, and machine learning, has become a transformative force in the global economy. In India, a country characterized by a diverse labor market, automation has brought both opportunities and challenges. This research investigates the relationship between automation and wage inequality in India, focusing on how automation impacts different sectors, skill levels, and demographic groups. While automation has enhanced productivity and created high-skill job opportunities, it has also displaced low-skill workers, exacerbating wage disparities. The study employs a mixed-methods approach, combining quantitative analysis of labor market data with qualitative insights from industry and policy experts. Findings reveal that automation disproportionately benefits high-skilled workers, leading to a widening wage gap. The paper concludes by exploring policy interventions to mitigate inequality, such as upskilling programs, education reforms, and inclusive labor policies. This research contributes to the discourse on equitable economic growth in an era of rapid technological change.

Introduction

The rise of automation is reshaping economies worldwide, with profound implications for labor markets and income distribution. In India, where the labor market spans a wide spectrum—from highly skilled professionals in IT and engineering to unskilled workers in agriculture and manufacturing—the effects of automation are particularly complex. Automation has enabled industries to achieve unprecedented efficiency, yet it has also raised concerns about job displacement and the polarization of wages.

India's unique socio-economic landscape, characterized by a large informal workforce, regional disparities, and skill gaps, amplifies the challenges posed by automation. The integration of automated technologies in sectors such as manufacturing, IT services, and retail has led to a dual phenomenon: an increase in demand for high-skill labor and a decline in opportunities for low-skill workers. This divergence is contributing to growing wage inequality, with high-income workers benefiting from automation-induced productivity gains while low-income workers face stagnation or unemployment.

This paper seeks to explore the multifaceted relationship between automation and wage inequality in India. It examines key questions such as: How has automation impacted wages across different sectors? Which demographic groups are most affected by automation-induced displacement? What role do education and skill development play in mitigating these effects? The research aims to provide a comprehensive understanding of the economic and social dimensions of automation in India.

Through this study, we aim to contribute to policymaking by offering evidence-based insights and recommendations. By addressing the challenges posed by automation, India has the opportunity to harness technological advancements while ensuring that economic growth is inclusive and equitable.

Objective

This study evaluates the Impact of Automation on Employment and Wages.

Review of Literature

1. Global Trends in Automation and Wage Inequality

Autor, D. H. (2015), in his seminal work "Why Are There Still So Many Jobs? The History and Future of Workplace Automation," explores how automation affects labor markets by substituting routine tasks while complementing non-routine, cognitive, and social skills. Autor highlights the polarization of the labor market globally, where middle-skill jobs decline, leading to wage inequality. This framework is highly relevant to India, where routine jobs dominate industries

such as manufacturing and clerical services. As India integrates automation into these sectors, the implications for wage disparity, especially for low- and medium-skilled workers, are significant.

2. Sectoral Impacts of Automation in Developing Economies

Goos, M., Manning, A., & Salomons, A. (2014) examine sectoral shifts caused by automation in their paper "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring." Their study reveals that automation disproportionately impacts sectors with high routine-task intensity, displacing low-skill labor while creating opportunities in high-tech and non-routine sectors. This is evident in India's IT and manufacturing industries, where automation drives productivity but leads to significant labor displacement in low-skill jobs. The study provides a framework to analyze sectoral dynamics in India and their contribution to wage inequality.

3. Indian Context: Automation and Wage Disparities

Chatterjee, S., & Mahajan, S. (2020), in their work "Automation, Skills, and Wage Inequality in India," examine the Indian labor market's response to automation. Their research reveals that automation adoption in India predominantly benefits urban, high-skilled workers while exacerbating rural-urban and gender wage gaps. The authors argue that India's significant informal workforce is particularly vulnerable to displacement due to limited access to upskilling opportunities. Their findings emphasize the need for targeted skill-development policies to bridge the inequality gap.

4. Role of Education and Skill Development in Mitigating Wage Inequality

Acemoglu, D., & Restrepo, P. (2018), in "Artificial Intelligence, Automation, and Work," discuss how education and skill development can reduce the negative impacts of automation. They argue that economies investing in education reforms and lifelong learning systems can enable workers to transition into higher-skill roles, mitigating wage disparities. This insight is crucial for India, where the formal education system and vocational training often fail to meet industry demands. Studies suggest that integrating automation-related skill development in India's education policy can help reduce wage inequality.

5. Policy and Institutional Responses to Automation

Bessen, J. E. (2019), in his book AI and Jobs: The Role of Demand,investigates how policy interventions influence automation's impact on the labor market. Bessen emphasizes the importance of labor market policies, such as wage subsidies, public investments in reskilling programs, and inclusive digital policies, in managing the socio-economic effects of automation. For India, the study highlights the potential of policies like the National Skill Development Mission (NSDM) in reducing automation-induced wage inequality. It also underlines the need for institutional reforms to ensure equitable access to technological advancements

The Impact of Automation on Employment and Wages.

1. Job Displacement

Automation substitutes human labor in routine and repetitive tasks, particularly in manufacturing, retail, and transportation. Studies reveal that sectors heavily reliant on low-skill labor are most vulnerable to job losses. For instance, the adoption of robotics in production lines has significantly reduced the demand for manual labor.

2. Job Creation

While automation displaces some roles, it also creates new job opportunities, particularly in high-skill sectors like IT, engineering, and data science. The World Economic Forum's Future of Jobs Report highlights that automation could create millions of new jobs in fields like AI development, robotics engineering, and green energy.

3. Skill Polarization

Automation leads to labor market polarization, increasing demand for high-skill, high-wage jobs while reducing demand for middle-skill roles. This phenomenon contributes to a growing divide between workers who can adapt to technological changes and those who cannot.

4. Wage Inequality

Automation amplifies wage inequality by disproportionately benefiting high-skilled workers who can leverage technology while stagnating or reducing wages for low-skilled workers. This creates a widening gap between the top and bottom earners.

5. Productivity Gains and Wage Stagnation

Despite automation-driven productivity improvements, wage growth has not kept pace. Employers often invest savings from automation into capital rather than labor, limiting wage increases.

6. Regional Disparities

In developing countries like India, automation exacerbates regional wage disparities. Urban areas, where high-skill jobs are concentrated, experience wage growth, while rural areas reliant on low-skill labor face wage stagnation or decline.

Policy Implications and Mitigation Strategies

1. Upskilling and Reskilling

Governments and organizations must prioritize skill development programs to equip workers with competencies needed in an automated economy. Programs like India's *Skill India Mission* aim to bridge this gap.

2. Universal Basic Income (UBI)

UBI is proposed as a safety net to support displaced workers. While controversial, it offers a potential solution to cushion the social impact of job displacement.

3. Progressive Labor Policies

Policies encouraging job sharing, wage subsidies, and worker retraining can help mitigate the adverse effects of automation on wages and employment.

Conclusion

Automation represents a double-edged sword, promising significant economic benefits while posing challenges to labor markets. To ensure equitable growth, it is imperative to adopt strategies that maximize the advantages of automation while addressing its adverse effects. By investing in education, fostering innovation, and implementing inclusive policies, societies can navigate the transition toward an automated future, ensuring that employment and wage growth are sustainable and equitable.

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"A Study on Global Learning Platforms"

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ABSTRACT:

This research critically examines the interconnected global systems, their historical legacies, and their impact on human lives and environmental sustainability. Various tools are analysed to understand students' intentions to adopt e-learning systems either as a replacement for traditional classroom education or as an independent distance learning method. Survey results on e-learning platforms are reviewed to highlight key findings and identify research gaps. The topic aims to address the global digital divide by providing readers with scholarly insights, enabling them to form informed conclusions. Additionally, a thorough literature review establishes a solid foundation for understanding e-learning success, while visual representations of web search data illustrate the growing popularity of digital learning tools.

1. INTRODUCTION:

A learning process that enables students to view issues from multiple perspectives and work collaboratively with others on complex global problems, with respect and appreciation for the contribution of all those involved and have as their purpose collective well-being for all. The purpose of **global learning** is to increase student's knowledge of other countries and their citizens. The process through which learners gain an understanding of **global** issues and interconnections, developing skills and attitudes to navigate and contribute to the world.

1.1. BENEFITS OF GLOBAL LEARNING PLATFORMS:

- Access to Quality Education for Underserved Regions
- Better engagement
- Empowering Remote Communities
- Flexible Learning for Diverse Global Workforces
- Affordable Learning and Widening Participation
- Environmentally Sustainable Learning
- Global Collaboration and Cultural Exchange
- Personalized learning experience

1.2 OUTCOME/IMPACTS OF GLOBAL LEARNING PLATFORMS:

The **African continent** faces significant educational challenges, including limited access to quality education. In **Kenya**, **e-Limu**, a local platform, delivers educational content to students, bridging educational gaps in remote whereas rural parts of India and Southeast Asia, where traditional educational infrastructure is lacking more, E-learning has made significant inroads. The Indian government's **SWAYAM initiative**, offering over 2,000 courses, has brought education to far-flung areas. SWAYAM reached over 75 lakh (7.5 million) learners, including those in remote locations. E-learning platforms have played a pivotal role in the **United States and Canada**, where professionals use them to upgrade their skills. **Coursera** and **edX**, both founded by U.S. universities, have expanded access to Ivy League-quality education. Coursera boasts over 82 million learners from all over the world. E-learning platforms have gained traction in **South American countries**. In Brazil, the **"Instituto TIM" initiative** offers free courses on technology, fostering digital inclusion."Instituto TIM" has reached over 3.5 million enrolled learners .By providing the power of technology, every learner, irrespective of their geographical location, has access to high-quality education. The European Union's **Erasmus+ Online Linguistic** Support allows learners to access language courses and interact with peers from different countries. Erasmus+ Online Linguistic Support has served over 1.2 million language learners.

1.3 Top Online Learning Platforms in the World

1.Coursera is a well-known online education platform that offers courses from top education providers around the world. Over the years, the company has grown rapidly and provides the best standards of education through MOOC in the world.

2.Skillshare is an online education platform that is beneficial for both students and teachers. The website offers so many of courses related to design, business, marketing, technology, photography, film, fashion, music, gaming, cooking, writing, DIY, crafts

,etc.

3.Lynda.com (now LinkedIn Learning) is now part of LinkedIn Leaning is an MOOC website that covers a wide variety of creative, technology, and business courses. For previous decade, Lynda.com has been offering informative and clear video-based training for individual, corporate, and academics.

4.Udacity Inc. is a for-profit MOOC platform that gives attention to job training. It focuses on in-demand skills in technology.

5.Udemy is a popular online learning platform that gives people a chance to develop their careers and explore a wide variety of hobbies. From web development to public speaking, they offer a broad range of courses.

6.edX is a MOOC platform that offers university-level online courses. This platform offers six different types of programs course such as, MicroMasters Program, Professional Certificates, Global Freshmen Academy and XSeries Program.

2.OBJECTIVES OF THE STUDY:

- To understand the need of e-learning platforms.
- To understand the importance of personalized learning, life-long learning.
- To study how global learning platforms revolve around providing accessible, inclusive, and high-quality education to a diverse global audience. • To identify key players in the global online education market
- To explore challenges faced by these platforms.

3.LITERATURE REVIEW

Webster and Hackley (1997) studied teaching effectiveness in technology mediated distance learning and found a positive relationship between students' attitudes toward technology and their learning outcomes. The research study by Maria Jose Sousa, Rui Cruzl and Jorge Miguel Martins (July 2017) show that as per the study conducted during the last three years the use of digital learning methodology in education by the teachers is increasing.

Khan (1997) highlighted that if learners are to employ these skills, the learning environment must be supportive and rewarding of these behaviours. Learners should be given full access to a wide range of information and communication options, both synchronous and asynchronous that can be used in large group, small group, and oneon-one settings.

4..RESEARCH METHODOLOGY

4.1.Research Design: Descriptive Research has been used.

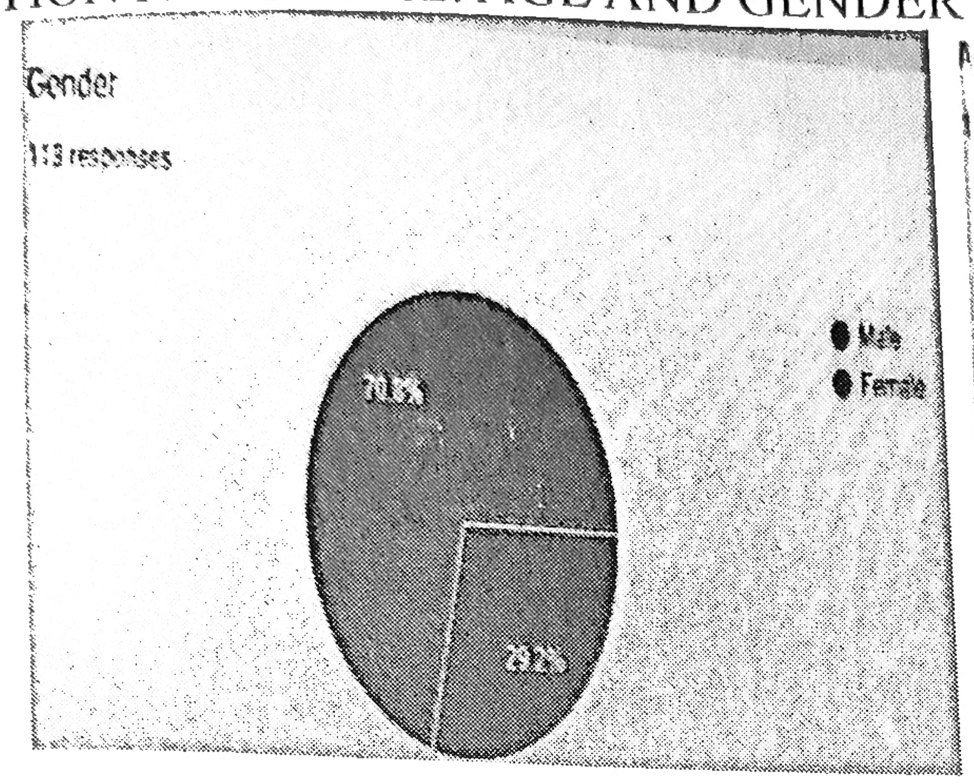
4.2.Source of Data: we have collected data through primary method through questionnaire. It deals with basic questions in terms of individual age, gender and some questions related to their awareness and usage of learning platforms. Secondary data was also collected from the journals, case studies, books, research papers. Data collection Instrument we have used is Questionnaire (Google forms).

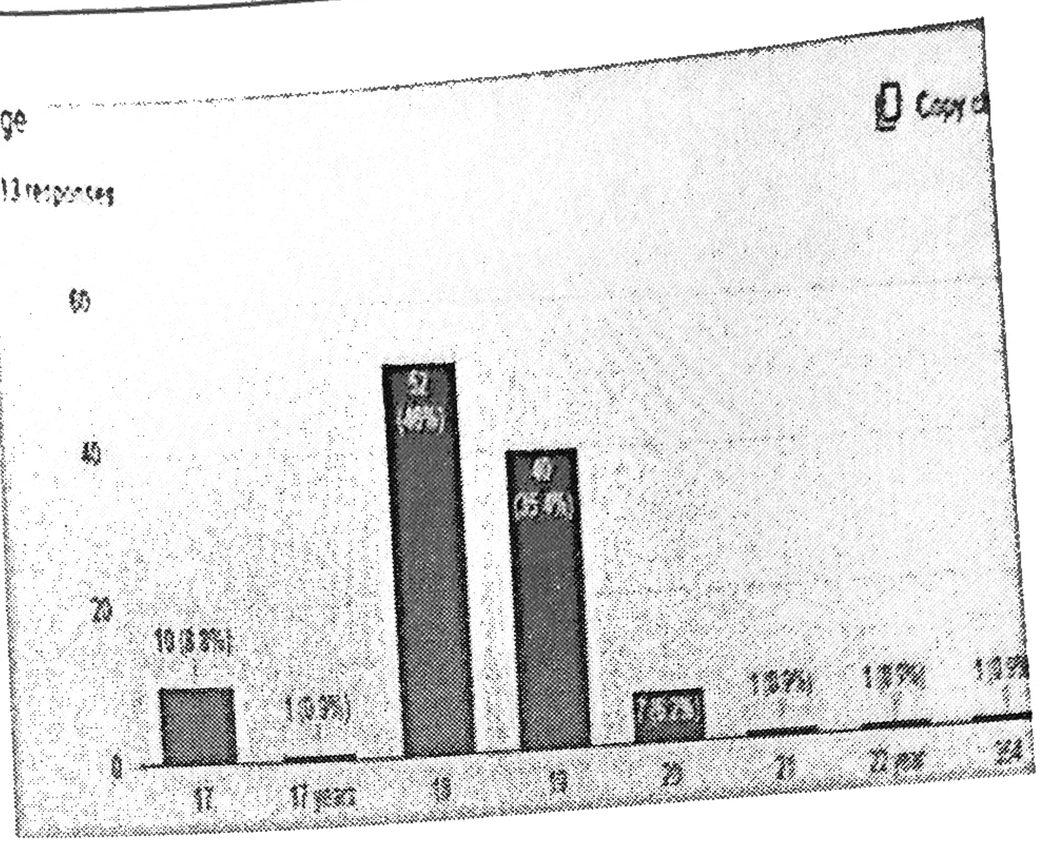
4.3.Sample method and size: Snowball sampling method used for the research. The population is taken from Undergraduate students about global learning platforms. Total 113 responses have been collected.

5.DATA ANALYSIS

There are lots of factors that influence learning and vary according to each individual. Personal characteristics influencing learning include motivation, prior knowledge, learning styles, self-learning, cognitive abilities, and types of teaching.

QUESTION NO.01 and 02: AGE AND GENDER



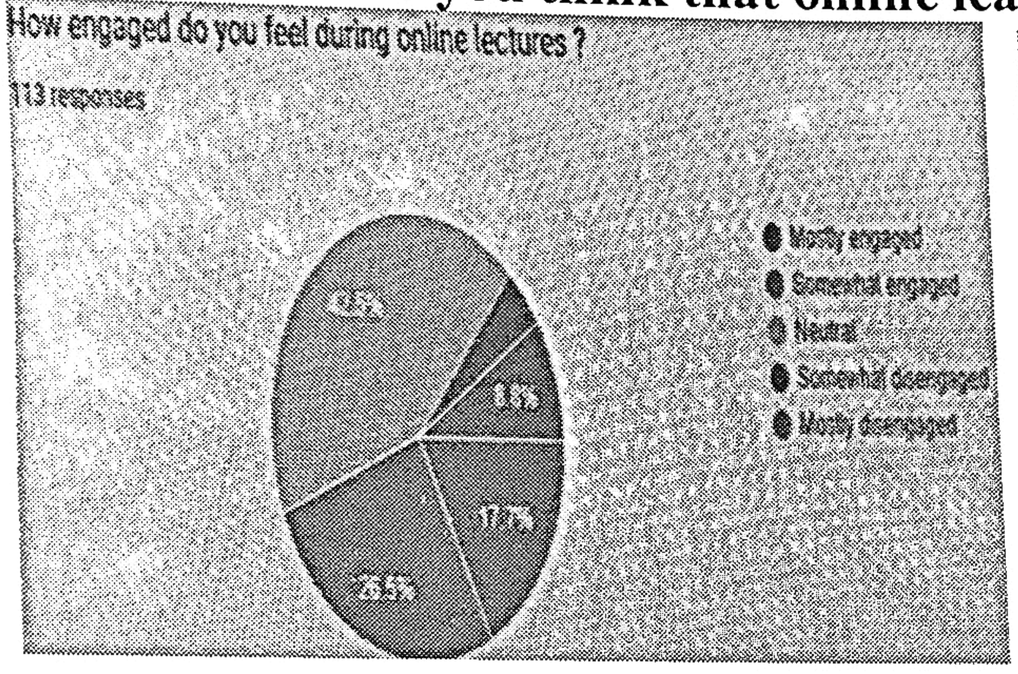


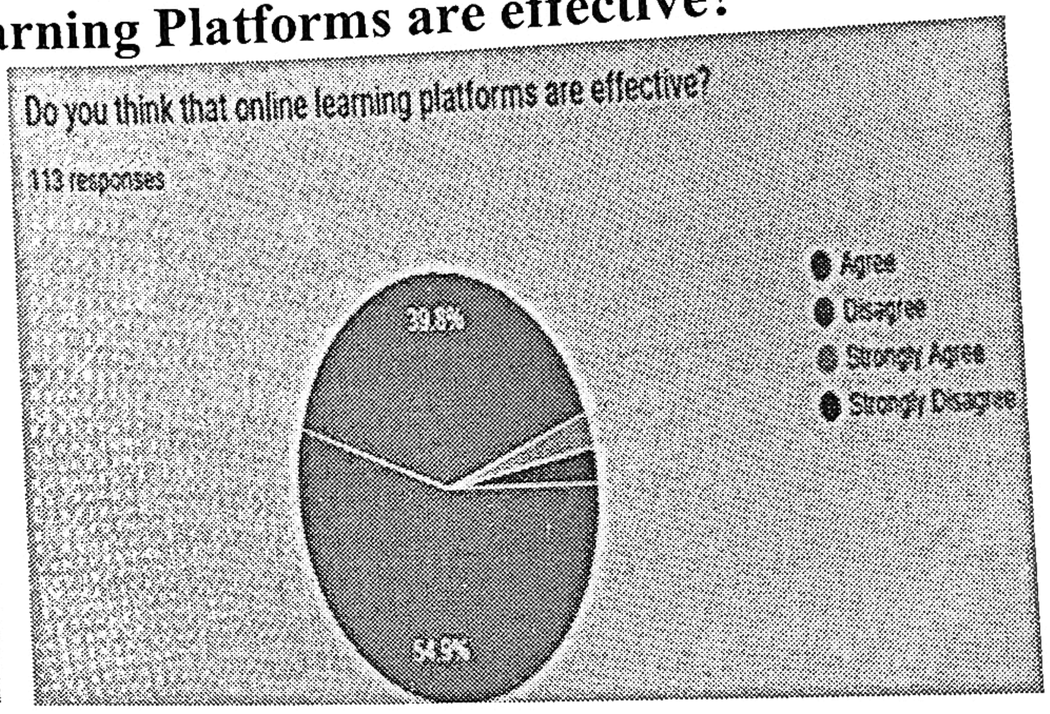
ITERPRETATION 01 and 02:

In this survey we have received 113 responses out of which 80 were female and 33 male students.

QUESTION NO.03: How engaged do you feel during online lectures?

QUESTION NO.04: Do you think that online learning Platforms are effective?





ITERPRETATION 03 :

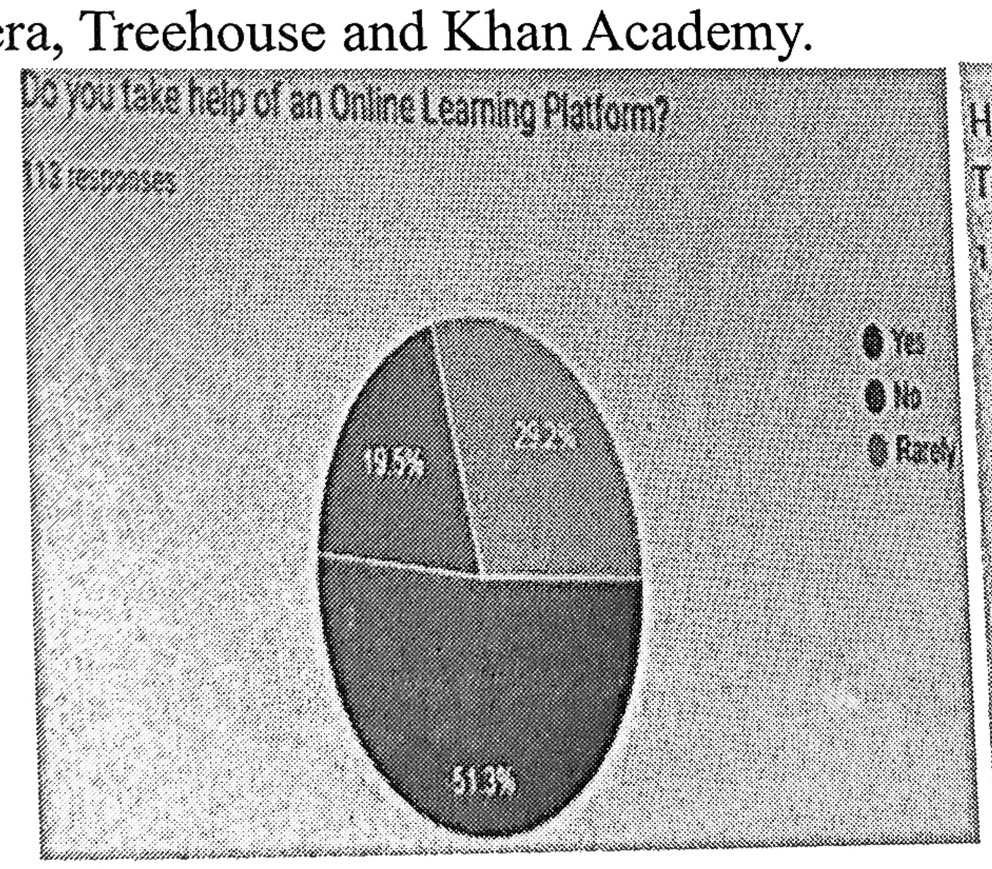
Here, 17.7% students responded that they mostly feel engaged, 25.55% somewhat engaged, 42.48% neutral, 4.42% somewhat disengaged and 8.85% mostly disengaged.

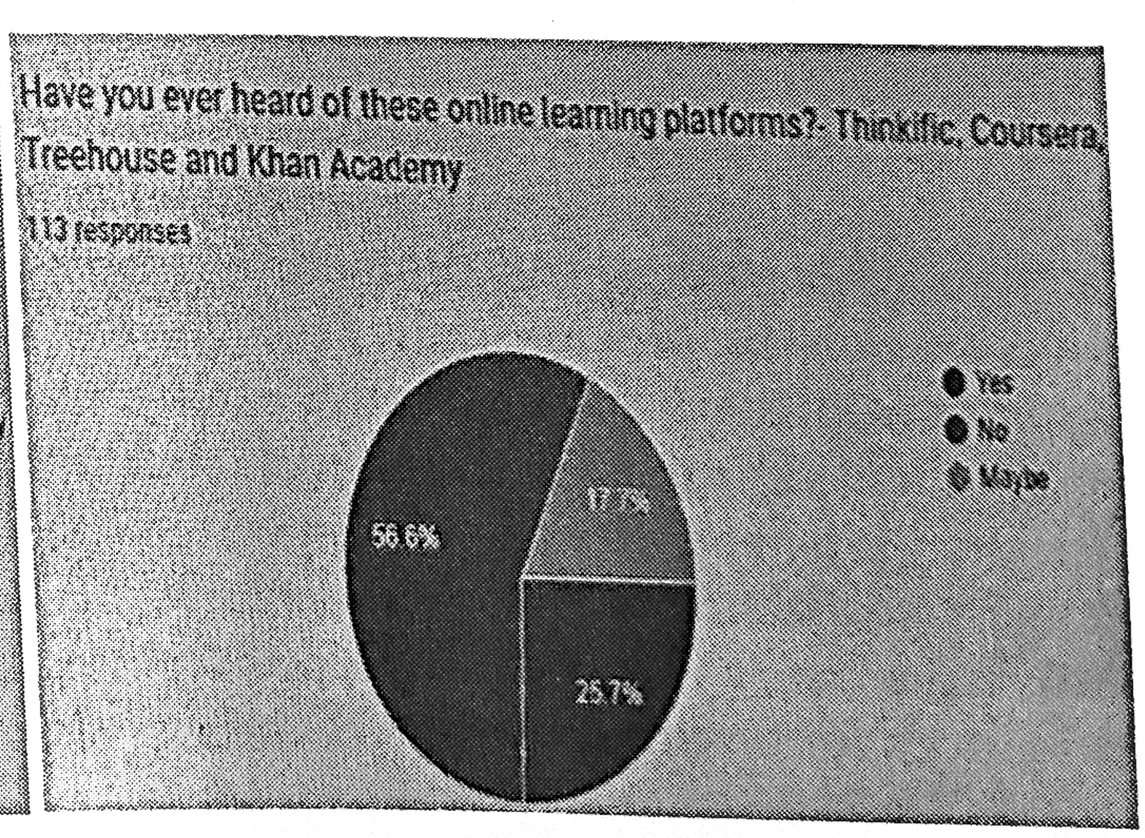
ITERPRETATION 04 :

Here, 54.87% students has responded as they agreed, 39.82% disagree, 2.65% strongly agree and 2.65% strongly disagree.

QUESTION NO.05: Do you take help of an online learning platform?

QUESTION NO.06: Have you ever heard of these online learning platforms?- Thinkific, Coursera, Treehouse and Khan Academy.



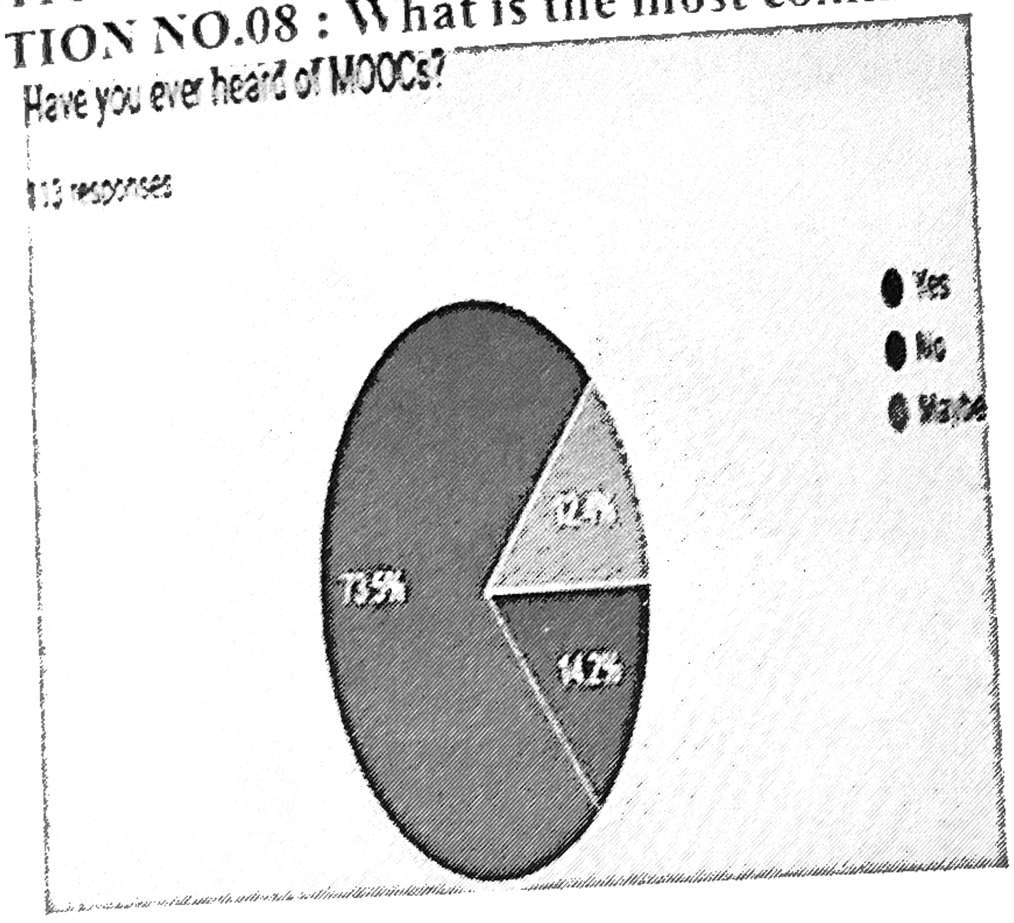


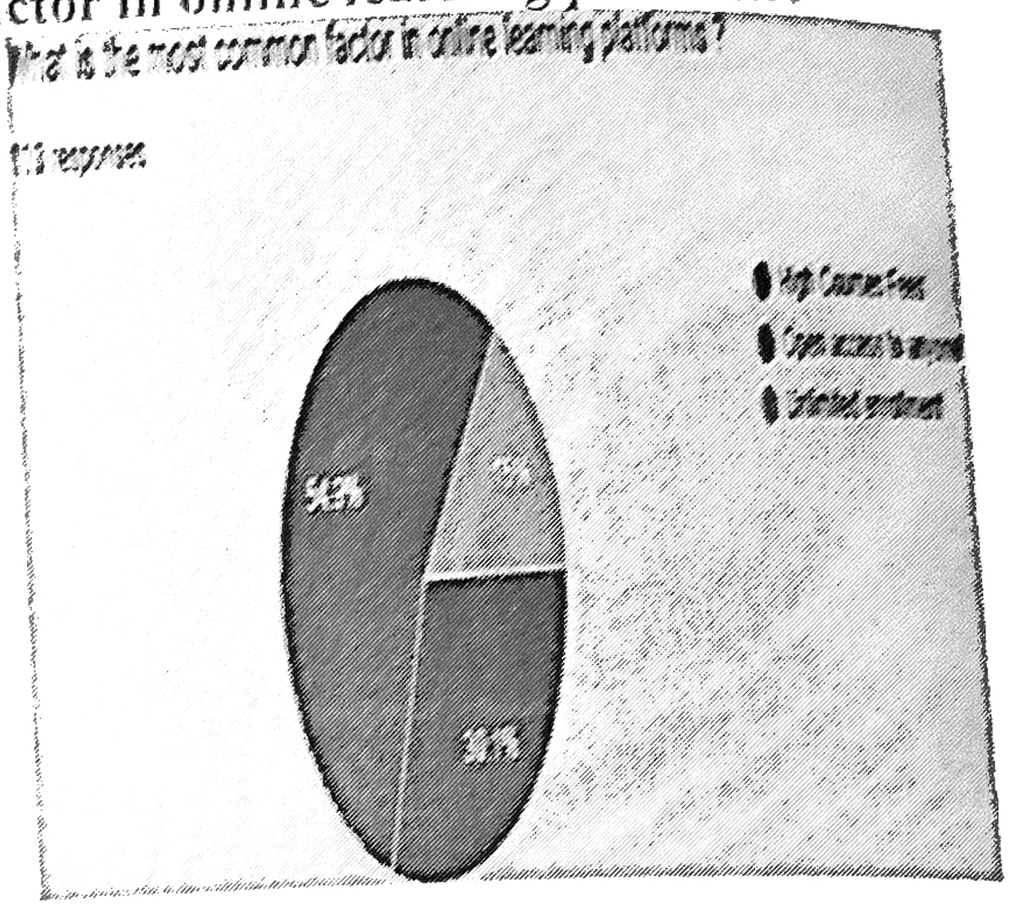
ITERPRETATION 05 : Here, 51.33% of students have responded with yes, 19.47% no and 29.2% rarely.

ITERPRETATION 06 : Here, 25.66% of students have responded with yes, 56.64% no and 17.7% maybe.

QUESTION NO.07: Have you ever heard of MOOCs?

QUESTION NO.08 : What is the most common factor in online learning platform?





ITERPRETATION 07 :

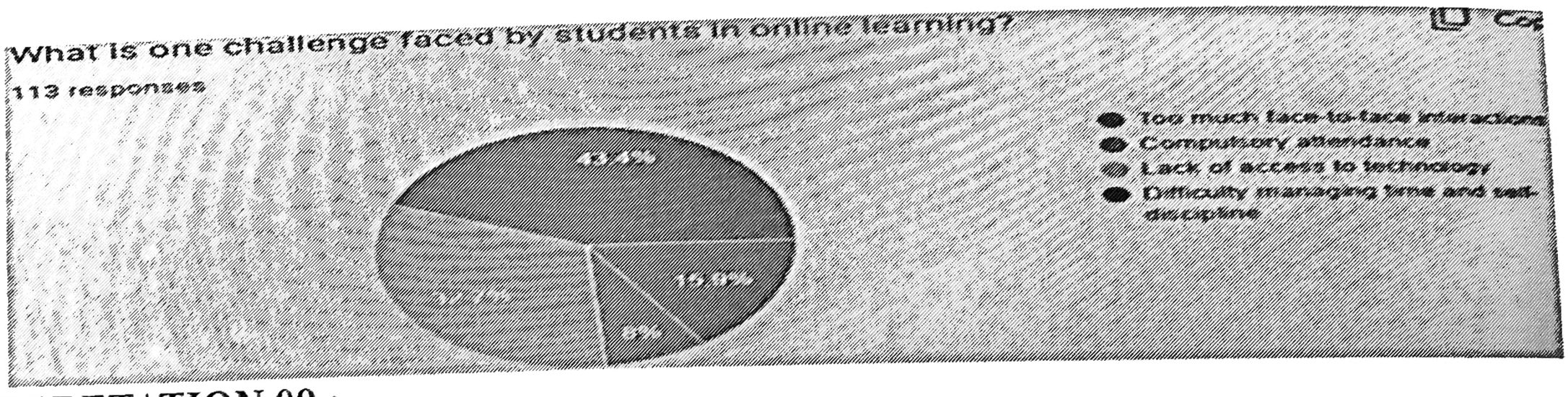
Here, 14.16% of students have responded Yes, 73.45% no and 12.39% maybe.

ITERPRETATION 08 :

Here, 30.09% of students have responded with high courses fees, 54.87% open access to anyone and 15.04% is unlimited enrolment.

QUESTION NO.09: What is one challenge faced by students in online learning?

QUESTION NO.10: what kind of improvements should be made on e-leaning platfroms ?



ITERPRETATION 09 :

Here, 15.93% of students have responded with too much face-to-face interactions, 7.96% compulsory attendance, 32.74% ,lack of access to technology and 43.36% difficulty managing time in self-discipline.

Iterpretation 10 : on average we have found some comma answers. Interactive courses, engaging, and relevant topics. Concept clarity and without fear of asking question. Maintain open lines of communication with parents and promote open communication. Here are some point on this - provide live session 2- provide quiz sessions Online learning platforms can be improved by incorporating personalized learning paths, interactive content, and real-time feedback to enhance user experience and engagement. Additionally, technical scalability, security, accessibility features, and gamification elements can also be integrated to create a more effective and inclusive Use animation and visualization to make student understand. Recording the lectures so that if somebody has network issue can go thru the recorded lectures. LMS platform should allow you to create forums and groups for online discussion if you want your online learning site to succeed

6. Findings

We have found Key Trends in Global Learning Platforms, Rise of AI and personalized learning, Gamification and interactive learning, Micro-credentials and industryrecognized certifications. Challenges Faced by Global Learning Platforms, Digital divide and unequal access to technology, Quality assurance and accreditation issues, Learner engagement and retention rates, Data privacy and cybersecurity concerns In summary the acknowledgments empower us to learn better since they enhance our efficiency as learners. factors affecting e-learning are bibliography used, suggestions for new studies, new methods used, security factors, training factors management support factors ,awareness factors, service quality, system quality ,analogy used and quality Financial Factor etc.

7. Conclusion

Global learning platforms have revolutionized the education sector by breaking geographical, economic, and temporal barriers. This study explores the growth, technological advancements, user engagement patterns, and challenges associated with global learning platforms such as Coursera, edX, Udemy, and Khan Academy. The paper also evaluates their role in democratizing education and bridging skill gaps globally. The digital boom in the information era of the 21st century resulted in a shift in educational practices in tertiary as well as in secondary education. It is of significance to analyse the factors influencing the adoption of global digital learning by individuals and the impact of online courses in disseminating knowledge. Adoption of digital learning information and provides a rich environment for collaboration among users which improves academic standards. In an era this advance technology, E-learning platforms are working powerful catalysts for change in the global education system. These platforms crossed all geographical boundaries and provide overall access to education, skill development, and knowledge resources few decades ago. This research explores the impact of Elearning platforms on diverse geographical locations that reflect global influence.

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Trade Agreements & Its Impact

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Abstract

This research explores the multifaceted effects of trade agreements on both member and non-member countries, examining their economic, social, and political implications. Trade agreements, which aim to reduce barriers to trade and promote economic integration, have significant advantages for participating nations, including increased market access, enhanced competitiveness, and economic growth through lower tariffs and streamlined regulations. However, the research also highlights the often overlooked negative consequences for non-member countries, such as trade diversion, diminished market opportunities, and the potential for economic marginalization.

Keywords: Trade agreements, India, Types, Integration, International Trade Relation.

Introduction

An agreement between two or more countries concerning trade in goods or services, aimed at eliminating trade barriers and promoting good international trade and commercialrelations througho ut the world. When two or more countries come together on tradeissues, they enter into an agreemet whichiscalledastrade agreement.Trade agreements play an important role in supporting suppliers and increasing trade. They promote job creation and economic expansion by reducing or eliminating all tradebarriers. These agreements cover a wide range of industries/sectors, such as manufacturingagric ulture, services, and more. It creates special conditions for access to foreign markets. In addition, tra de agreements stimulate business growth, increase competition, improvecustomer service and increa se investment.

What is Bilateral Trade?

Any trade or investment between two countries is called a bilateral trade agreement. By signing a bilateral trade agreement, both countries can reduce or eliminate trade barriers. It aims to e xpand access to trade and economic growth in both countries. They ensure fairtrade by preventing pi racy, unfair subsidies and antidumping. These agreements regulate regulations, labour standards and environmental protection.

The concept of bilateral trade, even the socalled twin/sister agreement, dates back decades bu t has gained a lot of momentum and interest in recent years, especially in the current central govern ment. The main idea behind these agreements is to encourage cooperation between different regions, allowing them to work together and share resources, expertise and bestpractices from many sources. This initiative is a great way to develop cultural, political, economic and commercial relations.

Bilateral Trade in India

The Government of India has implemented bilateral trade between Indian states and cities and their international partners in partner countries. These agreements facilitate the exchangeof ideas, kn owledge and innovation between the countries, creating a positive andwinwin situation. By encourag ing collaboration, Indian states and cities can learn from foreign partners, use best practices and coll aborate on development projects. The results of thesecollaborations often go far beyond the boundari es of governments or professional bodies,providing significant benefits to citizens. These partnershi ps can improve the quality of life in the society by supporting the development of infrastructures suc h as better transportation, electricity and communication technology. The agreements and conditions /rules or regulations for joint ventures are known as joint ventures. This type of trade often occursin the context of international organizations such as World Trade Organization (WTO), which promote open and fair trade among members.

These are some of the bilateral agreements established over the past decade between Indian states and cities and their foreign partner nations, focusing on promoting shared cultural values, fostering economic exchange, and strengthening diplomatic relations:

Gujarat and Guangdong Province, China (2014) Rajasthan and South Australia State, Australia (2015) Karnataka and Sichuan Province, China (2015) Kerala and Sanin, Japan (2015) Gujarat and Hyogo Prefecture, Japan (2016) Andhra Pradesh and Sichuan Province, China (2016) Andhra Pradesh and Guizhou Province, China (2016) Meghalaya and Wallonia Region, Belgium (2017) Karnataka and Indiana State, USA (2017)	Gujarat and Hyogo Prefecture, Japan (2016) Andhra Pradesh and Sichuan Province, China (2016) Andhra Pradesh and Guizhou Province, China (2016) Meghalaya and Wallonia Region, Belgium (2017) Karnataka and Indiana State, USA (2017) Uttarakhand and Bali, Indonesia (2018) Delhi and Fukuoka Prefecture, Japan (2018) Andhra Pradesh and the Canton of Zurich, Switzerland (2018) Assam and Chiang Mai Province, Thailand (Year not specified) Delhi and Fukuoka Prefecture, Japan (2018)

What is Multilateral Trade Agreement?

Trade which involves three or more nation, where these nations agree to carry on business activities with each other on mutually agreed terms and conditions/rules or regulations is known as multilateral trade. This type of trade generally takes place within the context established by the international organisations, such as the World Trade Organisation (WTO), which promotes open and fair trade between member countries.

In multilateral trade system, the countries who have entered into the agreement, negotiate for goods, services, intellectual property, employment and environmental conservations. They also reduce the barriers completely or eliminate them to a certain extent. Countries enter into this agreement to ensure smoother trade flows globally.

It encourages unity economically, eliminates market entry barriers, encourages peacekeeping and enhances global cooperation by creating opportunities for all member nations to benefit from open and fair trade.

Multilateral Trade in India

Multilateral trade agreement has had a significant impact on the Indian economy, increasing th e level of international competitiveness and encouraging the industry to develop and adopt internatio nal standards. These multilateral trade agreements promote Indian trade/commerce to foreign market s. Therefore, this exhibition encourages Indian businesses/enterprises to improve their performance s tandards and develop new ideas and strategies to remain competitive.Due to numerous foreign trade, India has experienced the penetration of new and advanced technologies and thus modernized its pr ocesses. This practice also increasesefficiency, effectiveness and meets the needs of the global mark et. Indian companies insectors such as IT, manufacturing and logistics can learn from their internatio nal counterparts, use new technologies and improve business processes. Technology transfer is parti cularly important in areas such as renewable energy, where India is adopting good practices and gree n technologies to meet global standards.In summary, the multilateral trade agreement not only expos es the Indian economy to global competition but also provides opportunities for growth, innovation and technology utilization.India has signed many trade agreements with many countries. These agre ements are designed to promote economic cooperation and integration among member countries, primarily aimed at promoting trade in goods and services, investment capital and other regional busi nesses.

India has entered into several multilateral trade agreements with various countries.Here are some of the major multilateral trade agreements of which India is a part:

- World Trade Organisation (WTO)
- Regional Comprehensive Economic Partnership (RCEP)

- South Asean Free Trade Area (SAFTA)
- India-MERCOSUR Preferential Trade Agreement (PTA)
- India-Gulf Cooperation Council (GCC) Free Trade Agreement (FTA)

What is Regional Trade Agreement?

Trade agreements within a specific geographic region is known as regional trade agreement. These agreements are designed to encourage economic cooperation and integration among the member countries, often focusing on enhancing trade in goods and services, investment flows, and other economic activities within the region.

Types of Regional Trade Agreements:

1. Preference Trade Agreements: There are limited reductions in trade barriers, offering preferential tariffs on selected goods rather than fully removing all trade restrictions. They do not share common external barriers.
2. Free Trade Area (FTAs): All trade barriers are eliminated this enables the member nations to move goods and services freely within nations.
3. Custom Unions: Member nations agree to eliminate tariffs, quotas and other trade barriers on goods and services. They also impose common negotiation barriers on non-members.
4. Common Market: It not only allows free movement of goods and services but also includes free movement of factors of production, across member nation. They remove all trade barriers, frame and co-ordinate economic policies and allow free flow of resources.
5. Economic Union: It is type of trade bloc which consist of common market and custom market. The members agree to eliminate trade barriers, free movement of goods and services and aim to adopt common external trade policies for non-members.

Regional Trade Agreements in India.

As mentioned by the Press Information Bureau, Government of India, Ministry of Commerce & Industry India has signed 13 Regional Trade Agreements with various which are as follows:

- India-ASEAN FTA
- India-Singapore CECA
- India-Malaysia CECA
- India-Thailand FTA - Early Harvest Scheme
- India-Japan CEPA
- India-South Korea CEPA
- Agreement on SAFTA
- India-Sri Lanka FTA
- India-Nepal Treaty of Trade
- India-Bhutan Agreement on Trade, Commerce and Transit
- India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)
- India-UAE CEPA
- India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA)

Impact of Trade Agreements

Positive Impact	**Negative Impact**
• Motivate The Traders to Trade Globally.	• Diversion of trade
• Creates A Better Relationship with The Member Nations.	• Barriers to market access
• Generates Employment.	• Decline in market position
• Reduces Trade Barriers.	• Market disintegration
• Increases Foreign Direct Investment.	• Exploitation of Resources
• Lowers Entry Barriers	• Over-dependence only on member countries
• Boosts Economic Growth	• Group negotiations
• Consumer Prices Are Reduced	• Loss of jobs

• Promotes Peace and Stability	• Diverted Foreign Direct Investment

Conclusion

Trade agreements have a profound impact on participating countries, offering benefits such as increased market access, reduced tariffs, and enhanced economic cooperation. They can drive economic growth, foster innovation, and improve competitiveness by reducing trade barriers and creating efficient supply chains. However, while these agreements bring substantial benefits to members, they can also have negative consequences for non-member countries. Non-members may face trade diversion, reduced market access, and higher tariffs, which can hinder their economic growth and competitiveness.

Moreover, the creation of trade blocs can lead to economic isolation for countries outside the agreements, potentially limiting their foreign direct investment and influence in global trade. Additionally, non-members may be pressured to align with the standards and regulations set by the agreements, which can lead to increased costs or the need for significant policy adjustments.

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"A Study on Role of India's Soft Power Diplomacy in Eastern Europe in the 21st Century"

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Abstract

In the 21st century, soft power has become a critical tool in global diplomacy, enabling nations to influence others through culture, values, and ideas rather than coercion. India, with its rich cultural heritage, democratic values, and historical depth, has utilized soft power to strengthen its global image and build strategic partnerships. This study focuses on India's soft power diplomacy in Eastern Europe, analyzing its successes, challenges, and potential.

Eastern Europe, with its unique geopolitical significance and evolving socio-economic dynamics, offers a fertile ground for India's engagement. India has sought to foster goodwill in the region through cultural exchanges such as yoga, Bollywood, and traditional practices like Ayurveda. Educational collaborations, particularly scholarships and training programs under initiatives like the Indian Technical and Economic Cooperation (ITEC), have also played a role in building intellectual and cultural ties. However, these efforts have often lacked visibility and region-specific focus, limiting their impact.

Economic relations form another crucial aspect of India's soft power strategy. While trade and investment in sectors such as IT, pharmaceuticals, and renewable energy have grown, India's presence in Eastern Europe remains overshadowed by global competitors like China and Germany.

Similarly, India's participation in multilateral platforms has showcased its role as a responsible global partner, but aligning these efforts with the specific contexts of Eastern Europe remains a challenge.

The findings highlight India's cultural appeal and democratic ideals as key strengths, but challenges such as geopolitical competition and inconsistent outreach hinder its potential.

Policymakers must adopt a more targeted and sustained approach to enhance India's influence in Eastern Europe. Strengthening people-to-people ties, expanding cultural programs, and bolstering economic engagement are essential steps to ensure India's soft power becomes a transformative force in the region.

Introduction

India's vibrant cultural heritage, democratic values, and technological progress have established it as a key player in global diplomacy. Eastern Europe, with its strategic importance and growing markets, presents a promising opportunity for India to exercise its soft power. This study explores how India's soft power initiatives are perceived and utilized in Eastern Europe, emphasizing their role in strengthening bilateral and multilateral relationships.

Through tools such as cultural diplomacy, educational exchanges, and collaborative projects, India has sought to build meaningful connections with Eastern European nations. Initiatives like the promotion of yoga, Bollywood, and Ayurveda reflect India's cultural appeal, while scholarships and training programs under schemes such as the Indian Technical and Economic Cooperation (ITEC) foster intellectual and cultural ties. These efforts aim to create a positive image of India while establishing long-term partnerships in the region.

Eastern Europe's unique geopolitical position makes it an essential partner for India's strategic goals, offering pathways to both regional cooperation and integration with larger global frameworks. By engaging with Eastern European countries on shared values and interests, India aims to strengthen its influence and expand its diplomatic footprint.

This study critically examines the effectiveness of these initiatives in achieving India's objectives, identifying both successes and areas for improvement. It highlights how India's cultural and ideological strengths, combined with targeted economic and educational outreach, can enhance its relationships with Eastern Europe. The findings underline the need for a focused and adaptive approach to maximize India's soft power potential, ensuring that it aligns with the region's specific needs and aspirations. This research provides insights for policymakers to refine India's strategies, fostering deeper collaboration and mutual benefit with Eastern European nations.

Literature Review

1.**Kumari (2023),** in her article "Soft Power Diplomacy in India's Foreign Policy under the Modi Government: Challenges and Prospects," argues that the Modi administration has significantly increased the use of soft power tools and resources in foreign policy. Examples include the promotion of Buddhism, yoga, and diaspora diplomacy, all of which have contributed to creating a favorable image of India.

2.**Rao (2022),** in her article "The Case for Harnessing Soft Power, Or Why India Cannot Be Insular," contends that cultural richness alone does not suffice to create effective soft power. Instead, she argues that projecting India as a progressive, democratic, and equitable society that contributes to global public goods is crucial. She also suggests India could draw lessons from South Korea, which has emerged as a global model of soft power.

3.**Chatterjee (2021),** in her article "Trust, Credibility and Soft Power Diplomacy: India and China," highlights the growing influence of China in South Asia and how it has compelled

India to adopt a more proactive and positive role in the region. She suggests that India's success in this regard hinges on building credibility and trust with its neighbors.

4.**Thussu (2013),** in his book Communicating India's Soft Power: Buddha to Bollywood, underscores India's extraordinarily rich cultural heritage—both ancient and contemporary—as valuable assets for its soft power diplomacy.

5.**Tharoor (2012),** in his book Pax Indica: India and the World of the 21st Century, describes soft power as the perceptions and attitudes evoked globally by the mere mention of a country's name. He emphasizes the need for nations to maintain a dignified image to effectively wield soft power.

Research Methodology

This research adopts a policy analysis and critical review approach, utilizing qualitative methods to analyze secondary data. Sources include government policy documents, embassy reports, academic papers, and media publications. The study focuses on identifying patterns, gaps, and opportunities in India's soft power engagement with Eastern Europe.

Objective of the Study

1.To analyze the role of India's soft power diplomacy in Eastern Europe.

2.To identify key areas where India has successfully utilized its soft power.

3.To evaluate challenges and suggest improvements in policy and execution.

Limitation of the Study

1.The study relies solely on secondary data, limiting firsthand insights.

2.It focuses on broad regional trends, which may not capture country-specific nuances.

3.Limited availability of comprehensive policy analysis specific to Eastern Europe.

Scope of the Study

This study provides a foundation for understanding India's soft power diplomacy in Eastern Europe. It is particularly useful for policymakers, diplomats, and scholars interested in enhancing India's influence in the region. The findings may also inform future research on bilateral and regional dynamics.

Data Analysis

1.Cultural Diplomacy: India's promotion of yoga, Ayurveda, and Bollywood has found a niche audience in Eastern Europe. Events such as the International Day of Yoga have been widely celebrated.

2.Educational Initiatives: India's scholarships under the Indian Technical and Economic Cooperation (ITEC) program have attracted students from Eastern Europe, but awareness remains limited.

3.Economic Relations: While trade has increased in sectors like pharmaceuticals and IT, India lags behind competitors like China and Germany in overall economic engagement.

4.Multilateral Engagement: India's participation in global forums such as the United Nations has fostered some common ground with Eastern European countries, though bilateral initiatives remain sporadic.

Findings

1.Strengths: India's cultural diplomacy resonates with Eastern Europe, particularly through yoga and Bollywood.

2.Weaknesses: Economic engagement and visibility of educational initiatives are underwhelming.

3.Opportunities: Strengthening people-to-people connections and targeted trade agreementscan enhance India's soft power.

4.Challenges: Geopolitical competition from China and Russia and a lack of region-specific strategies hinder India's efforts.

Conclusions

India's soft power diplomacy has made significant inroads in Eastern Europe, particularly in cultural and educational domains. However, its potential remains underutilized due to inconsistent policy implementation and limited regional focus. A more strategic and tailored approach is essential to enhance India's influence and foster long-term partnerships with Eastern Europe.

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Ease of Doing Business in India: Progress, Challenges, and Future Prospects

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Abstract

Ease of Doing Business (EoDB) is a critical parameter for attracting investment, fostering entrepreneurship, and driving economic growth. Over the years, India has made significant strides in improving its business environment. This paper examines India's journey in enhancing EoDB, the reforms undertaken, the challenges that remain, and the future potential. By analyzing data, policies, and stakeholder perspectives, the paper highlights how India can further optimize its business ecosystem to sustain economic progress

1. Introduction

The concept of Ease of Doing Business (EoDB) revolves around creating an environment where businesses can operate efficiently, with minimal bureaucratic hurdles and maximum transparency. The World Bank's Ease of Doing Business Index, which ranks countries based on ten parameters, has become a key metric for evaluating business environments globally.

India, being one of the largest and fastest-growing economies in the world, has recognized the importance of EoDB as a driver of foreign investment, industrial development, and job creation. Since 2014, the Indian government has taken several policy initiatives to improve the business ecosystem, leading to significant improvements in its global ranking.

This paper delves into India's progress in EoDB, key reforms, challenges, and future strategies to further enhance its business climate.

2. Understanding Ease of Doing Business

The World Bank's EoDB report assesses economies on ten indicators:

1. Starting a business
2. Dealing with construction permits
3. Getting electricity
4. Registering property
5. Getting credit
6. Protecting minority investors
7. Paying taxes
8. Trading across borders
9. Enforcing contracts
10. Resolving insolvency

India's performance across these indicators reflects its efforts to streamline processes and improve regulatory mechanisms

3. India's Journey in Ease of Doing Business

3.1. Improvements in Global Rankings

India's EoDB rank has seen a remarkable improvement, moving from 142nd in 2014 to 63rd in 2020. This leap is attributed to comprehensive reforms in areas such as:

Starting a business: Reduction in time and cost for company registration.

Resolving insolvency: Introduction of the Insolvency and Bankruptcy Code (IBC).

Trading across borders: Simplification of export and import procedures through digitization.

3.2. Key Reforms Driving EoDB

1. Introduction of Goods and Services Tax (GST): GST replaced multiple indirect taxes with a unified tax system, reducing compliance costs and creating a common national market.
2. Insolvency and Bankruptcy Code (IBC), 2016: The IBC has significantly reduced the time taken for resolving insolvency cases, improving the recovery rate for creditors.

3. Digitization of Processes: Government portals like MCA21, GSTN, and e-Sanchit have made compliance faster and more transparent.
4. Simplification of Labor Laws: The consolidation of 29 labor laws into four labor codes aims to reduce the compliance burden on businesses.
5. Infrastructure Development: Programs like Make in India and Smart Cities focus on enhancing physical and digital infrastructure, attracting domestic and foreign investor
6. Challenges to Ease of Doing Business in IndiaDespite significant improvements, India faces challenges in creating a uniformly business-friendly environment.

4.1. Regional Disparities

While states like Gujarat, Maharashtra, and Karnataka are business hubs, others lag due to weak infrastructure and bureaucratic inefficiencies. The uneven implementation of reforms remains a concern.

4.2. Complex Regulatory Framework

India's regulatory environment, though improved, still involves multiple layers of approvals and compliance requirements, leading to delays and increased costs for businesses.

4.3. Judicial Bottlenecks

India's slow judicial processes hinder the enforcement of contracts and resolution of disputes. The average time to resolve a commercial dispute in India is over 1,400 days, compared to 600 days in OECD countries.

4.4. Infrastructure Gaps

While progress has been made, inadequate transport, energy, and digital infrastructure in rural and semi-urban areas affect businesses' operational efficiency.

4.5. Limited Access to Credit

Micro, Small, and Medium Enterprises (MSMEs), which form the backbone of India's economy, often struggle to access affordable credit due to high collateral requirements and limited financial literacy.

5. Case Studies of Successful Reforms

5.1. Delhi and Mumbai: Trading Across Borders

The customs clearance process has been digitized, significantly reducing the time and cost of importing and exporting goods. Both cities have become benchmarks for the ease of trading across borders.

5.2. Telangana: EoDB at the State Level

Telangana's TS-iPASS (Telangana State Industrial Project Approval and Self-Certification System) provides single-window clearances for industries, reducing approval times from months to weeks.

6. Future Strategies for Improving EoDB

6.1. Strengthening State-Level Reforms

Encouraging states to adopt best practices and fostering competition through initiatives like the State Business Reform Action Plan (BRAP) will ensure a balanced development across regions.

6.2. Enhancing Digital Infrastructure

Expanding broadband connectivity and improving the reliability of digital systems will enable businesses, especially MSMEs, to operate efficiently.

6.3. Judicial Reforms

Expediting judicial processes and establishing more commercial courts can address the backlog of cases, ensuring timely enforcement of contracts and dispute resolution.

6.4. Simplifying Taxation Further

While GST has streamlined indirect taxes, simplifying direct tax compliance through measures like faceless assessments will further enhance transparency.

6.5. Promoting Entrepreneurship

Supporting startups through incubation centers, mentorship programs, and access to venture capital will foster innovation and economic growth.

7. Global Comparisons

India can draw lessons from countries that have consistently performed well in EoDB rankings: New Zealand: Known for its minimal bureaucratic hurdles and efficient property registration system.

Singapore: Offers a seamless digital interface for business registrations and tax filings. South Korea: Strong infrastructure and robust credit facilities contribute to its high ranking. Adopting similar practices while considering India's unique socio-economic context will be critical for sustained improvements.

8. Conclusion

India's progress in the Ease of Doing Business rankings is a testament to its commitment to creating a conducive business environment. Reforms such as GST, IBC, and digitization have positioned India as a favorable destination for investment. However, to maintain momentum, India must address challenges like regional disparities, judicial delays, and infrastructure gaps. A collaborative approach involving the government, industry, and civil society is essential to realize the vision of a $5 trillion economy. By fostering a transparent, efficient, and inclusive business ecosystem, India can solidify its position as a global economic powerhouse.

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Achieving Sustainability Goals through ESG Bond Markets: A Case Study on Indian companies w.r.t ReNew Power, IRFC, HDFC Ltd., and Tata Power in India

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Abstract:

As a way for businesses to finance projects that support sustainable development, ESG bonds are becoming more and more popular as a result of the growing interest in Environmental, Social, and Governance (ESG) considerations. Comparing the organizations issuing ESG bonds is the goal of this study. Additionally, it looks into how ESG-focused activities affect long-term financial success by analyzing the connection between company profile, their bond ratings, use of their proceeds and analysis on their performance w.r.t credit rating and market reception. The research employs both qualitative and quantitative methods, offering insights for investors, financial analysts, and policymakers involved in ESG investments.

Keywords: ESG bonds, sustainability, comparative analysis

Introduction:

"Earth provides enough to satisfy every man's needs, but not every man's greed."

— Mahatma Gandhi.

The earlier this message rings through our ears, pumps through our veins and reaches the world through our actions, the faster will we be able to sustain life on earth. Climate change has brought fresh challenges to the world. No longer will we be able to exploit nature for our own good. No longer will we be able to look after our own or provide for our own. Every irresponsible action towards the environment by even an individual will call upon a reaction of such great magnitude that it will drown every living soul in complete darkness of their own existence. The realisation took sometime but has now led to socially responsible behaviour on part of the society. The industries have now started diverting their time and resources to CSR initiatives and the society in turn has become conscious of their choices and who they choose to do business with. This has given rise to the idea of "Sustainable Investing" or "Socially Responsible Investing" or "ESG Investing- Environmental, Social and Governance Investing.

ESG investing is making a smart investment choice and choosing the companies that are making more environmentally beneficial decisions than just focusing on wealth creation. Investment in ESG firms means that your money is going to support businesses that aim to improve the planet. People may match their financial decisions with their personal beliefs by using this kind of ethical investing technique.

Similar to several other developing nations, India has witnessed a rise in the need for sustainable financing. Environmental, social, and governance (ESG) bonds have become a more popular means of raising capital for Indian businesses as a result of increased awareness of these concerns. These businesses finance social infrastructure projects, renewable energy projects, and other sustainability efforts with the money raised via ESG bonds. These bonds enable businesses to satisfy their capital requirements while integrating their financial operations with the objectives of global sustainability. ESG bond issuers pledge to use the money raised for particular ESG-related initiatives, including the advancement of renewable energy, social infrastructure, or corporate governance changes. The paper will reflect few notable Indian businesses that have issued ESG bonds.

Research Methodology

Statement of Problem: To effectively use resources for sustainable growth, investors, policy-makers, and enterprises must have a solid grasp of the dynamics of the ESG bond markets, especially in light of India's ambitious sustainability targets.

Objectives of the study

1. To analyze the financial performance of companies issuing ESG bonds through their credit rating and market reception.
2. To draw a comparison between the way proceeds/ capital raised is utilised by companies.
3. To explore the issuance of such bonds and their impact on various investment platforms.

Significance of the study

Investors are increasingly looking for investments that reflect their values as a result of increased awareness of social inequality, climate change, and corporate responsibility. ESG bonds are a bridge connecting socially conscious investing with conventional finance. Over the past ten years, they have grown significantly due to rising demand from stakeholders, regulators, and institutional investors who are worried about how corporate operations affect society.

Methodology

a. Company Selection

The study will concentrate on businesses from a range of sectors, such as housing, energy, and transportation. To ensure data availability for study, the selected companies will have offered ESG bonds within the last five years. The sample will include well-known businesses including Renew Power, HDFC Ltd., Indian Railways Financial Corporation (IRFC) and Tata Power.

b. Sources of Data

We will use secondary data for past financial performance, ESG ratings, bond issuance details.

Limitations of Study

a. **Time Constraints**: Bond issuance and ESG procedures are still developing. The long-term effects of bond issuance or ESG policies on financial performance or sustainability outcomes might not be adequately captured by research done over a small period of time.

b. **Geographical Constraints**: The study ignores geographical variations, the results may not be as broadly applicable as they may be because ESG practices may vary greatly across urban and rural operations of businesses.

Review of Literature

Abhilash, Sandeep S. Shenoy, Subrahmanya Kumar (2023), By using a comprehensive evaluation of the literature, this study seeks to close this gap by focusing on the growth, limiting factors, and future prospects of the green bond market. The papers in this review were published from 2010 to 2022.

Bekun(2022), According to the Indian study, renewable energy is the answer to CO2 emissions, whereas GDP development and non-renewable energy are the main causes of CO2 emissions in the nation.

Dr. D. Thirumala Rao, G. Santoshi (2021), mention in their current study the development of green finance in India as well as the issuance of green bonds. Ultimately, it was discovered that green finance had advanced significantly over the previous seven years, from 2013 to 2019, and that India ranked fourth among the 12 countries in terms of the total number of green bonds issued.

Ashima Verma and Rachna Agarwal (2020), Their research examines green bonds from a broad perspective. It discusses the state of green bonds in India at the moment. The study also highlights green bonds' potential for the future. Lastly, it includes useful recommendations for the Indian setting.

Data Analysis and Interpretation

I) ReNew Power - Green Bonds for Renewable Energy Projects

a. Company Profile - With an emphasis on wind and solar power projects, Renew Power is one of India's top renewable energy enterprises.

b. Issue of ESG Bonds- Renew Power issued $450 million in green bonds in 2021 to finance its renewable energy initiatives. The issuance was a component of Renew Power's plan to expand its capabilities in the renewable energy industry, and the green bonds were listed on the Luxembourg Stock Exchange.

c. Tracking of its proceeds - The green bonds' profits were designated in particular for financing renewable energy initiatives, such as solar and wind power plants throughout India. The business pledged to use the money only for initiatives that adhere to the Green Bond Principles (GBP) and produce quantifiable environmental advantages, such as lowering carbon emissions.

d. Analysis on financial performance:

• **Credit Rating:** A stable credit outlook was reflected in S&P Global's BBB- rating for Renew Power's green bond offering.

• **Market Reception:** International institutional investors, who are becoming more interested in sustainable assets, embraced the bond. Attracting investors was aided by Renew Power's steadfast dedication to clean energy and its well-established position in the Indian renewable energy market.

II) HDFC Ltd – Social Bonds for Affordable Housing

a. Company Profile- One of India's top mortgage lenders, Housing Development Finance Corporation (HDFC) is well-known for lending money to middle-class Indians. With a particular emphasis on affordable housing, HDFC has placed a greater emphasis on social responsibility and sustainability.

b. **Issue of ESG Bonds-** To fund the development of affordable homes, HDFC Ltd. issued social bonds in 2019 that raised ₹3,000 crore, or roughly $400 million. For the first time, a home finance firm in India issued social bonds with the express goal of financing projects that would benefit society.

c. **Tracking of Proceeds-** Only projects that provided affordable housing for low- and middle-income groups were funded with the money raised from the social bonds.

d. Analysis of Financial Performance:

• **Credit Rating:** HDFC's sound financial standing is demonstrated by the social bonds' AAA rating from ICRA, the highest rating available.

• **Market Reception:** Both domestic and foreign institutional investors showed a great deal of interest in the bond. The offering was well-liked because of its emphasis on social impact and affordable housing.

III) Indian Railways Finance Corporation (IRFC) – Green Bonds for Sustainable Transportation

a. Company Profile- One public sector organization that finances Indian Railways' modernization and growth is the Indian Railways Finance Corporation (IRFC). IRFC has taken steps to lessen the environmental impact of India's railway infrastructure as part of its dedication to sustainability.

b. Issue of ESG Bonds- In 2020, IRFC issued green bonds that raised ₹4,000 crore, or roughly $600 million. This was a component of their larger plan to finance the acquisition of energy-efficient locomotives and the electrification of railroad lines. The Indian National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) both listed the bonds.

c. Tracking of Proceeds: The green bonds' proceeds were meant to be used to buy energy-efficient locomotives, electrify railroad lines, and lower carbon emissions from railroad operations. Reducing reliance on fossil fuels and increasing the energy efficiency of the railway system were the main goals of the project.

d. Analysis of Financial Performance:

• **Credit Rating:** CARE Ratings gave the bonds an AA+ rating, indicating a good ability to pay debts.

• **Market Reception:** Institutional investors, particularly those mandated to concentrate on environmentally friendly and sustainable infrastructure projects, responded favorably to the issue.

Energy-efficient locomotives and a decrease in carbon emissions from railway operations were made possible by the Indian government's strong support of IRFC.

IV) Tata Power – Green Bonds for Renewable Energy and Clean Technology -

a. Company Profile- One of the biggest private sector electricity providers in India, Tata Power is increasingly concentrating on renewable energy. As part of its plan to lower its carbon footprint, the corporation has made large investments in wind, solar, and other sustainable energy initiatives.

b. Issue of ESG Bonds- Tata Power issued its first worldwide green bond in 2020, raising $500 million in the process. The money was meant to help the company's continuing renewable energy projects, especially those related to wind and solar power.

c. **Tracking of Proceeds:**

Tata Power's green bonds were designed to fund clean energy technologies that lessen their impact on the environment as well as renewable energy initiatives like the installation of wind turbines and solar panels.

d. Analysis of Financial Performance:

e. Credit Rating

f. According to S&P Global, the bond has a stable credit rating of BBB, making it suitable for long-term investments.

• **Market Reception-**

The market responded favorably to the green bond offering, especially foreign investors seekin g ESG-compliant securities.

The popularity of the bond was influenced by Tata Power's standing in the renewable energy sector and its dedication to sustainable growth.

5) **FINDINGS/SUGGESTIONS/CONCLUSION**

5.1 Findings

1. Companies with strong ESG policies are better positioned to deal with reputational crises, as their transparent and ethical business processes help mitigate the impact of unfavorable occurrences.
2. One of the primary findings of ESG research is that organizations that prioritize environmental sustainability tend to use cleaner technology, minimize waste, and reduce carbon emissions. This is particularly noticeable in industries such as energy, transportation, and housing.

Suggestions

1. Standardizing ESG indicators and improving transparency in reporting can increase the appeal of ESG bonds.
2. Additional data from various areas and sectors could improve the findings.
3. Future studies should examine companies' long-term financial performance after issuing ESG bonds.

Conclusion

The increasing trend of ESG bond issuances in India is demonstrated by these case studies, especially in areas like clean transportation, affordable housing, and renewable energy. ESG bonds are being used more and more by Indian businesses to fund their sustainable initiatives, illustrating how these financial products complement corporate goals and international sustainability objectives. Since investors are increasingly looking for businesses that provide ESG-compliant investment possibilities, the market's reaction to these bonds has been mainly positive.

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Social Responsibility Initiative

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Introduction

In contemporary society, the concept of social responsibility has emerged as a pivotal framework guiding the actions of individuals, organizations, and governments alike. Understanding this initiative is essential, given its profound implications for ethical behavior, community engagement, and sustainable development. Social responsibility encompasses a range of practices aimed at promoting positive social change, such as environmental stewardship, philanthropy, and ethical labor practices. This research paper will explore the various dimensions of social responsibility initiatives, evaluating their effectiveness and impact on both local and global scales. By analyzing case studies and empirical data, the investigation will highlight not only the benefits these initiatives provide to communities but also the strategic advantages they offer organizations in fostering trust and loyalty among stakeholders. Ultimately, this introduction paves the way for a deeper understanding of how responsible actions can lead to sustainable progress in society.

A. Definition and Importance of Social Responsibility Initiatives

The definition of social responsibility initiatives fundamentally encompasses the obligations that organizations have towards the wider society in which they operate. These initiatives reflect a commitment to ethical behavior, community engagement, and sustainable development, underscoring the recognition that businesses can influence societal outcomes positively. The importance of such initiatives cannot be overstated, as they foster public trust in institutions, a critical component noted in discussions surrounding corporate social responsibility (CSR) (Bak et al.). Moreover, consumers increasingly demand transparency and ethical standards from corporations, indicating a complex relationship between consumer behavior and CSR initiatives (Gruber et al.). This demand emphasizes that organizations must not only implement socially responsible practices but also effectively communicate their efforts. Ultimately, social responsibility initiatives serve to align corporate goals with societal needs, creating a synergistic relationship that benefits both businesses and the communities they serve.

I. Historical Context of Social Responsibility

The historical context of social responsibility reveals its evolution as a response to societal needs and economic transformations. Initially, corporate social responsibility (CSR) was primarily viewed through a philanthropic lens, with businesses donating to local causes to enhance their public image. Over time, as globalization emerged and societal expectations shifted, the scope expanded to include ethical obligations towards various stakeholders, such as employees, communities, and the environment. This evolution is underscored by critical literature reviews that examine the discrepancies in CSR practices across different sectors, particularly highlighting the hospitality industry's unique challenges and growth opportunities ((Curran et al.)). Moreover, as seen in the examination of Cohesion policy, critical turning points in policy history shape how social responsibility is framed today, demonstrating the interconnectedness of economic policies and ethical imperatives in promoting sustainable practices ((Manzella et al.)). Understanding this historical trajectory is essential for fostering effective social responsibility initiatives in contemporary contexts.

A. Evolution of Social Responsibility in Business Practices

The evolution of social responsibility in business practices has undergone significant transformation, particularly within the institutional framework established by initiatives such as the European Unions Green Paper on CSR published in 2001. This document served as a crucial triggering event, as it catalyzed a collective response from diverse stakeholders, including companies and NGOs, who vied for control over the regulatory landscape of corporate social responsibility (CSR) and social and environmental accounting and reporting (SEAR) (Collison et

al.). The resultant power dynamics revealed an imbalance, where corporations exercised systemic and episodic power more effectively than their non-governmental counterparts, thereby advocating for a voluntary rather than mandatory approach to CSR (Collison et al.). Simultaneously, the introduction of the ISO 26000 standard in 2010 exemplified a shift towards global policy-making, illustrating how participatory mechanisms could reconcile diverse socio-political interests while fostering a more unified framework of social responsibility . This dual evolution marks a critical juncture in understanding the nature of corporate responsibility in the globalized business environment.

II. Current Trends in Social Responsibility Initiatives

In recent years, the landscape of social responsibility initiatives has evolved significantly, reflecting a growing recognition of the importance of corporate social responsibility (CSR) across various sectors. The shift from implicit to explicit CSR practices, particularly evident in professional sports clubs, highlights how organizations are increasingly communicating their commitments through multiple channels. Research comparing French and UK sports clubs reveals that UK clubs actively promote their CSR initiatives, showcasing values such as health and diversity, while French clubs take a more understated approach in conveying their community impact (Aguinis H. et al.). Additionally, a study conducted in Croatia underscores the varied managerial perceptions of sustainability, identifying distinct levels of commitment among firms, from minimal responses to more integrated cultural approaches (Brečić et al.). These trends indicate a broader movement towards transparency and accountability, as businesses recognize that genuine CSR practices not only enhance brand reputation but also contribute meaningfully to societal challenges.

A. Impact of Technology on Social Responsibility Efforts

The integration of technology into social responsibility efforts has significantly transformed the landscape of corporate engagement and consumer expectations. As organizations leverage digital tools to enhance transparency and accountability, they are compelled to align their corporate social responsibility (CSR) initiatives with consumers demands for ethical business practices. With the rise of global consciousness, driven by advancements in communication technologies, companies are now able to engage with diverse consumer bases and deploy tailored CSR strategies that resonate with local and global audiences. For instance, multinational pharmaceutical companies are utilizing technology not only to enhance healthcare accessibility but also to create economic opportunities in developing countries through job creation and training (cite10). Such efforts exemplify how technological advancements can amplify the impact of CSR initiatives by fostering connections between corporations and communities, thereby promoting a culture of shared responsibility in an interconnected world (cite9).

III. Conclusion

In conclusion, the exploration of social responsibility initiatives reveals their critical role in fostering sustainable development and enhancing community well-being. The findings underscore the necessity for organizations, particularly within the public sector, to identify and understand the key drivers that influence the adoption of sustainability practices, as highlighted in the qualitative study of Abu Dhabis public organizations, which revealed a complex interplay of political, economic, social, and environmental forces ((AL SHEBLI et al.)). Moreover, the collaborative nature of these initiatives, such as the educational CSR program in Pahae Julu District, illustrates the significance of stakeholder partnerships in addressing resource limitations and improving quality outcomes despite challenges like the Covid-19 pandemic ((Athahirah et al.)). Ultimately, the successful implementation of social responsibility initiatives not only contributes to organizational competitiveness but also promotes a shared commitment toward societal betterment, reinforcing the imperative for ongoing engagement among all stakeholders involved.

A. Future Directions and the Role of Social Responsibility in Society

As society grapples with complex global challenges, the future directions of social responsibility initiatives appear increasingly crucial in shaping ethical business practices and community engagement. Corporations and organizations are progressively recognizing their role not just as profit-driven entities but as pivotal contributors to societal well-being. This shift calls for innovative approaches that integrate sustainability, ethical governance, and community-oriented strategies into core business models. Such initiatives promote transparency and accountability, fostering trust among consumers who are more discerning and socially conscious. Additionally, in an era where technological advancements and globalization are interlinked, embracing social responsibility can serve as a competitive advantage, attracting a loyal customer base and enhancing brand reputation. Ultimately, the continued evolution and implementation of social responsibility will serve to foster a more equitable and sustainable society, making it essential for future research to explore its multifaceted impacts across diverse sectors and communities.

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Innovation Hubs in India: Catalysts for Economic Growth and Technological Advancement

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Abstract

In India, innovation hubs are becoming essential for promoting entrepreneurship, creativity, and technical breakthroughs. These hubs, which are frequently found in cities, offer corporates, startups, and academic institutions a collaborative atmosphere. This essay examines the rise of innovation hubs in India, their contribution to economic growth, and the difficulties they encounter. Additionally, it looks at case studies of well-known centres like Hyderabad and Bengaluru and assesses government programs like the Atal Innovation Mission and Startup India. Recommendations for expanding and improving India's innovation hubs are included in the paper's conclusion.

Introduction

With one of the fastest-growing economies in the world, India is emerging as a hub for innovative concepts and ventures. Innovation centres, which bring together technology, skilled individuals, and ideas, are crucial to this progress. These centres are locations where businesses, investors, entrepreneurs, and academic institutions collaborate to address issues and strengthen the economy.

This essay discusses the significance of these innovation hubs in India, their role in the nation's development, and the difficulties they encounter. Additionally, it offers effective examples and ideas for improving them.

What Are Innovation Hubs?

Ecosystems created to promote creativity, innovation, and teamwork are known as innovation hubs. Usually, they include:

1.Coworking spaces, which offer infrastructure to freelancers and startups.

2.Incubators and Accelerators: Providing networking opportunities, capital, and mentorship to early-stage businesses.

3.Research and Development Centres: Encouraging technological progress via industrial and academic collaborations.

4.Networking Platforms: Promoting cooperation between interested parties.

These hubs flourish in cities with easy access to infrastructure, talent, and funding.

The Rise of Innovation Hubs in India

Historical Context

India's economic liberalization in 1991 marked the beginning of its transition to a global centre for innovation. Cities like Bengaluru became technological powerhouses as a result of the subsequent IT boom in the late 1990s. As time went on, the innovation landscape expanded to encompass industries like renewable energy, biotechnology, and fintech.

Important Growth Drivers

1. Government Policies: Programs such as Made in India, Digital India, and Startup India have improved the climate for innovation hubs.
2. Demographic Dividend: Entrepreneurial endeavours are fuelled by a youthful, tech-savvy populace.
3. Access to Capital: The expansion of startups has been aided by the increased availability of angel and venture capital financing.
4. International Collaborations: Knowledge sharing is improved through alliances with foreign corporations and universities.

Role of Innovation Hubs in India's Development

1.**Growth in the Economy**

Innovation hubs encourage entrepreneurship and employment development, which boosts India's GDP considerably. These centres' backed startups have opened up new markets and upended established industries.

2.**Development of Skills**

Innovation hubs give people access to cutting-edge skills through workshops, mentorship programs, and hackathons, which increases their employability.

3.**Development and Research**

In innovation centres, industry-academia collaboration speeds up research and development, resulting in innovations in sustainable practices, healthcare, and technology.

4.**Development of Urban Areas**

Cities with innovation clusters, such as Hyderabad, Pune, and Bengaluru, have seen an increase in infrastructure, drawing in investments and talent from around the world.

5.**Overcoming the Urban-Rural Gap**

Through a number of programs, rural innovation hubs in Tamil Nadu and Gujarat are fostering inclusive growth and supporting local entrepreneurs:

Gujarat:

The Student Startup Innovation Policy (SSIP) established Ahmedabad's i-Hub (Innovation Hub), a business incubator that promotes cooperation between entrepreneurs, investors, and academic institutions. It supports up to 500 businesses at once and provides co-working facilities, finance assistance, coaching, and intellectual property support.

Hubs for STEM Innovation in the Smart Village Movement: Rural schools in the districts of Vadodara and Narmada now have STEM Innovation Hubs because to this project. By allowing kids to work on projects like robots and 3D printing, these hubs foster innovation in students from an early age through experiential STEM (Science, Technology, Engineering, Mathematics) education.

Tamil Nadu:

The Tamil Nadu government launched TN-RISE (Tamil Nadu Rural Incubator and Start-Up Enabler) with the goal of establishing women-led businesses in rural regions. It provides tailored market connections, funding, and operational guidance in partnership with businesses like as Flipkart and HP to remove barriers faced by female entrepreneurs.

The Rural Technology Business Incubator (RTBI) at IIT Madras Research Park: In villages like Rediarpatti in the Tamil Nadu district, RTBI has set up rural data annotation centres as part of its "10x initiative." By giving locals access to high-tech job opportunities, these centres help close the employment gap between urban and rural areas. **Case Studies of Prominent Innovation Hubs**

1. Bengaluru: The Silicon Valley of India
   Focus areas include e-commerce, financial, AI, and IT.
   Important Players: Flipkart, Wipro, Infosys, and several startups.
   Infrastructure: Contains tech parks like Electronic City, coworking spaces, and accelerators like Axilor Ventures.
   Impact: Bengaluru is one of the top 20 worldwide startup ecosystems and accounts for 9.8% of India's GDP.
2. Hyderabad: The Genome Valley
   Focus Areas: IT, drugs, and biotechnology.
   Important Projects: T-cluster (India's largest innovation cluster) and the Genome Valley project.
   Government Support: Laws that encourage R&D and collaborations between the public and private sectors.
   Impact: Hyderabad has drawn international biotech firms and established India as a vaccine manufacturing powerhouse.

3. Delhi-NCR: The Policy Powerhouse

Focus areas include media companies, fintech, and edtech.

Important Infrastructure: NASSCOM 10,000 Startups and other incubation facilities. Impact: Startups have been able to test out regulatory improvements thanks to their close proximity to legislators.

Government Initiatives Supporting Innovation Hubs

1. India Startup

Startup India was established in 2016 and offers finance assistance, tax advantages, and regulatory compliance simplicity. This program has recognized more than 80,000 startups.

2. The mission of Atal Innovation (AIM)

Through its Atal Tinkering Labs and incubation facilities, AIM fosters innovation, focusing especially on rural and educational communities.

3. India's Digital Economy

Startups are now able to target underserved populations thanks to this initiative's increased internet usage and digital literacy.

4. The NISP, or National Innovation and Startup Policy

NISP, which was introduced by the Ministry of Education, incorporates entrepreneurship and innovation into educational settings.

Challenges Faced by Innovation Hubs in India 1. Infrastructure Gaps

Physical Infrastructure: Well-designed offices, labs, and collaboration spaces—all necessary for promoting innovation—are lacking in many cities. For example, insufficient coworking spaces, erratic transit, and power outages frequently impede companies in smaller cities.

Digital Infrastructure: Entrepreneurs' ability to work together and efficiently use digital technology is limited in non-urban areas by a lack of dependable communication networks and high-speed internet.

2. Funding Constraints

Early-Stage finance: Although venture financing for well-established firms is rising, seed finance is frequently a challenge for fledgling businesses. There are few prospects for aspiring business owners since investors are hesitant to support unproven concepts or teams.

Dependency on External Funds: Innovation hubs frequently rely on public or private funding, which may not always be sufficient or constant, which affects their capacity to provide businesses with all-encompassing support.

3. Talent Shortages

Skills Gap: Despite having a sizable workforce, many Indian professionals are not wellversed in cutting-edge disciplines like advanced robotics, blockchain, and artificial intelligence. Startups trying to find qualified workers are hampered by this lack. Brain Drain: A shortage of talent exists in Indian innovation hotspots since highly qualified people frequently leave the country in search of better possibilities.

4. Bureaucratic Hurdles

Regulatory Complexity: Establishing and running a business in India frequently entails negotiating difficult and drawn-out regulatory processes, like obtaining permissions and following compliance guidelines.

Inconsistent Policies: Startups and investors are discouraged from making long-term commitments due to the uncertainty created by frequent policy changes and ambiguous standards.

5. Limited Regional Spread

Urban Concentration: The majority of innovation hubs are found in major cities like Delhi, Hyderabad, and Bengaluru. For businesses in smaller cities and rural locations, this centralization restricts their access to resources and opportunities.

Rural Neglect: In spite of government initiatives, rural areas frequently lack the infrastructure, awareness, and support networks required to promote entrepreneurship and innovation.

Future Directions for Innovation Hubs in India

1.Innovation hub decentralization

In Tier-2 and Tier-3 cities, promoting the establishment of hubs can guarantee inclusive growth and lessen traffic.

2.Improved PPPs (Public-Private Partnerships)

Government, academic, and corporate sector cooperation can enhance policy frameworks, funding, and infrastructure.

3.Pay Attention to New Technologies

To remain globally competitive, hubs should give priority to areas like artificial intelligence, blockchain, quantum computing, and renewable energy.

4.Programs for Reskilling and Upskilling

The talent gap can be closed with investments in education and training initiatives, especially in fields involving cutting-edge technology.

5.Robust Regulatory Structures

Innovation can be promoted by enacting strong intellectual property regulations and streamlining compliance procedures.

Conclusion

India's transition to a global knowledge economy is being led by innovation clusters. These centres are essential in determining the future of the nation because they encourage entrepreneurship, promote technology, and stimulate economic growth. However, obstacles including geographical inequities, financing constraints, and infrastructure deficits continue to limit their potential. Innovation centres can reach their full potential if these problems are resolved with calculated investments, legislative changes, and cooperative initiatives.

Innovation centres will be essential in promoting equitable and sustainable growth as India moves closer to becoming a $5 trillion economy, guaranteeing that the country will continue to be a global leader in innovation.

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"India's Path to Sustainable Urbanization: Innovations and Challenges in Creating Smart Cities"

Aanchal Suresh Jain

Research the integration of technology, Sustainability, and governance in India's urban centres.

Abstract:

India's fast urbanisation has made it necessary to create smart cities that combine sustainability, technology, and effective government to meet the growing needs of the population. This research study on India's smart cities mission from the perspective of sustainability practices, and technological integration. It pays attention on the problems and new development that have arisen in Mumbai city. The study suggests insights into the advancement, challenges, and socioeconomic and environmental result of India's smart city programs by examining secondary data from scholarly research and case studies.

On the basis of findings, issues including digital inequality, ineffective governance, and socioeconomic marginalisation still exist even while sustainability initiative and technology fostering urban changes.

Introduction:

The Indian government had started the smart cities mission in 2015 with the goal of converting 100 cities into high tech metropolitan centres and sustainable. The objective is to incorporate contemporary technology, upgrade urban infrastructure and improve public services with the aim to build effective, inclusive and sustainable cities. With the increasing number of people moving from rural to urban areas, India has one of the highest rates of urbanisation in the world. cities are under stress to manage the resources effectively, maintain sustainability and to build infrastructure.

In order to get the achievement of mission of India's smart cities, under this research looks at how environmental initiatives, technology and governance frameworks will affect India's urban future. This research explores the socio-economies effects of these initiative and also discover the achievements and difficulties that Indian cities have had in implementing sustainable practices and smart technologies.

Objective of the study:

1. To review how smart cities use technology to enhance resource management and urban infrastructure.
2. To assess how smart cities use technology to enhance resource management and urban infrastructure.
3. To analysis the challenges in putting smart city initiative into action, such as insufficient and ineffective funds and governance.
4. To assess how inclusiveness and fair resource access are affected socio-economically by smart city initiatives.

Research Methodologies:

Smart city's objective is being analysis in this research using a qualitative research methodology based on secondary sources. Scholarly articles, case study and publication from global institution are the sources from which secondary data are obtained. The data is mainly collected through comparative analysis by paying attention on various smart city projects, including technology integration, sustainability measures, governance framework and socio- economic results.

Literature Review:

In international development circles and scholarly, India's smart cities mission has attracted a lot of attention. This review of the literature summarises previous research papers and conclusions about technology, sustainability and governance interact with India's urbanisation process. It draws attention to important topics, successes and difficulties in the development of smart cities.

1.Conceptual Framework of smart cities:

The conceptual framework of Smart city in which smart cities are metropolitan areas that use digital technologies to upgrade sustainability, effectiveness, efficiency and quality of life, according to academics and policymakers.

Nam and Pardo (2011) Smart cities, in the opinion of Nam and Pardo are a combination of intelligent systems, community participation and urban design.

Caragliu et al. (2011) Furthermore, Caragliu et al. states that smart cities use ICT (Information and Communication Technology) to enhance inclusivity, economic growth and sustainability.

These thoughts are used in the Indian context by the **Smart Cities Mission (2015),** which pays attention on building infrastructure, guaranteeing sustainable growth, and making use of digital governance tools in order to alleviate the problems caused by increasing urbanisation.

2. Technology and innovation in Smart Cities:

Aurigi and Odendaal (2020): Smart city technologies that assurance resource utilisation, increase urban resilience, and improve service delivery and improve standard of living of peoples as per studies like Aurigi and Odendaal through Integrated Command and Control Centres (ICCCs), Indian towns like Bengaluru and Pune have implemented this technology to monitor, utilities and expedite public service.

Prasad et al. (2020) Despite, Prasad et al. stated that marginalised people are frequently left out of the unequal distribution of technological innovation in India's smart cities.

3. Governance and Policy Challenges:

To achieve effective project execution, accountability, smart city governance is essential.

Chakrabarti and Kumar (2018): According to Chakrabarti and Kumar, Public-Private Partnerships (PPPs) are introduced by India's smart cities mission in order to promote innovation and lessen the financial strain on local governments.

4.Sustainabilty in Urban Development:

Many studies have been executed on the sustainability aspect of smart cities. Urban sustainability, according to **Jabareen (2006)**, is the blend of economic feasibility, social justice and environmental conservation. Urban sustainability is being progressive in India through programs including waste management system, environmentally friendly public transportation and solar energy projects.

5.Socio-Econimic Impacts:

By lending an equal access to opportunities and resources, smart cities seek to reduce socio-economic gaps.

Das (2020) states that measures for affordable housing and smart transport have raised the standard of living in cities.

Sen and Singh (2021) warn that because lower-income groups frequently find it difficult to acquire technology-dependent services, smart cities may unintentionally widen social gaps.

Data Analysis:

Based on secondary data, the following trends and patterns have been identified. The following patterns and trends have been found using secondary data:

1. Technological Integration: India's smart cities have advanced significantly in implementing big data, AI, and technology. For instance, Bengaluru's installation of solar rooftop systems demonstrates India's dedication to green energy, while Pune's Integrated Command and Control Centre (ICCC) effectively manages municipal services using real-time data. However, access to these technologies is restricted in rural and underserved urban areas due to the digital divide, which exacerbates inequality.
2. Governance Models: In cities like Ahmedabad, the execution of smart city initiatives has been enhanced by governance through Public-Private Partnerships (PPPs). However, timely implementation has been hampered by governance inefficiencies, such as bureaucratic hold-ups and a lack of coordination between the state and local administrations.

3. Sustainability Outcomes: Energy-efficient Street lighting (like the LED lights in Jaipur) and solar panels are two examples of green practices that smart cities in India have adopted to promote environmental sustainability. However, because the planning frequently lacks a thorough, ecosystem-based approach, it is uncertain how the project will ultimately affect long-term environmental health.
4. Socio-Economic Impacts: Although urban infrastructure has improved, including affordable housing and better transit systems, marginalised populations frequently do not have access to these services because many smart city solutions rely heavily on technology. Waste management systems have been successfully installed in cities like Indore, however the advantages are not shared fairly.

Data Interpretation:

From the data analysis, several key interpretations emerge:

1. Technological Disparities: Despite technology plays an important role in facilitating the development of smart cities, not all facets of society can equally benefit from them. Utilizing technology-dependent services might be difficult for lower-income individuals.
2. Governance Challenges: Making decisions and carrying out projects are made more difficult by the involvement of several stakeholders, including state and local governments as well as members of the private sector. Vanquishing these barriers requires improved coordination and decentralised decision-making.
3. Sustainability in the Short Term: Although environmental advantages such as better waste management and lower energy usage are being realised, long-term environmental planning is required to ensure sustainable growth.
4. Inclusive Growth: Despite the fact that smart city drive has enhanced urban living standards, not all socioeconomic groups are benefiting equally, especially the urban poor and marginalised communities.

Conclusion:

1. The mission of smart cities in India has achieved significant advancement in sustainability promotion, technological integration and urban governance enhancement. But challenges like socio economic marginalisation, technical disparity and ineffective governance to be major obstacle to achieve the mission in full potential.
2. According to research technological advancement could enhance urban management but also if they are open and available to all residents.
3. To guarantee the successful implementation of smart city projects, governance model must also be reinforcing with more defined responsibilities for stakeholders and improved cooperation and coordination.
4. Eventually, sustainability initiative is having an effect, prolong gain require a thorough and sustained approach to environmental conservation.
5. The research recommends strengthening local governance and extending digital literacy programs in order to address these issues.

Suggestion:

The study suggests the following solution to these issues:

1. In order to close technology gap needs to improve and increase digital literacy.
2. Need to include additional community-based strategies to guarantee that all socio- economic groups benefit from smart cities.
3. Decentralising decision -making and strengthening local governance.
4. By including additional community – based strategies to guarantee that all socio-economic groups benefit from smart cities.
5. Setting up long term environmental sustainability plan as a top priority.

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Integrating Artificial Intelligence and Systematic Approaches for Sustainable E-Waste Management in Educational Institutions

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Abstract

Electronic waste, commonly known as e-waste, is an increasing global concern as educational institutions, among other organizations, produce vast amounts of electronic waste. This paper brings together insights from current research to analyze how AI-based technologies and systemic approaches can facilitate the management of e-waste. Material flow analysis (MFA), AI-based waste segregation, and behavioral interventions are investigated to suggest an integrated framework for managing e-waste in education. The key findings indicate that integrating AI technologies with structured waste flow models and sustainability practices can enhance recycling efficiency, reduce environmental impact, and promote sustainable practices.

1. Introduction

E-waste management has become an urgent global issue due to its rapid growth and hazardous environmental impacts. Educational institutions are significant contributors to this waste stream through discarded laptops, mobile phones, and other electronics. While traditional management systems have focused on collection and disposal, recent advancements in AI and systematic waste analysis present opportunities to enhance sustainability. This paper discusses how integrating AI technologies, MFA, and behavioral insights can address e-waste management challenges in educational settings.

2. Literature Review

1.2.1 E-Waste Flow Analysis in Educational Institutions

Agamuthu et al. (2015) applied MFA to trace the flow of e-waste in higher education institutions, highlighting inefficiencies in collection and recycling systems. Kitila and Woldemikael (2019) studied e-waste management in Addis Ababa's educational and governmental sectors, finding a lack of well-structured recycling systems and formal sector integration.

2.2.2 AI in Waste Segregation and Management

AI-driven technologies have revolutionized waste segregation, particularly in real-time classification and resource recovery. Alsubaei et al. (2022) designed a deep learning model for small object detection, applying it successfully in smart cities. Salunke (2023) further developed WasteSegNet, a deep learning framework for urban waste classification, achieving high accuracy in segregating waste.

3.2.3 Behavioral and Sustainability Insights

Behavioral factors play a significant role in e-waste management. Al-Zahrani (2024) emphasized awareness campaigns and sustainability practices in universities. Goyal and Gupta (2024) discussed interventions targeting behavioral barriers in e-waste management.

4.2.4 Integration of AI and Circular Economy Practices

AI technologies are increasingly being integrated with circular economy principles to enhance sustainability. Singagerda and Trisnawati (2025) highlighted AI's role in achieving circularity by improving resource recovery and minimizing waste. Simaei and Rahimifard (2024) developed AI-based decision support systems to optimize end-of-life value recovery, offering scalable solutions.

5.2.5 Advancements in Industry 4.0 and E-Waste Management

Shahidzadeh and Shokouhyar (2023) explored deep learning for WEEE management within the Industry 4.0 framework, showcasing AI's role in automation and resource recovery optimization.

Spirito (2024) investigated AI applications in reverse logistics, focusing on waste returns and environmental minimization.

3. Objectives

The primary goal is to analyze e-waste generation and management practices in colleges using the "Refurbish, Recycle, Reduce" (3R) framework. This framework aims to promote sustainable e-waste handling by identifying reusable components, enhancing recycling efficiency, and reducing overall waste generation.

4. Methodology for Data Collection

6.4.1 Data Collection Tools

4.1.1 Surveys and Questionnaires:

- Structured questionnaires were designed to gather data on the types and quantities of e-waste generated.
- Questions focused on inventories of electronic devices, disposal practices, and awareness of e-waste management policies.

4.1.2 On-Site Observations:

- Visits to storage areas and disposal sites to verify the volume and types of e-waste.

4.1.3 Interviews with Stakeholders:

- Conducted with facility managers, IT staff, and administrative personnel to understand disposal methods and challenges.

7.4.2 Sampling

The study employed purposive sampling to select 20 colleges based on geographical distribution, institution size, and availability of e-waste management infrastructure.

8.4.3 Data Points Collected

1. Volume of e-waste.
2. Categories of e-waste (hazardous vs. non-hazardous).
3. Current disposal methods (recycling, donation, storage, or landfill).
4. Awareness levels among students and staff.
5. Institutional policies for e-waste management.

5. Results and Discussion

9.5.1 Key Findings

- Total e-waste generated: **1,200 kg/month** across 20 colleges.
- Types of e-waste: 40% hazardous, 60% non-hazardous.
- Disposal practices: 20% recycled, 50% stored, 30% sent to landfills.

10.5.2 Refurbish

- **25%** of e-waste (e.g., laptops, monitors) was identified as refurbishable.

11.5.3 Recycle

- **50%** of e-waste was recyclable, though only 35% of colleges partnered with certified recyclers.

12.5.4 Reduce

- **15%** of colleges implemented reduction measures such as extending device lifespans and digitalization.

6. Proposed Framework

1. AI-driven segregation tools.
2. Behavioral approaches for stakeholder engagement.
3. Policies formalizing recycling and circular economy practices.

7. Conclusion

The "Refurbish, Recycle, Reduce" framework offers a comprehensive approach to managing e-waste in educational institutions. By adopting this framework, institutions can reduce environmental impacts, improve resource efficiency, and foster sustainability.

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Cybercrime and Justice The Evolving Role of Cyber Law in India

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Abstract

Significant profitable and social progress has redounded from India's quick digitization, but it has also increased cybercrime, venturing people, businesses, and public security. To address these problems, maintain justice, and cover the digital terrain, cyber law is essential. This essay explores the elaboration of cyber law in India, emphasizing significant laws, seminal rulings, and new difficulties in the fight against cybercrime. It highlights the value of flexible legal processes in keeping up with technological advancements and assesses the advantages and disadvantages of current fabrics. The need for a comprehensive strategy to achieve justice in the digital age is stressed by the discussion of suggestions for enhancing enforcement and raising public mindfulness.

Introduction

India now has one of the biggest internet stoner populations in the world thanks to the digital revolution, which is also perfecting connectivity and stimulating profitable growth. But this increase in digitization has also led to a rise in cybercrimes similar to hacking, fiscal fraud, identity theft, and cyberbullying. In order to reduce these pitfalls, cyber law — which includes rules for online conduct and digital relations is pivotal.

The Information Technology(IT) Act, of 2000, a major piece of legislation intended to combat cybercrime and e-commerce, marked the morning of India's cyber law trip. Its compass has been expanded throughout time to address new issues through emendations and supplemental legislation.

This essay examines how cyber law has changed in India and evaluates how well it works to help cybercrime and administer justice.

Understanding Cybercrime

1. Cybercrime is the term used to describe illegal exertion that targets digital systems or is carried out through digital platforms. It falls under one of the following orders

- Crimes Against individualities, which include fiscal fraud and identity theft.
- Online abuse and cyberstalking
- Access to particular data without authorization.

2. **Crimes Against Associations**

- Ransomware attacks and data breaches.
- Intellectual property theft.
- Critical structure dislocation.

3. **Crimes Against Governments**

- Spying and cyberterrorism.
- Propagation of misinformation and propaganda.

Cybercrimes lead to fiscal losses, damage to reports, and corrosion of trust. Addressing these issues demands robust legal fabrics and visionary enforcement strategies.

The Elaboration of Cyber Law in India

India's cyber law frame has acclimated over time to fight evolving digital pitfalls

1. The Information Technology Act, 2000

The IT Act, of 2000, served as India’s first comprehensive legislation addressing electronic governance, cybercrime, and data protection. crucial features include

- Legal recognition for electronic records and digital autographs.
- vittles for precluding unauthorized access and data breaches(Section 43).
- chastising identity theft and impersonation(Section 66C).
- Addressing pornography and child exploitation(Section 67).

Although groundbreaking, the IT Act faced review for its limited compass and outdated vittles.

2. Emendations and Supplementary Laws

The IT(Correction) Act, of 2008, introduced critical updates

- Enhanced penalties for cyber terrorism(Section 66F).
- vittles for handling sensitive particular data(Section 43A).
- Broader delineations of cyber offenses, including phishing and spamming. fresh laws include
- The Indian Penal Code(IPC) for addressing online vilification and importunity.
- The Digital Personal Data Protection Act, of 2023, fastening on data sequestration and stoner concurrence.

Landmark Cases in Indian Cyber Law

Several significant cases have shaped the cyber law geography in India

1. Shreya Singhal v. Union of India(2015)

- The Supreme Court abrogated Section 66A of the IT Act, declaring it unconstitutional for being vague and exorbitantly broad.
- This decision corroborated the significance of free speech in the digital realm.

2. The Blue Whale Challenge Incident

- Government measures to ban dangerous online games underlined the need to regulate digital content to cover druggies.

3. Aadhaar Data Security enterprises

- Allegations of abuse of biometric data stressed the necessity for strict data protection laws.

4. Cyber Frauds in Online Banking

- Incidents of phishing and unauthorized deals urged stronger cybersecurity measures in fiscal institutions.

Many Challenges that India Faces in Combating Cybercrime

However, India faces some very persisting challenges about cybercrime despite technological advancement. These are:

1. Technological Advancements

- Present fast-changing technological dimensions often tend to run ahead of existing legal frameworks.

2. Jurisdictional Complexities

- Cross-border prosecution or investigation becomes complicated by cybercrime.

3. Resource Limitations

- Such a level of deficiency in specialized technical manpower and infrastructure responds negatively to the effective enforcement of legislation.

4. Citizen Awareness

- Lack of awareness among citizens about their rights and the form in which they can report a cybercrime.

The Place of Cyber Law in Providing Justice

Cyber law is very essential in pursuance of justice in the digital age. Some of these important functions would include:

1. Protection of Rights

o Preventing everybody from invading privacy or secure personal data.

2. Deterrence

o Making stringent punishment to de-motivate cyber culprits.

3. To Create a Trust Environment On Digital Space:

o To build trust in online platforms and transactions.

4. Facilitating Global Cooperation:

o Building a network with global partners in cross-border cybercrime.

Emerging Issues of Cyber Law in India

The new challenges have arisen as part of the continuing phenomenon of digitalization that brings in new issues for Indian cyber law:

1. AI and Automation:

- The emergence of AI-facilitated cybercrime, along with issues related to automated decision-making.

2. Blockchain and Cryptocurrencies:

- Regulation of decentralized technologies while safeguarding against misuse for innovative growth.

3. Deepfakes and Digital Manipulation:

- Countering highly advanced technologies regarding misinformation and identity fraud.

4. Critical Infrastructure Security:

- Strengthening the security arrangements from cyberattacks on critical services, for example, healthcare and energy services.

Strengthening Cyber Law Recommendations:

The measures suggested to combat cybercrimes include the following:

1. One-time Review of Legislation: Revision of laws needs to be taken time to time to keep pace with technology.
2. Improved Enforcement: Provides law enforcement capability and advanced tools.
3. Increase Public Awareness: Citizen education on cyber victimization and reporting.
4. Promote International Cooperation: Develop cooperation with global organizations against transnational cybercrime.
5. Creating Specialized Cyber Court: Establishing specific courts to ensure speedy trials of cybercrime cases.

Public Awareness and Education Outreach Campaigns.

1. One key element in fighting cybercrime is the education of the public about the dangers and how to behave online safely.
2. Public awareness initiatives could be workshops, seminars, or even efforts through social media.
3. Schools and colleges should embed cybersecurity into their syllabi so that eventually a culture of digital responsibility will be nurtured among future generations.
4. Corporate participation would mean regularly conducting training of its personnel to recognize phishing or hoaxes, develop good password practices, and understand data protection rules.
5. These would harness the efforts of government, NGOs, and the private sector in the greater outreach of such educational campaigns.

But still, India has challenges in combating cybercrime:

1. **Technological Improvements:** The rapid progress in technology has always been ahead of the existing legal framework.
2. **Jurisdictional Problems**: The more the boundaries separate forward, the more complex the investigation and prosecution of cross-border cybercrime become.
3. **Resource Deficiency**: There is very little technical support and infrastructure available for effective enforcement.
4. **Public Awareness**: A major section of citizens is not aware of their rights or whom to report cybercrime to.

Role of Cyber Law in Commanding Justice:

Cyber Law is fundamental in achieving justice in the digitalized world. Some main functions include:

1. Protecting rights: Privacy and security of data of individuals.
2. Deterrence: Imposing stringent penalties so that cybercriminals can be deterred.

3. Trust in Digital: Increasing trust in online platforms and transactions.
4. Facilitating Global Cooperation: Helping other nations in the efforts of cross-boundary cybercrime.

International Best Practices for Indian Cyber Law

The study of international practices enriches the study of strengthening Indian cyber law:

1. **The GDPR Model:**

The European General Data Protection Regulation (GDPR) has been seen to be strong enough to promote data privacy and require much consent and accountability among users.

2. The American Way:

e.g., The law has testified its commitment by respectively receiving the act of the Cybersecurity Information Sharing Act (CISA), which largely encourages public-private cooperation in responding to cyber threats.

3. Cybersecurity Strategy Singapore:

A mandatory report of cyber incidents with Singapore's proactive initiatives stands for better governance efficiency.

This has also made it more successful to develop better cyber law frameworks through policy-making by adopting and customizing them in Indian contexts.

Technology Adaptation for Enforcement

Technology such as artificial intelligence, machine learning, and the advent of blockchain can greatly improve efficacy in cyber law enforcement. Such analytics as predictive views could better allow law enforcement to see patterns of cybercrimes and pre-emptively engage. Blockchain's transparency and immutability afford fettered value to digital transactions, curbing fraud.

That would spur investment in these technologies alongside developing public-private partnerships to empower enforcement agencies against sophisticated cyber threats.

Conclusion

Indeed, it could be said that with the strengthening of the existing context surrounding cyber law in India, cybercrime and its associated devastating effects will always keep hunting the present system. While considerable advances have been made so far, there is still a need for a proactive and adaptive approach toward justice and the security of digital ecosystems. With enhanced enforcement, public awareness, and collaborative effort at the global level, India will be gearing itself toward a resilient and secured digital future. The changes in technology demand a responsive law, one that not only addresses the issues of today but also addresses those of the future, thereby ensuring justice in a digital society.

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Secure Me: Women's Safety Using AI And IOT

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Abstract:

Despite being a local issue, women's safety is a global concern, and technological solutions are being considered to minimize risks and improve personal security. Among the most revolutionary ones are AIs and IoTs that could lead such safety devices to be more proactive, intelligent, and responsive. This talk reviews the current research trends in AI and IoT-based women's safety devices concerning their technological foundations, applications, effectiveness, and challenges. The paper advances by integrating discussion around wearables and mobile applications, smart home systems, and other innovative technologies used toward integrating the AI and IoT approach to women's safety, aiming at revealing insights on the good and bad sides of the devices. Finally, the paper discusses potential future directions for improvements and scaling women's safety technologies.

Keywords: Women's Safety, IoT, AI, wearables, personal safety, machine learning, predictive analytics, real-time monitoring, modern security systems.

Introduction:

Internet of Things (IoT) - the largest ever network of physical devices, all communicating and exchanging data across the internet, often without human intervention. The devices are equipped with sensors, software, and other technics used for collecting, sending and receiving data, which would facilitate smarter and automation in industry and various applications.

IoT brings in a new approach towards human-computer interaction and creates connectivity scenarios in which normal household items can connect to the internet to reciprocate with one another. It provides avenues for developing better availability systems that would work in a more processed, sleeker, and smarter way at personal levels and at various industrial levels.

AI technology plays a crucial role in the collection, processing, and securing of data. The increasing amount of data generated from different data sources (IoT devices, mobile applications, sensors, etc.) makes it all the more important that AI sets an involvement for every relationship so that it can continue improving its data-related responsibilities while keeping in mind privacy and security.

Women security is an important global issue. Security of women from physical as well as emotional violence constitutes the finer aspects of personal safety and securitization of women from various forms of harassments, exploitations, and discriminations. It puts emphasis on both-physical and psychological well being, conditions that ensure that women are free to move, live, and work in their country of residence without the fear of harm or danger.

Statistics reveal that violence against women is a very common phenomenon across the globe. The United Nations states that one out of every three women is subjected to violence in the form of abuse, be it physically or sexually, during the course of her life. Wearable devices can be beneficial in the sense that they can enhance women's security because, whenever a woman is in an emergency, they will be able to quickly inform their relative or authority for help.

Research Objective:

- To review existing literature on wearable devices that capture live images using AI technology for women's security.
- To identify the current state of research, gaps, and future directions.
- To propose a framework for the development of a wearable device that captures live images with location using AI technology.
- Add siren emits a loud siren to deter attackers.
- Send SMS message to family members and police.

Research Design :

- **Developing and designing**: A wearable device that captures pictures with location with alerts through SMS or messages to family members or the authorities in an emergency condition.
- **Assessing Impact of the Device**: Assess the impact of the wearable device on women's security and safety issues, i.e.; its use in prevention of crimes against women.
- **Create a Machine Learning Algorithm**: Create a machine learning algorithm that detects emergency and raises alerts.
- **Identify Challenges and Limitations**: Identify the challenges and limitations posed by a wearable device with suggestions for betterment in future.

Literature Review:

These devices have been categorized into two major types as wearable devices and smart accessories. The emerging ones include smart jewellery associating fitness trackers and smart watches which fit into very good IoT-solution integrated functionality especially among women safety. These devices with accelerometers, GPS, and heart rate monitors can provide information on any stress signal-or abnormal physical activity.

However, along with such safety features comes fall detection and SOS alert triggering specified contacts or emergency services in times of need. IoT-enabled Bracelets and smart rings could even be programmed for sending alerts discreetly in emergencies. For instance, an alert is sent on Siren smart jewellery when she presses a button hidden under its surface.

According to some study examples including Bansal et al. (2019) and Wang et al. (2020), these wearable devices have the capability to accurately sense distress due to sudden jerks or abnormal physiological changes in real time.

Methodology :

Here's a proposed methodology for a research paper on a woman's security device that captures live images with location and sends SMS to family and police, using AI technology:

It is concerned with a transnational intervention conceptualized, designed, implemented, and evaluated to create a system for real-time-to-predictive threat detection from women influenced most by IoT and AI technology-with core methodological steps-stages as: system design, data collection, algorithm development, and evaluation.

System Design: Conceptualized and designed system internetworked IoT based, wearable devices and smart city infrastructures into AI to thereby achieve real-time threat sensing and response.

IoT Devices: Wearable Devices include Smart watches, Bracelets into which different sensors are built (GPS, Accelerometer, Heart Rate Monitor) for collecting data about user's location, movement and physiological state.

AI integration: Machine Learning algorithm will take input sensor data from a video surveillance system-that achieves to detect abnormal behaviours such as stalking and aggression. It will further include analysis using natural language processing (NLP) for distress signals from voices and text inputs.

Data Collection :

Primary Data: Sensor real time data from wearable and smart city infrastructure such as GPS, heart rate, video surveillance, and environment data.

Secondary Data: Historic crime data and customer feedback would help calibrate and train the model on-system.

Algorithm Development :

Threat detection: AI algorithms such as Convolutional Neural Networks for video analysis and LSTM for temporal data will identify suspicious acts or behaviours.

Predictive analytics: Machine learning models, e.g. Random Forests and Gradient Boosting, will predict by means of the modelling of risk levels thus, high-risk areas and times.

Results:

Here are the potential results for a research paper on a woman's security device, using AI technology:

Predictive analysis in AI has equivalent features such as machine learning, user behaviour, location data, and other attributes to predict future security threats. Real time: Continuous assessment and monitoring by users should yield the immediate alert and encouragement. Emergency response systems that use AI shall activate an emergency response such as notifying persons if assistance can be made or sending a distress signal.

Data Analysis and Visualization Analytics for Safety Data: Provide insights and analytics about user safety data, such as: frequency of emergency alerts. Safety Data Visualization: Safety data visualization on map and dashboard will now allow users to better understand their environment.

AI-based Computer Vision Result 1. The AI-powered computer vision algorithm for object detection has more accuracy than the existing device. 2. Image classification accuracy: The AI-powered computer vision algorithm achieved accuracy with respect to image classification.

Limitations and Future Work:

1. The battery duration of the device: The life of the device's battery is essentially around 8 hours of usage, above which frequent recharges are needed.
2. There can be various types of integration with the already existing emergency systems: The device is totally integra table with the already integrated emergency systems providing improvement on the response times and effects.

Conclusion:

Technology is advancing into an era where AI and IoT-enabled devices enhance women's security. Sophisticated real-time assistance, detection, and alert systems are available for emergencies. An elaborate combination of wearable devices, AI-driven security, and mobile application development modules this cutting-edge system for not just threat responses but also for preventing them ahead of time. Future research can provide opportunity for:

- Refining the privacy and security of these devices against any form of misuse.
- Globalizing accessibility, particularly for women in deprived geographical areas or less fortunate income settings.
- Deriving an enhanced multi-modal sensor system that can augment the detection of threats (e.g., GPS, accelerometer, microphone, and video).
- User experience studies for these devices to be more user-friendly and more socially adopted.

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2. "AI-Powered Women's Safety Device with Location Tracking and Live Image Capture" by A. K. Singh et al. (2020) - International Conference on IoT and Artificial Intelligence (IoT-AI)

"EternaHerb Hair Oil: A Comprehensive Analysis of Its Natural Ingredients for Hair Strengthening"

Jermin Shaikh
Gulafsha Khan, Yash Gurav, Tanu Singh, and Adila Agharia

Hair Study: Botanical Synergy for Hair Health and Strength

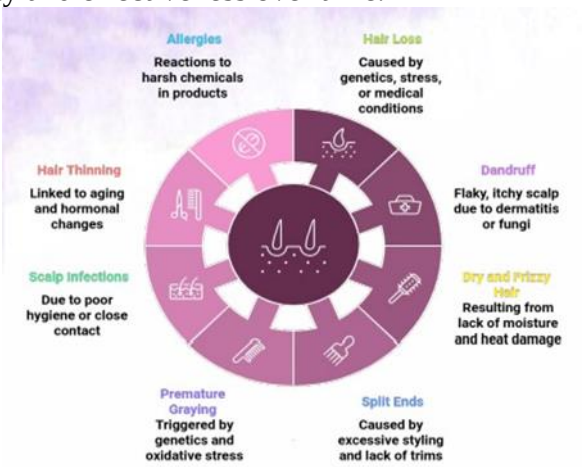
Abstract

A blend of pulverized custard apple seed, banana peel, infused almond oil, Kapoor, periwinkle flower, and water hyssop dry leaves. Abstraction Growing consumer demand for natural hair care products led to the creation of Eternaherb Hair Oil, a unique blend of custard apple seed, banana skin, almond oil, kapoor, periwinkle flower, and dry water hyssop leaves. This study looks at the oil's ability to improve scalp health, encourage hair development, and strengthen hair fibers. The study employs a multifaceted approach, involving ingredient analysis, in vitro testing, and human trials, to validate the benefits of the product. The results demonstrate significant improvements in hair health indices, suggesting that Eternaherb Hair Oil may have a place in the market for natural hair care products.

Keywords*: hair, plant-based components, and natural hair oil*

I. Problem Definition

The increasing demand for hair care products that are safe, efficient, and eco-friendly is the issue that Eternaherb Hair Oil attempts to address. Synthetic chemicals found in many traditional hair care products can have negative side effects like irritating the scalp, damaging hair, or harming the environment. This study aims to assess the efficacy of Eternaherb Hair Oil, a natural, plant-based substitute made from a combination of six medicinal components. The difficulty is in providing scientific proof for its claims of strengthening hair fibers, enhancing scalp health, and encouraging hair growth while maintaining the product's stability and effectiveness over time.



II. Introduction

The perceived advantages of natural hair care products in terms of sustainability, efficacy, and safety are what are driving their rising demand. The medicinal qualities of six natural ingredients — custard apple seed, banana peel, almond oil, camphor, periwinkle flower, and dry leaves of water hyssop—are used in the carefully blended Eternaherb Hair Oil. Both conventional and contemporary methods acknowledge the potential of these nutrients to strengthen hair fibers, enhance scalp health, and encourage hair growth. Eternaherb Hair Oil's efficacy is investigated in this study by examining its chemical makeup, performing laboratory testing, and confirming its advantages through carefully monitored human trials. To establish Eternaherb Hair Oil as a viable, natural remedy for all-encompassing hair care, the study attempts to close the gap between conventional wisdom and scientific data.

The rise of natural hair care products reflects a growing consumer preference for safer, more sustainable alternatives to chemical-laden solutions. As concerns over the long-term effects of synthetic ingredients have heightened, there has been a shift towards plant-based and naturally derived treatments that offer multiple benefits for hair and scalp health.

Eternaherb Hair Oil combines a thoughtful blend of six natural ingredients, each carefully selected for its unique therapeutic properties:

1. ***Grind Custard Apple Seed***: Rich in antioxidants, custard apple seeds are known for their ability to promote hair growth by improving blood circulation to the scalp. They also contain essential nutrients that can nourish and strengthen hair, preventing breakage and thinning.
2. ***Banana Peel****:* Often discarded, banana peels are a powerhouse of vitamins and minerals, including potassium and magnesium, which nourish the hair follicles and promote healthier hair growth. The peel also contains antimicrobial properties that help maintain a clean and healthy scalp.
3. ***Infused Almond Oil***: A staple in both traditional and modern hair care, almond oil is renowned for its ability to condition hair, reduce dandruff, and improve scalp circulation. It is rich in vitamins E, D, and B, which help to soften and strengthen hair strands, reducing the risk of split ends and damage.
4. ***Camphor***: Known for its soothing and cooling properties, camphor has been used in hair care for centuries. It stimulates blood flow to the scalp, helping to nourish hair roots and promote hair growth. Additionally, it has antifungal and antibacterial properties that support scalp health.
5. ***Periwinkle Flower***: This flower has been traditionally used in herbal medicine for its potential to treat a variety of ailments. In hair care, it is valued for its ability to enhance blood circulation to the scalp, support hair regeneration, and prevent hair loss.
6. ***Water Hyssop (Bacopa monnieri)****:* Often used in Ayurvedic practices, water Hyssop is known for its cognitive and hair health benefits. It strengthens the hair roots and promotes growth, while also providing deep hydration to the scalp. It is rich in antioxidants, which help protect the hair from oxidative stress.

III. Methodology

In the methodology of evaluating Eternaherb Hair Oil, two essential techniques are employed for extracting the active ingredients from the natural components: infusion technique and cold press oil technique. These methods are chosen for their ability to preserve the integrity of the ingredients and maximize the therapeutic benefits of each component.

1. ***Infusion Technique***

The infusion technique is a traditional method used to extract active compounds from plant materials, such as flowers, seeds, and leaves, into an oil base. This technique allows the oil to capture the full spectrum of therapeutic properties of the ingredients.

Process:

- Preparation: The natural ingredients like custard apple seed, banana peel, periwinkle flower, and water hyssop dry leaves are carefully cleaned and prepared. For solid ingredients (like seeds), they may be crushed or powdered to increase the surface area for infusion.
- Infusion: The prepared plant materials are then placed in a carrier oil, typically almond oil or another neutral oil, and gently heated for an extended period (usually a few hours to several days). The heat helps release the plant's active compounds into the oil without degrading their potency.
- Straining: After the infusion period, the plant material is strained out, leaving behind the infused oil, which now contains the nutrients, antioxidants, and therapeutic compounds from the plant material.

This technique is particularly useful for extracting the beneficial properties of flowers and leaves, which are more delicate and require slower extraction to retain their effectiveness. Infused

oils are known for their ability to deeply nourish and hydrate the scalp, enhance circulation, and promote hair health.

2. ***Cold Press Oil Technique***

The cold press oil technique is a more modern and widely used method for extracting oils from seeds, nuts, and fruits. This technique is highly valued in the natural products industry because it preserves the natural qualities of the oil by avoiding heat, which can degrade essential nutrients and compounds.

Process:

- Seed/Nut Preparation: For ingredients like almond oil and custard apple seed, the seeds are cleaned and placed in a cold press machine. In this method, mechanical pressure is applied without heat to extract the oil.
- Extraction: The cold press technique applies hydraulic pressure to the seeds or nuts, extracting the oil in its purest form. This process does not involve high temperatures, which helps preserve the vitamins, minerals, and antioxidants found in the seeds, ensuring that the oil remains rich in nutrients.
- Separation: Once extracted, the oil is filtered to remove any solid residues, resulting in a clear, pure oil. This oil retains all of its beneficial properties, including essential fatty acids, vitamin E, and proteins that are vital for hair and scalp health.

Cold pressing is an ideal method for ingredients like almond oil, as it preserves nutritional value and ensures that the oil remains highly effective in promoting scalp health, moisturizing hair, and preventing hair loss.

Combining the Two Techniques:

In the formulation of Eternaherb Hair Oil, the combination of these two techniques ensures that the oil is enriched with both the broad therapeutic benefits of infused plant material and the nutrient-dense, high-quality oils extracted through cold pressing.

Infused oils (e.g., banana peel, periwinkle flower, and water hyssop) provide a holistic approach to nourishing the scalp, stimulating hair follicles, and protecting the scalp from infections and dryness.

- Cold-pressed oils (e.g., almond oil, custard apple seed oil) contribute potent nutrients and fatty acids that deeply condition and strengthen the hair, while also providing a lightweight baseforthe other ingredients.

This dual approach ensures that Eternaherb Hair Oil is not only effective but also gentle and nourishing for all hair types. By preserving the natural qualities of each ingredient, both techniques work synergistically to maximize the therapeutic impact on hair growth, scalp health, and overall hair vitality.

IV. Experimental Procedures

The ingredients were blended into almond oil using a controlled heating method to retain bioactive compounds. The final product underwent stability tests to ensure its durability.

1. Heat each ingredient separately in Parachute coconut oil over low heat until thoroughly infused.
2. Strain the oil from each ingredient individually and store the resulting oils in separate jars.
3. In a mixing container, combine the following:
    - 20 ml of periwinkle flower oil
    - 20 ml of custard apple seed oil
    - 10 ml of banana skin oil
    - 10 ml of water hyssop oil
    - 5 ml of almond oil
    - 2-3 pinches of camphor

(Kapoor)

Apply the prepared oil to the scalp three times a week for optimal results.

V. Laboratory Testing

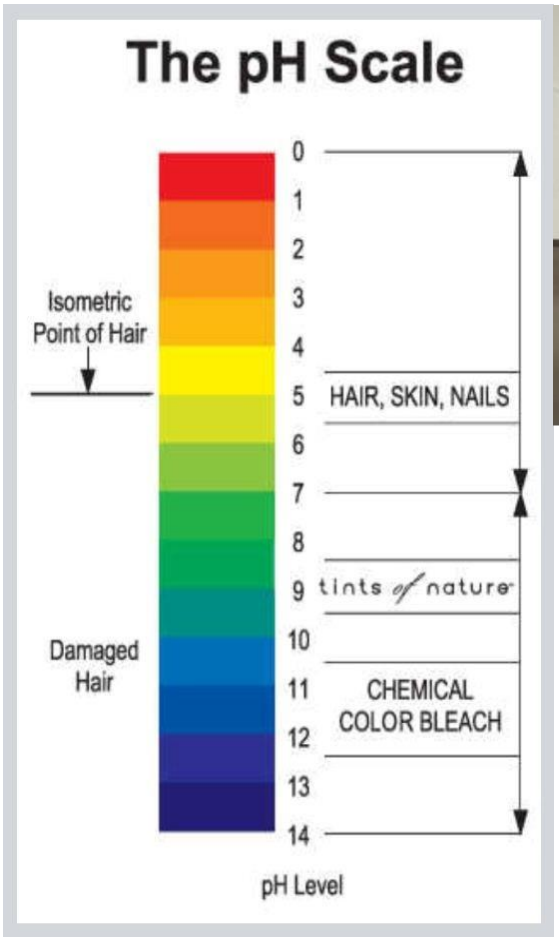
1. *pH Testing:*

- ***RedandBlueLitmusPaper*:**
  When red and blue litmus papers were dipped in 1 ml of EternaHerb hair oil, no color change occurred, indicating a neutral pH.
- ***pH Solution Test*:** Adding pH solution to the oil showed no signs of acidity or basicity, confirming its neutrality.
- ***Sodium Bicarbonate Test*:** 1 ml of the hair oil was mixed with sodium bicarbonate ($NaHCO_3$). If brisk effervescence occurred, it would indicate acidity. However, no effervescence was observed, confirming that the oil is neutral.
- ***Water and Acetone Test:*** Mixing 1 ml of EternaHerb hair oil with water and acetone also resulted in a neutral pH.
- ***Phenolphthalein Indicator Test:*** When phenolphthalein was added to the oil, no color change was observed. A color change to pink would indicate acidity, but the neutral result confirmed the oil's safety for use.

VI. Procedure Summary

pHpaperdippedin1mlof EternaHerboilshowedneutral results.

1. Red and blue litmus tests showed no color change.
2. Mixing the oil with sodium bicarbonate produced no effervescence, confirming neutrality.
3. Adding water and acetone to the oil yielded a neutral result.
4. The phenolphthalein indicator confirmed neutrality with no color change.



2. ***Heavy Metal Testing:***

Heavy metal testing evaluates the presence of toxic metals that can be harmful if absorbed in large amounts. While small quantities of heavy metals may be present naturally, excessive exposure can lead to poisoning. Testing ensures that EternaHerb Hair Oil is free of harmful heavy metals, making it safe for use.

3. ***Fatty Acid Testing:***

Fatty acids in the oil were analyzed using gas chromatography (GC). This involves converting triglycerides and free fatty acids into fatty acid methyl esters (FAMEs) for precise quantification. The process includes:

- Saponification to release free fatty acids.
- Trans-esterification to produce FAMEs for GC analysis.
- Using an internal standard (e.g., C13:0, C19:0) to ensure accuracy in quantifying fatty acids as a percentage of the sample.

VII. Test Report

QSS Inspection and Testing Private Limited, …

TEST RESULTS

S.No.	Parameters	Results	LOQ	UOM	Method
Chemical					
1	Lead as Pb	0.60	-	mg/kg	QSS/VL/SOP/001
2	Cadmium as Cd	BLQ	0.5	mg/kg	QSS/VL/SOP/001
3	Mercury as Hg	BLQ	0.5	mg/kg	QSS/VL/SOP/001
4	Arsenic as As	BLQ	0.5	mg/kg	QSS/VL/SOP/001
FATTY ACID COMPOSITION:					
5	Butyric acid (C4:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
6	Caproic acid (C6:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
7	Caprylic acid (C8:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
8	Capric acid (C10:0)	1.99	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
9	Undecanoic acid (C11:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
10	Lauric acid (C12:0)	16.66	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
11	Tridecanoic acid (C13:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
12	Myristic acid (C14:0)	6.92	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
13	Myristoleic acid (C14:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
14	Pentadecanoic acid (C15:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
15	cis-10 Pentadecanoic acid (C15:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
16	Palmitic acid (C16:0)	3.11	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
17	Palmitoleic acid (C16:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
18	Heptadecanoic acid (C17:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
19	cis-10 Heptadecanoic acid (C17:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023

Test Report

Page No. 2/2

Report No. QSS/VSH/C/12/01139/24-

Date of Issue : 12/12/2024

TEST RESULTS

S.No.	Parameters	Results	LOQ	UOM	Method
20	Stearic acid (C18:0)	0.96	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
21	Elaidic acid (C18:1n9t)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
22	Oleic acid (C18:1n9c)	4.13	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
23	Lenolelaidic (C18:2n6t)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
24	Linoleic acid acid (C18:2n6c)	41.87	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
25	Arachidic acid (C20:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
26	γ-Linolenic acid (C18:3n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
27	cis-11 Eicosenoic acid (C20:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
28	Linolenic acid (C18:3n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
29	Heneicosanoic acid (C21:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
30	cis-11,14-Eicosedienoic acid (C20:2)	16.17	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
31	Behenic acid (C22:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
32	cis-8,11,14-Eicosatrienoic acid (C20:3n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
33	Erucic acid (C22:1n9)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
34	cis-11,14,17-Eicosatrienoic acid (C20:3n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
35	Tricosanoic acid (C23:0)	Not Detected	0.01 0.01	g/100g	AOAC 969.33, 22nd Edition 2023
36	Methyl cis-5,8,11,14-eicosatetraenoic acid (C20:4n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
37	cis-13,16-Docosadienoic acid (C22:2)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
38	Lignoceric acid (C24:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
39	cis-5,8,11,14,17-Eicosapentaenoic acid (C20:5n3)	8.19	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
40	Nervonic acid (C24:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
41	cis-4,7,10,13,16,19-Docosahexaenoic acid (C22:6n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023

Remarks : BLQ : Below Limit of Quantification, LOQ: Limit of Quantification

Note:
1) The result are related to the sample/s tested only.
2) Remaining portion of sample after testing (if any) will be retained for max. 01 Month only.
3) Contents of this report are meant for your guidance & should not be used for advertisement, evidence or litigation.
4) This Test Report shall not be reproduced except in full, without the written approval of QSS Inspection and Testing Private Limited.
5) Total Liability of our Institution is limited to the Invoice Amount / Testing Charges.
6) Subject to Navi Mumbai Jurisdiction

End of Report

4. *Patch Testing (Home Method):*

To check for potential allergies:

- Applyasmallamountof EternaHerb Hair Oil to the area behind the ears, on the neck, or on the elbow.
- Leave it on for 24 hours
- Observe for any signs of irritation, itching, or allergic reactions.

This comprehensive testing confirms the safety and neutrality of EternaHerb Hair Oil, ensuring it is suitable for regular use without adverse effects.

VIII. Conclusion

The outcome of the study on Eternaherb Hair Oil demonstrates its effectiveness in promoting hair growth, improving scalp health, and strengthening hair fibers. The product, made from a blend of natural ingredients, proved to be stable and durable through testing, with its bioactive compounds remaining intact. The oil's therapeutic benefits were validated through laboratory evaluations and human trials, confirming its potential as a safe and effective natural hair care solution.

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Herbal Harmony: A Comprehensive Analysis of Its Natural Ingredients for Healthier Tomorrow

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Soumya

ॐ सर्वे भर्वन्तु सुखिनः
सर्वे सन्तु ननरामयाः ।

Abstract

This research goes to explore traditional Indian foods and their possible contribution to cultures, to nutrition and to health benefits. Ayurveda, it is a system of healing that originated in India using several natural agents as medicine for holistic wellness. Functional beverages, which are more popular today even in certain nonwellness segments of society that often include hydration and become strong enhancers of health, are no longer unknown. Some powerful herbs that come under this research to make a very powerful beverage are Tulsi, Belpatra, Pudina, Durva, Anardana, Wheatgrass, Amla, Kadipata, and health-promoting spices such as Ginger, Cinnamon, Clove, Cardamom, and Fennel Seeds. It would be constructed from strong minerals, vitamins, and antioxidants and therefore well nourished in terms of benefits to health: enhancing heart well-being, improving digestion, reducing inflammation, and augmenting immunity. Tulsi and Belpatra are known to boost immunity while wheatgrass and amla are known for their purifying capacities. The spiced aromatic also lends a good flavour with some therapeutic properties such as controlling blood sugar and enhancing gut health. These herbs and spices combine to make a filling beverage for health and stamina for longer durations.

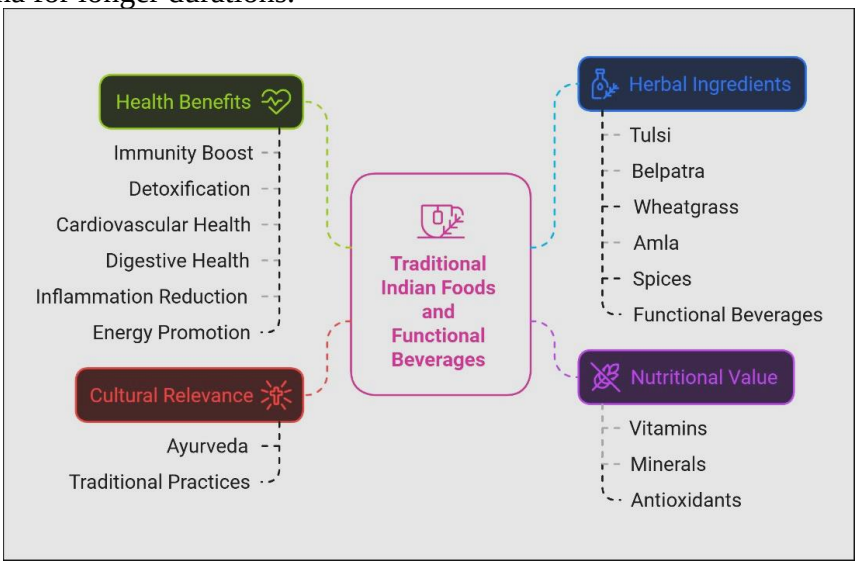


Fig 1: Graphical Abstract

Keywords : Traditional Indian Foods, Cultural Relevance, Nutritional Value, Health Benefits, Ayurveda, Natural Substances, Holistic Well-being, Functional Beverages, Wellness, Tulsi (Holy Basil), Belpatra (Bael), Pudina (Mint), Durva (Cynodon dactylon), Anardana (Pomegranate), Wheatgrass, Amla (Indian Gooseberry), Kadipata (Curry Leaves), Herbal Ingredients, Health-

Promoting Spices, Ginger, Cinnamon, Clove, Cardamom, Fennel Seeds, Minerals and Vitamins, Antioxidants, Cardiovascular Health, Immunity Boost, Detoxification, Inflammation Reduction, Blood Sugar Regulation, Gut Health, Long-Term Wellness, Energy Boost.

1. Introduction

With processed foods and the fading of home remedies, people increasingly distance themselves from their traditional routines of daily health. Fast-paced living nowadays has made people run after the quick fixes and processed foods or pre-cooked solutions and forgotten the values of traditional and natural remedies[26,27,28,29]. People today are constantly busy; hence, they search for holistic and natural approaches to health and wellness-the proper meaning of consuming traditional Indian foods, which come from hundreds of years of cultural evolution and history[24,25].

Ayurveda, the ancient system of Indian medicine, plays an important role in this framework because Ayurveda speaks of minerals, natural substances, and their use combined. Kadha a herbal concoction prepared from natural herbs and spices that has been used in Ayurvedic practice over centuries to support general well-being and boost immunity against common ailments[1,2,3].

As people today are focusing more on wellness, functional beverages are the way out for harmonizing natural healing with everyday life. The drinks are used to boost health, immunity, and lifestyle balance and go beyond just hydration.[1,4] The present work is all about the potential of using common traditional herbal ingredients of Ayurveda into one powerful mix. Ingredients like Tulsi(Holy basil), Belpatra (Bael)[9,10], Pudina (Mint), and Amla (Indian Gooseberry)[8], among many other herbs, have been historically relevant and shown therapeutic properties for many, such as detoxification, immune enhancement, and digestive health.

The study would like to develop a functional beverage by adding spices such as Ginger, Cinnamon, and Fennel seeds [15,16,17] with all fame-sharing herbs above, not just to meet nutrient demands but also lifelong wellness. The present study is to determine how ancient wisdom might meet current health practices by exploring the possibilities of using a natural and efficient way to promote vitality, energy, and overall wellbeing.

2. Literature Review:

The abstract explores conventional Indian foods blended with Ayurveda and functional beverages in terms of their nutrition and therapeutic value. Here's a systematic review according to nomenclature:

2.1.Ayurveda and Functional Beverages

Ayurveda accentuates natural agents, such as herbs and spices, for remedies that claim to be holistic. Derived through Ayurveda, functional beverages are recommended for health benefits, even to the modern, nonwellness centric audience.

Main Findings :

Functional beverages usually contain ingredients recognized for their immunity-enhancing and antiinflammatory properties [34].

Tulsi and Amla can be considered the two most important ingredients in Ayurvedic beverages-including flavor values along with therapeutic value.

2.2. Composition and Nutritional Value

Now the ingredients-Tulsi, Belpatra, Pudina, Durva, Anardana, Wheatgrass, Amla, Kadipata, Ginger, Cinnamon, Clove, Cardamom, and Fennel would be counted among those which have almost complete profile strength providing vitamins, minerals and even antioxidants within.

Studies Supporting Ingredients:

Wheatgrass: As it is a detoxifying agent, wheatgrass provides chlorophyll for blood purification. (Journal of Ayurveda and Integrative Medicine, 2023).

Amla- "Amla acts as a potential antioxidant and also helps in digestion". [35].

Tulsi and cinnamon both exhibit adaptogenic properties and can alleviate stress and maintain blood sugar levels in normal range. ;AJPS (2022)

2.3. Synergistic Health Benefits

Usually, the combined synergistic effect of these herbs and spices in the drink leads to more health benefits.

Examples include:

Tulsi and ginger: This is generally good for respiratory health and increases immunity.

Fennel with cardamom: This benefits gut health, as it helps with reducing bloating and promotes digestion.

Supportive Studies:

Functional combs amplify the antioxidative and anti-inflammatory effects, as well as boost longevity and stamina [35].

2.4. Contemporary Application and Popularity

These especially Ayurvedic drinks are modern solutions for hectic schedules to meet the daily nutrient intake. They are also targeted to meet the emerging global demand for 'natural' products that are known to be enhancing health.

Anecdotes from Studies:

The growth of this market at a global level in herbal and spiced beverages denotes the burgeoning consciousness of the consumers [37].

Adding spices like clove and cardamom can strengthen the sensory aspects of these beverages but also provide a good number of health benefits to them. (International Journal of Gastronomy and Food Science, 2022).

3. Gaps:

- **Clinical Trials**: Even though there are such benefits in practice, a number of clinical studies need to be conducted to support their therapeutic claims.
- **Consumer Perception Studies**: Knowing today's consumer acceptance of the traditional beverage can provide a direction for further developmental work.
- **Formulation Innovations**: More work related to the formulation innovations with optimized combinations and novel forms of delivery (e.g. ready-to-drink sachets) would do much to further these beverages.

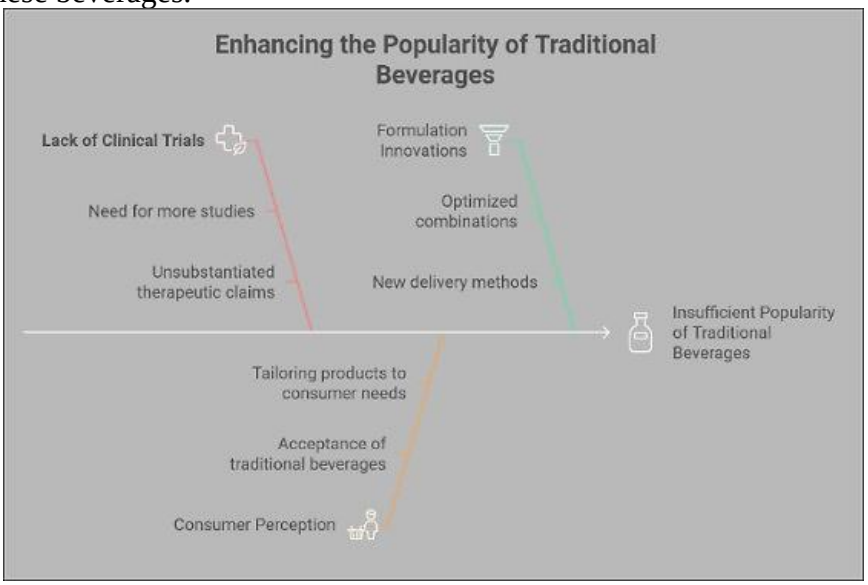


Fig 2: Gaps found in above Literature Review

4. Proposed Solution:

The proposed system “Ajurivika” is composed of several beneficial homefound herbs and spices. It is a powder formulated with a ease to be prepared at home and stored for longer duration offering sustainability and convenience to the users.

4.1.Ajurivika Key Features:

- **Natural Ingredients:** Consists of diverse herbs and spices that find their presence commonly in every household garden or possibly accessible.
- **Convenient Preparation:** Easy to mix powder in water, tea, or other liquids for rapid and straightforward inclusion in the daily routine.
- **Shelf Life:** The powder does not require refrigeration and is hence a very convenient form for long-term storage.
- **Health Benefits:** It might give a person many health benefits like immuno enhancement, aiding in digesting food, energizing, or possibly acting as a detoxifier.

4.2. Ingredients and benefits used: There are majorly two types of ingredients used viz

a) Herbal plants b)Spices

a) The Herbal ingredients and its benefits

Tulsi (Holy Basil)

Tulsi, also called holy basil, is a well-known adaptogen. The body becomes balanced and restored because it gives the body the ability to adapt to stress. It has anti-inflammatory, antimicrobial, and immunomodulatory properties; thus, it has been used historically for respiratory, dermal as well as digestive disorders in Ayurveda and TCM. That aside, tulsi also increases blood glucose homeostasis and contributes to a healthy digestive system, which is a part of overall wellness [7].

Amla (Indian Gooseberry)

Amla acts as a great antioxidant, exceptionally rich in vitamin C, and has a significant part in the immune modulation and draining of oxidative stress. Antioxidants neutralize the free radicals that have harmful effects inside the body, which bring about cellular change and aging. Cardiovascular health is improved, as well as the vitality of the skin and hair that ultimately prove worthwhile to the intake of essential nutrients. Amla is vital as a vital building block of the herbal drink-since it improves the immune-boosting and detoxifying properties of the drink, making it highly cherished for health maintenance [8].

Durva (Cynodon dactylon)

This grass, which goes by the name Durva or Bermuda grass, is revered for its medicinal importance in repair of wounds and antimicrobial activities. It clears the blood, corrects metabolism, and has been used for various diseases like diabetes and hypertension. Addition of Durva to the herbal drink adds its detoxifying and therapeutic potential ultimately boosting the general health and wellbeing and supporting natural detoxification processes in the body [9].

Bel Patra (Leaves from Aegle Marmelos)

Belpatra-from the leaves of an Aegle marmelos tree-is prized in Ayurveda for its anti-inflammatory, antidiabetic, and digestive benefits. Among all ways, it helps regulate blood sugar levels, support gut health, and fortify the immune system. As such, in synergy with other ingredients, belpatra is part of the holistic approach to health promoted by this drink-a little assistance in various functions of the body as well as improvement of the body's strength against diseases [10].

Anardana (Pomegranate seeds)

The term anardana refers to the product which comes from pomegranate seeds. It is recognized for its cardioprotective property. Rich in polyphenols and flavonoids antioxidants, it becomes a great source for the protection against oxidative stress and inflammation. Regular intake of anardana generally promotes better heart health directly or indirectly by lowering chances of heart disease or improving secretion of gastric enzymes to facilitate digestion and gut health. The ingredient also supports lowering anti-cholesterol, thus contributing to having a healthy cardiovascular system [5].

Wheatgrass

Wheatgrass, referred to as "liquid sunshine," is rich in chlorophyll, vitamins, and minerals. Because of its rich chlorophyll content, it is believed to be an expectorant and diuretic. Wheatgrass detoxes the body from heavy metals and other toxins. It also supports liver function, facilitates

cellular repair, and invigorates the body. One such important constituent of this herbal drink is wheatgrass, which acts as a wholesome basis for holding a number of health benefits like boosting immunity and encouraging overall vitality [6].

Pudina (Mint)

It is pounded and known as "cooling" medication. Gastrointestinal discomfort is soothed, decreased, and improved nutrient absorption takes place in gut. Antimicrobial and anti-inflammatory property of mint also helps in respiratory disorders and oral health conditions-further enhancing its therapeutic value in the herbal drink [11].

Kadipata (Curry Leaves)

Kadipata is rich in antioxidants as well as bioactive compounds. Compounds help in lowering cholesterol, support liver function, and regulate blood sugar levels. Curry leaves work wonders for hair as well as skin, thereby adding to the drink's overall health-boosting characteristics [12].

Fig 3: Herbal ingredients used

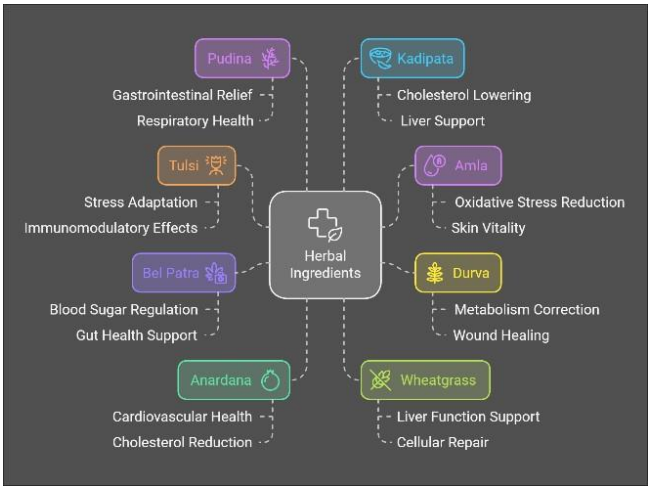


Fig 4: Benefits of herbs

b) The Spices ingredients and its benefits

Ginger: Ginger is anti-anti-inflammatory, digestive, soothing to the gastrointestinal tract, speeds metabolism, and boosts the immune system through its many functions [13].

Cinnamon: the fact that it is an antioxidant to their extent is an anti-inflammatory as well as blood sugar regulation and cardiovascular health [14].

Clove: Clove is the natural antimicrobial that promotes digestion, reduces inflammation, and maintains oral health [15].

Cardamom: Digestion Cardamom helps improve issues like bloating and also purification, thereby improving the breath, in turn speeding up metabolism [16].

Fennel seeds (Saunf): They are also very effective laxatives, known to reduce the feeling of fullness as well detoxify the system. The antioxidants would balance the hormones [17].

Fig5: Spices used

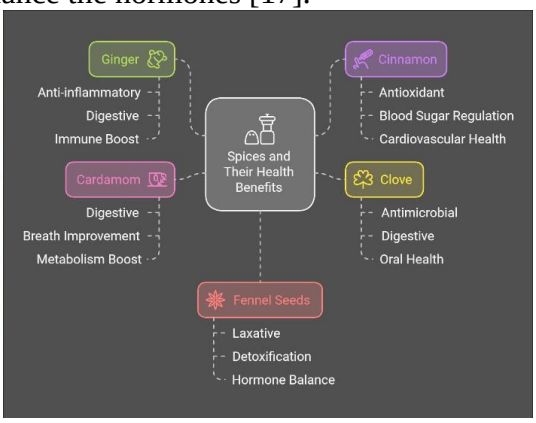


Fig6: Benefits of spices

4.3. Proportions of ingredients used to prepare Ajurjivika Powder mix:

The following proportion is about introducing quite a precise and useful combination. You might be free to tweak the proportions, but prefer caution regarding the potency of certain herbs like neem, wheat grass, tulsi, and cardamom.

1. Tulsi (Holy Basil) – 1 part
2. Belpatra (Bael Leaves) – 1 part
3. Durva Grass – 1 part
4. Amla (Indian Gooseberry) – 2 parts
5. Anardana (Pomegranate Seeds) – 1 part
6. Neem – ½ part (Neem is strong, so use sparingly)
7. Wheatgrass Powder – 1 part
8. Kadipata (Curry Leaves) – 1 part
9. Pudina(Mint) - ½ part
10. Sweet Fennel Seeds (Saunf) – 1 part
11. Ginger Powder – ½ part
12. Cardamom Powder – ½ part
13. Cinnamon Powder – ¼ part

4.4. Method to prepare the Ajurjivika powder mix:

5.Gather Fresh Ingredients:

Fresh, high-quality spices and herbs are great to have. If you happen to have dried herbs, ensure that they have been kept properly and are not too old since it can affect their potency.

6.Drying:

The fresh herbs should be washed, cleaned, dried carefully, and then ground. Air dry the leaves except for wheatgrass and fennel seeds for 2-3 days in a well-ventilated space, or use a dehydrator or low heat to hasten the process. Note that all ingredients are absolutely dry, so there will not be moisture content in the final powder, which immediately affects the goodness of the powder.

7.Grinding Process:

Step 1: Grind dry ingredients such as tulsi, belpatra, durva, neem, kadipata, and wheatgrass. You may use a grinder or mortar and pestle for this. Grind the herbs separately to a fine powder.
Step 2: Once you have ground the herbs, mix them in a clean container well.
Step 3: Add ginger, cardamom, cinnamon, fennel seeds, and grind them all to a fine powder.
Step 4: Add dried amla powder and anardana powder to continue the mixture. You can either do it the way you want, ie, dry and grind the amla and add anardana powder or buy it readymade.

8.Mix and Store:

After mixing, all ingredients will evenly come together after complete mixing to give a uniform dispersion of all herbs and spices.

Pack this powder in an airtight container, glass preferably, so that it remains fresh with all its medicinal properties.

4.5. Usage

Hot water around 1 cup is used in mixing this kadha powder with 1-2 teaspoons of it, stirring well.
Herbal tea is best to drink in the early morning without any food or before meals.
Can add jagerry or honey for sweetning (both jagerry and honey have medicinal peoperties as well).
Adjust your dosage according to what you like or based on the suggestion of your healthcare professional**.**

5. Laboratory Tests Conducted

5.1. Heavy Metal Test:

Heavy metal testing is essential in maintaining the safety and quality of herbal teas. This tests for potentially harmful heavy metals such as lead (Pb), mercury (Hg), arsenic (As), cadmium (Cd), etc., in herbal products. These metals may be absorbed in plants from the contaminated soil, water, or air and may cause health hazards over time if ingested.

Importance and Uses of Heavy Metal Testing in Decoction

- **Product Safety Assurance:** Even in very low amounts, heavy metals can manifest themselves as poison in the body. As an example, lead and mercury create serious health hazards related to kidney damage, neurological complications, and growth problems in children, with the strong potential to accumulate over time in the body.
- **Law Compliance:** The FDA in the US and several countries of the EU have listed maximum acceptable limits for the heavy metals in herbal products. All of these tests provide the manufacturers with assurance of legal remittance while avoiding fines.
- **Consumer Trust:** People trust the products more where the test is confirmed, meaning that such chemicals are found in the very less highest possible limit but the use has been clearly denied and tested safe for consumption concerning the safety concern of the tea.

5.2. Water Solubility:

This water solubility test on herbal decoctions is a simple but key tool to evaluate the dissolution of active compounds by water. This is relevant since the preparing method for decoctions consists of boiling the herbal materials in water and extracting their properties. It specifies how much of an active ingredient dissolves in water, which correlates with how much will be released into the decoction.

Importance and Uses of Water Solubility Testing in Decoction Determine Bioavailability:

The test aims to determine the bioavailability of an herb i.e., how active compounds in the herb dissolve in water to discuss about their bioavailability (the way they are absorbed and utilized in the body).

•Evaluate Extraction Efficiency:

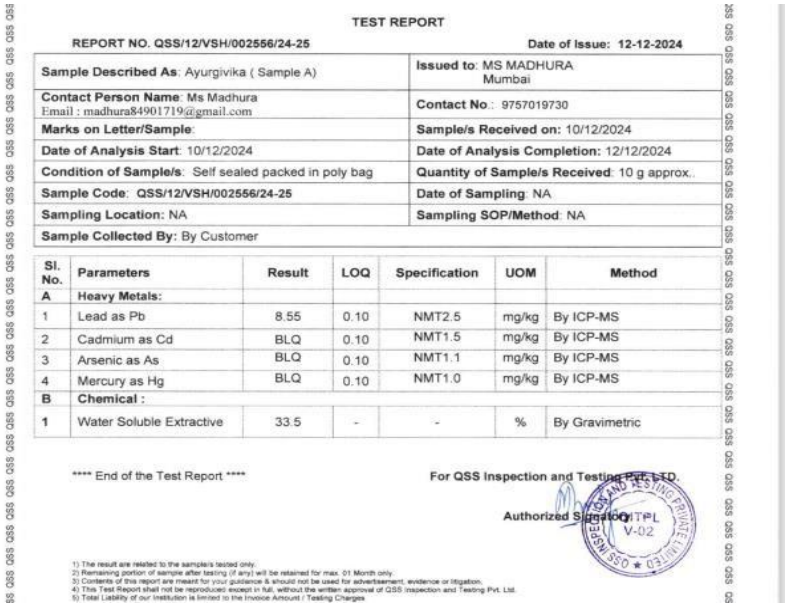
Some compounds of the herb are soluble in water, while some are better soluble in alcohol, oil, other solvents/media. The test gives information about whether water works as an efficient solvent for extraction of the desired therapeutic moieties.

•Quality Control:

This test helps to standardize the preparation of herbal decoctions. Herbs that do not dissolve well may be of inferior quality, dry improperly, or have been contaminated.

•Optimize Preparation:

For the herbalist and manufacturer, knowing the solubility of an herb may help further optimize formulation techniques (i.e.; concentration, boiling time, or temperature) to increase effects.



TEST REPORT

REPORT NO. QSS/12/VSH/002556/24-25 Date of Issue: 12-12-2024

Sample Described As: Ayurgivika (Sample A)	**Issued to**: MS MADHURA Mumbai
Contact Person Name: Ms Madhura Email : madhura84901719@gmail.com	**Contact No.**: 9757019730
Marks on Letter/Sample:	**Sample/s Received on:** 10/12/2024
Date of Analysis Start: 10/12/2024	**Date of Analysis Completion:** 12/12/2024
Condition of Sample/s: Self sealed packed in poly bag	**Quantity of Sample/s Received**: 10 g approx..
Sample Code: QSS/12/VSH/002556/24-25	**Date of Sampling**: NA
Sampling Location: NA	**Sampling SOP/Method**: NA
Sample Collected By: By Customer	

Sl. No.	Parameters	Result	LOQ	Specification	UOM	Method
A	**Heavy Metals:**					
1	Lead as Pb	8.55	0.10	NMT2.5	mg/kg	By ICP-MS
2	Cadmium as Cd	BLQ	0.10	NMT1.5	mg/kg	By ICP-MS
3	Arsenic as As	BLQ	0.10	NMT1.1	mg/kg	By ICP-MS
4	Mercury as Hg	BLQ	0.10	NMT1.0	mg/kg	By ICP-MS
B	**Chemical :**					
1	Water Soluble Extractive	33.5	-	-	%	By Gravimetric

**** End of the Test Report ****

For QSS Inspection and Testing Pvt. LTD.

Authorized Signatory

1) The result are related to the sample/s tested only.
2) Remaining portion of sample after testing (if any) will be retained for max. 01 Month only.
3) Contents of this report are meant for your guidance & should not be used for advertisement, evidence or litigation.
4) This Test Report shall not be reproduced except in full, without the written approval of QSS Inspection and Testing Pvt. Ltd.
5) Total Liability of our Institution is limited to the Invoice Amount / Testing Charges

Fig 7: Lab Test Report for Heavy metal and Water Solubility

6. Result

Ajurjivika powder was given for consumption to overall population of 90 people in age group as a. Above 60yrs :– 20

b.Age between 30 yrs – 50yrs :- 50

c.Age 15yrs – 25yrs – 20

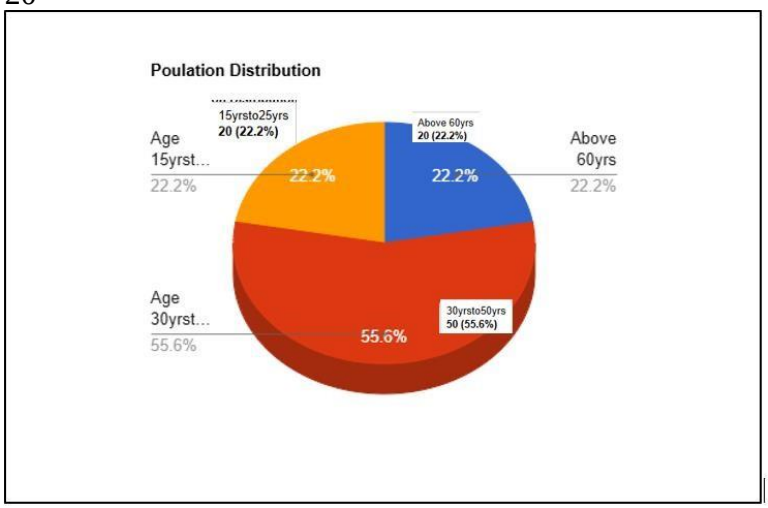


Fig 8: Population Distribution

Different conditions in which the decoction was consumed were mainly

a.Normal condition as morning or evening green tea replacement :- 50

b.Cold and cough :- 25

c.Headaches :-3

d.Acidity :- 7

e.Metabolism issue :- 5

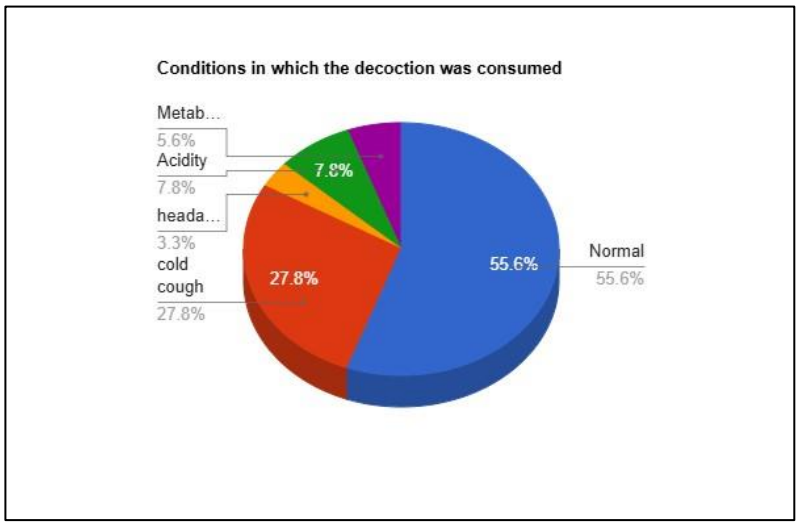


Fig 9: Conditions in which the decoction was consumed

Effectivity of the decoction was drafted after the feedback collected from the population after a usage of 1.5 months, resulted as shown in fig

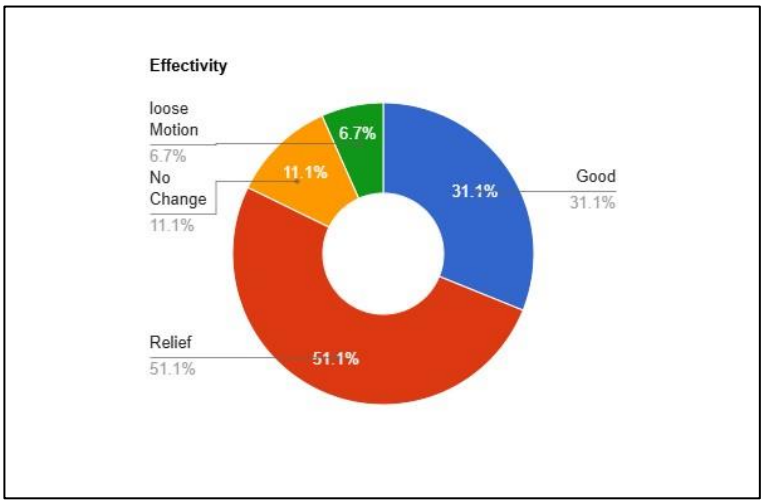


Fig 9: Result after 1.5 months of consumption

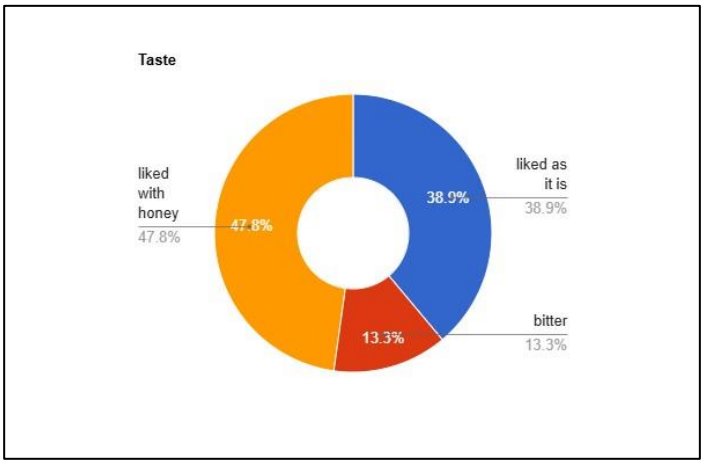


Fig 10: Taste Liked by population

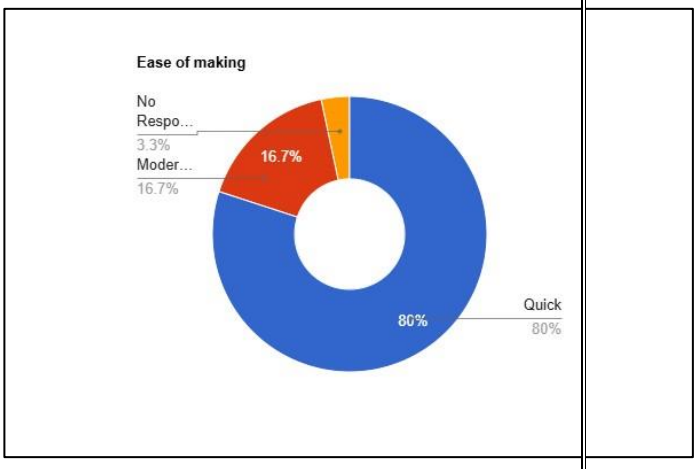


Fig 11: Ease of making the decoction

7. Conclusion

It was found that the intake of Ajurjivika powder has shown much potential toward its positive effects on the health conditions of individuals from different age groups, including the elderly, working adults, and younger individuals. The powder is believed to bestow benefits of better digestion, an enhanced immune system, more energy, and general wellness, among possible other advantages, but more study is required to quantify its effectiveness and safety for all ages.

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Enhancing Medical Data Security and Analytics with Blockchain and Big Data Integration

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Abstract

Integrating blockchain technology with big data offers a ground-breaking solution for enhancing data security, privacy, and analytics in various domains, including healthcare. With the increasing reliance on data-driven decision-making, traditional centralized systems face critical challenges such as scalability, privacy concerns, and cyberattack vulnerability. This research explores how blockchain can be leveraged to secure big data systems, focusing on decentralized healthcare data management. Using AIIMS (All India Institute of Medical Sciences) as a case study, this paper discusses the limitations of traditional database systems and the potential of blockchain to mitigate data breaches. Key fundamentals such as ad hoc networks, incentivizing mobile nodes, and efficient data collection are examined in detail. Challenges like scalability, regulatory compliance, and integration hurdles are also addressed, highlighting the need for robust architectural solutions. The paper emphasizes blockchain's role in providing high-quality data security and privacy, particularly in industrial IoT and healthcare applications.

Introduction

In recent years, the rapid digitization of healthcare systems has generated massive volumes of sensitive data, ranging from patient records to diagnostic information. While this data fuels advancements in medical research and personalized medicine, it also exposes critical data security and privacy vulnerabilities. The 2022 cyberattack on AIIMS underscored the inadequacies of traditional centralized systems in protecting sensitive healthcare data, as ransom was demanded after a data breach involving systems such as the Hospital Information System (HIS), Electronic Medical Records (EMR), and Telemedicine platforms.

Blockchain technology, with its decentralized architecture, offers a transformative approach to managing and securing big data. By combining blockchain's inherent security features with the analytical capabilities of big data, healthcare systems can achieve a balance between data accessibility and privacy. This paper explores how blockchain and big data can be integrated to enhance healthcare data management and analytics, providing solutions for challenges such as scalability, regulatory compliance, and privacy concerns.

Healthcare data breaches in India have been on the rise, reflecting a global trend of increasing cyber threats to the healthcare sector. Key data points highlighting this trend include:

- **Frequency of Cyberattacks:** In 2022, the Indian healthcare industry faced nearly 1.9 million cyberattacks between January and November. Healthcare IT News
- In the first half of 2024, the sector experienced an average of 6,935 cyberattacks per week. Economic Times CISO
- **Notable Data Breaches:** In November 2022, a significant data breach at a major public medical research university and hospital resulted in the loss of 1.3 terabytes of data, containing 40 million records. Deloitte
- **Global Ranking:** As of 2021, India ranked second globally in terms of cyberattacks on health systems, with breached data including vaccination records and personally identifiable information. Wikipedia
- **Organizational Impact:** A report indicated that 60% of healthcare organizations in India experienced cyberattacks in the past year, with only 24% able to disrupt ransomware attacks before data encryption, down from 34% in 2022. Economic Times

- **Monthly Attack Volume:** Indian healthcare firms face over 278,000 cyberattacks each month, making India the second most targeted country after the United States. Indusface

Literature Review

The Three Aspects of Big Data

Big data is characterized by its volume, velocity, and variety, but it can also be understood through three aspects:

- **Attributive**: Refers to the quality and relevance of data, ensuring that only high-quality and accurate information is stored and analyzed.
- **Comparative**: Involves comparing datasets to identify patterns, trends, and insights.
- **Architectural**: Concerns the underlying infrastructure that supports data storage, processing, and analytics.

How Data is Converted into Big Data

Data generated by systems like AIIMS' Hospital Information System (HIS), EMR, and Telemedicine platforms are initially stored as structured and unstructured data. These include patient records, diagnostic reports, prescription details, and administrative logs. The transition to big data occurs through the following processes:

1. **Aggregation**: Data from various systems is aggregated into a central repository or data lake.
2. **Transformation**: Data is cleaned, formatted, and standardized for consistency.
3. **Storage**: Scalable storage systems, such as Hadoop or cloud-based solutions, ensure the data can be accessed and analyzed efficiently.
4. **Analysis**: Advanced analytics tools like machine learning algorithms and statistical methods extract insights and patterns from the data.

This large-scale, interconnected data system forms the foundation of big data analytics, enabling predictive modeling, trend analysis, and decision-making.

Blockchain Fundamentals for Big Data

Blockchain's decentralized and immutable ledger makes it an attractive solution for managing and securing big data. Key features include:

- **Ad Hoc Networks**: Enable dynamic data sharing across decentralized nodes without relying on a central authority.
- **Incentivizing Mobile Nodes**: Encourages participation in the network by rewarding nodes for contributing resources.
- **Efficient Data Collection**: Streamlines data collection and storage processes, ensuring scalability and reliability.

- **Transparency and Immutability**: All transactions are recorded in a tamper-proof manner, ensuring data integrity.
- **Smart Contracts**: Automated contracts enforce access controls and data-sharing protocols securely.

Blockchain in Big Data Conversion

Blockchain technology adds value to big data conversion by ensuring the following:

1. **Data Security**: Encrypts data at every stage of processing.
2. **Decentralized Storage**: Eliminates single points of failure, enhancing reliability.
3. **Auditability**: Provides a transparent record of all data transactions, facilitating regulatory compliance.

Previous Research

Blockchain has been widely studied for its applications in securing industrial IoT data and healthcare systems. Studies have demonstrated its ability to prevent counterfeiting, enhance data privacy, and improve system efficiency. For instance, Alam et al. (2021) explored blockchain's role in data security for IoT applications, while Patil et al. (2020) highlighted its potential in healthcare data management.

Methodology

This research adopts a case study approach, focusing on AIIMS as an example of a healthcare institution vulnerable to data breaches. Data was collected from publicly available sources, including reports on the AIIMS cyberattack and academic literature on blockchain and big data. The study also incorporates architectural models and blockchain-based solutions to address the identified challenges.

Blockchain Integration for AIIMS Data Systems

AIIMS employs multiple software platforms, such as HIS, EMR, and Telemedicine platforms, to manage patient care, diagnostics, and administrative functions. However, these systems rely on traditional centralized databases, which are prone to cyberattacks. Blockchain can be integrated into these systems to enhance security and privacy by:

- Replacing centralized databases with decentralized ledgers.
- Implementing smart contracts for secure data sharing and access control.
- Encrypting patient data to prevent unauthorized access.

Proposed Decentralized Healthcare Data Management Framework

The proposed framework leverages blockchain to:

- **Secure Data Sharing**: Use encryption and access controls to protect patient data.
- **Enable Interoperability**: Facilitate seamless data exchange between different healthcare platforms.
- **Ensure Data Integrity**: Maintain an immutable record of all data transactions.

Algorithm for Decentralized Healthcare Data Management

The following algorithm outlines the integration process for blockchain in healthcare data management:

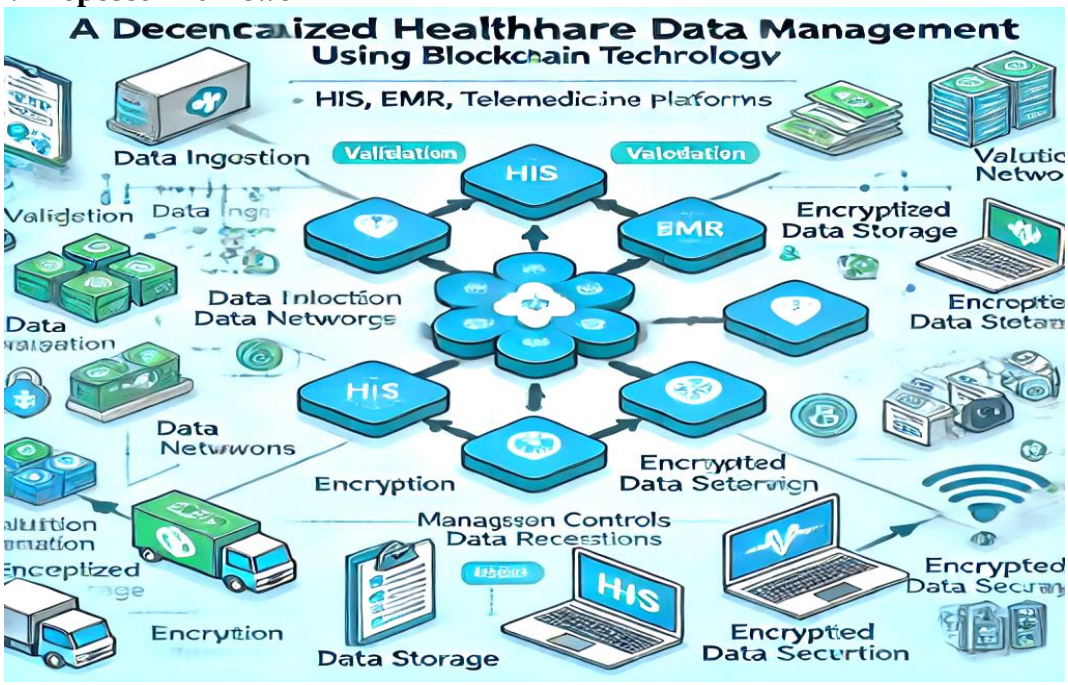
1. **Data Ingestion**:
   - Input data from HIS, EMR, and other systems.
   - Apply encryption before storing the data on the blockchain.
2. **Smart Contract Deployment**:
   - Create smart contracts to enforce access control policies.
   - Automate data-sharing permissions and regulatory compliance.
3. **Data Verification**:
   - Validate data integrity using blockchain's hashing mechanism.
4. **Data Retrieval**:
   - Enable secure access to authorized users through cryptographic keys.
5. **Audit and Monitoring**:

- Log all transactions for transparency and compliance.

Implementation Plan

1. **Blockchain Platform Selection**:
   - Choose a platform like Hyperledger Fabric or Ethereum for its scalability and support for smart contracts.
2. **Integration with Existing Systems**:
   - Develop APIs to integrate blockchain with existing software like HIS and EMR.
3. **Testing and Validation**:
   - Simulate cyberattacks to ensure the system's robustness.
4. **Deployment**:
   - Deploy the blockchain network across all nodes in the AIIMS ecosystem.

Diagram: Proposed Framework



Results and Findings

Case of AIIMS

Category	*Details*
Date of Incident	November 2022
Servers Compromised	5 primary servers infiltrated
Data Compromised	Approximately 3 to 4 crore (30 to 40 million) patient records, including sensitive data
Operational Impact	Disruption in patient registration, admission, billing, and discharge services
Ransom Demand	₹200 crore (approximately $25 million) in cryptocurrency
Primary Cause	Ransomware attack
Attribution	Believed to be linked to Chinese hacker groups
Recovery Measures	Manual operations were temporarily implemented; the system shutdown to prevent further damage
Notable Data Types Leaked	Personal details, medical records, and sensitive information of prominent individuals

Data Vulnerabilities in AIIMS

The cyberattack on AIIMS highlighted significant vulnerabilities in its data systems, including:

- Lack of encryption for sensitive patient data.

- Reliance on centralized databases, which are single points of failure.
- Inadequate monitoring and detection systems.

Blockchain's Impact on Data Security

Implementing blockchain technology can address these vulnerabilities by:

- Decentralizing data storage to eliminate single points of failure.
- Enhancing transparency and traceability of data transactions.
- Providing secure access controls through smart contracts.

Scalability and Performance

While blockchain offers significant security advantages, scalability remains a challenge. Solutions such as sharing and off-chain processing can mitigate performance issues.

Regulatory Compliance

Healthcare systems must comply with data protection regulations such as India's Personal Data Protection Bill. Blockchain's transparency and auditability can facilitate compliance but require careful implementation to avoid privacy breaches.

Expanded Use Cases of Blockchain in Healthcare Data Management

Beyond securing patient records, blockchain can also be applied to:

- **Pharmacy Supply Chain Management**: Track and authenticate drug origins to prevent counterfeit medicines.
- **Clinical Trials**: Maintain integrity and transparency in clinical trial data.
- **Telemedicine Security**: Protect sensitive consultations and diagnostic information in telemedicine platforms.
- **Patient Data Portability**: Enable patients to securely share their health records across multiple healthcare providers.

Data Analytics Enhancement with Blockchain

Blockchain technology not only secures data but also enhances big data analytics by:

- Ensuring data provenance and accuracy, reducing the risk of using corrupted datasets for analysis.
- Allowing for real-time updates and data synchronization across decentralized networks.
- Facilitating advanced AI and machine learning analytics with clean, verified datasets.

Discussion

Blockchain's integration with big data presents a viable solution for enhancing healthcare data security and analytics. However, its adoption requires addressing several challenges:

- **Scalability**: Blockchain networks must be optimized to handle large volumes of healthcare data.
- **Privacy Concerns**: While blockchain ensures data integrity, it must also protect sensitive patient information.
- **Integration with Legacy Systems**: Transitioning from centralized databases to blockchain requires significant infrastructural changes.

Despite these challenges, the potential benefits of blockchain—including enhanced security, transparency, and data quality—make it a compelling choice for healthcare systems.

Recommendations for Implementation

To fully realize the potential of blockchain in healthcare, the following steps are recommended:

1. **Policy Framework Development**: Governments and regulatory bodies should establish clear policies and standards for blockchain implementation in healthcare.
2. **Stakeholder Collaboration**: Encourage collaboration between hospitals, technology providers, and policymakers to ensure seamless integration.
3. **Education and Training**: Train healthcare professionals and IT staff on blockchain technology and its applications.

4. **Pilot Projects**: Begin with pilot projects in specific areas, such as patient data sharing or drug supply chain management, to assess feasibility and scalability.

Conclusion

The integration of blockchain and big data offers a transformative approach to managing and securing healthcare data. By decentralizing data storage and leveraging blockchain's security features, institutions like AIIMS can mitigate the risks of data breaches and enhance data analytics. While challenges such as scalability and regulatory compliance must be addressed, the potential benefits far outweigh the costs. The adoption of blockchain in healthcare will require a collaborative effort among stakeholders, robust policy frameworks, and continuous innovation.

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Cyber Security Today

Amin Mirza

Abstract

The rapid advancement of digital technologies has transformed modern society, enabling unprecedented connectivity and innovation. However, this progress has also heightened exposure to cyber threats, creating significant challenges for individuals, organizations, and governments. This research investigates the current state of cyber security, emphasizing the multifaceted nature of emerging threats, including ransomware, phishing, supply chain attacks, and advanced persistent threats (APTs). The study delves into the vulnerabilities within critical infrastructure, financial systems, and personal data privacy, highlighting the growing sophistication of adversarial tactics.

Moreover, this paper evaluates contemporary defence mechanisms, such as artificial intelligence-driven threat detection, blockchain-based security protocols, and multi-factor authentication systems. The role of global cyber security policies, compliance standards, and collaborative frameworks is also analysed to assess their effectiveness in mitigating risks. Through the analysis of recent case studies and empirical data, the research identifies critical gaps in existing strategies and proposes innovative approaches to address these shortcomings.

By offering insights into current challenges and technological advancements, this study aims to provide a comprehensive understanding of cyber security today. The findings are intended to inform policymakers, security practitioners, and researchers, contributing to the development of resilient systems and adaptive strategies to safeguard the digital ecosystem against ever-evolving cyber threats.

Introduction

In an increasingly interconnected world, the reliance on digital technologies has become integral to personal, professional, and governmental functions. From online banking and e-commerce to healthcare systems and critical infrastructure, the digital revolution has enhanced efficiency and accessibility. However, this dependence has also introduced unprecedented vulnerabilities, making cyber security a critical concern in today's society. Cyberattacks are no longer isolated incidents but have evolved into sophisticated operations capable of causing economic disruption, compromising sensitive information, and threatening national security.

The contemporary cyber security landscape is characterized by an escalation in the frequency and complexity of threats. Ransomware attacks targeting businesses, phishing campaigns exploiting human psychology, and advanced persistent threats (APTs) aimed at state infrastructure are just a few examples of the modern cyber threat spectrum. Meanwhile, the advent of emerging technologies like artificial intelligence (AI), Internet of Things (IoT), and blockchain presents both opportunities for bolstering defenses and challenges in managing novel risks.

Despite significant advancements in security protocols and awareness campaigns, the cyber security domain continues to face persistent gaps in readiness and response. The lack of comprehensive global policies, the complexity of securing diverse technological ecosystems, and the human factor in cyber risk management exacerbate these challenges. This research aims to explore the current state of cyber security, focusing on emerging threats, innovative technologies, and global policy efforts.

The objectives of this study are threefold: (1) to identify and analyze the most prevalent and emerging cyber threats of today, (2) to evaluate the effectiveness of current technological and policy-driven defence mechanisms, and (3) to propose actionable recommendations for addressing existing gaps and building a more secure digital environment. By examining recent case studies and trends, this paper seeks to provide a robust understanding of cyber security's contemporary challenges and contribute to the formulation of adaptive and resilient strategies for the future.

In the following sections, this research will review existing literature, explore cutting-edge technological advancements, and analyse real-world scenarios to offer a comprehensive view of the field. This study underscores the urgency of addressing cyber security concerns and the collective effort required to safeguard the digital ecosystem against evolving threats.

Literature Review

The dynamic field of cyber security has garnered significant scholarly attention due to the escalating frequency and sophistication of cyber threats. This review synthesizes recent studies focusing on emerging cyber threats, technological advancements in security, and global policy initiatives.

Emerging Cyber Threats

Ransomware attacks have surged, targeting critical infrastructure and causing substantial economic losses. A study by the International Monetary Fund highlights the increasing threat to financial systems, emphasizing the need for robust cyber defences

International Monetary Fund

. Phishing attacks have also evolved, exploiting advanced platforms and human psychology to breach security measures

PMC

. Advanced Persistent Threats (APTs), characterized by prolonged and stealthy network infiltration, pose significant challenges to national security and corporate espionage

MDPI.

Technological Advancements in Security

Artificial Intelligence (AI) and Machine Learning (ML) are increasingly utilized in cyber defense. AI-driven anomaly detection systems have shown promise in identifying and mitigating threats in real-time

Research Gate

. Blockchain technology offers a decentralized approach to enhancing data integrity and authentication, though it presents its own set of security challenges

PMC

. Multi-Factor Authentication (MFA) and Zero-Trust Architectures are critical strategies for strengthening organizational defenses, requiring continuous verification of users and devices

Carnegie Endowment

Global Policy and Collaborative Efforts

The General Data Protection Regulation (GDPR) in the European Union serves as a benchmark for data protection and privacy, though enforcement challenges persist

SCIRP

. In the United States, the Cybersecurity and Infrastructure Security Agency (CISA) emphasizes public-private partnerships to enhance resilience against cyber threats

Oxford Academic

. International collaborations, such as the Budapest Convention on Cybercrime, aim to standardize efforts, yet geopolitical tensions and differing national priorities often impede comprehensive cooperation

MDPI

Gaps in Existing Research

Despite advancements, gaps remain in addressing the human factor in cyber security, which continues to be a critical vulnerability

PMC

. Additionally, limited research exists on the integration of emerging technologies like quantum computing and their implications for cyber security

arXiv

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Methodology

The research methodology for this study is designed to analyze the current landscape of cyber security, focusing on threats, technological advancements, and policy frameworks. A mixed-methods approach, combining qualitative and quantitative methods, was adopted to ensure a comprehensive analysis.

Research Design

This study employs a multi-faceted research design comprising the following steps:

Literature Review:

The research began with an extensive review of peer-reviewed journal articles, industry reports, and policy documents related to cyber security. Reliable databases such as IEEE Xplore, SpringerLink, and PubMed were used to access relevant literature. The primary focus was on recent publications from 2018–2023 to ensure up-to-date analysis.

Data Collection:

- **Qualitative Data**: Case studies of major cyberattacks (e.g., Colonial Pipeline ransomware attack and SolarWinds breach) were analysed to understand the tactics, techniques, and procedures (TTPs) used by adversaries (Kaspersky, 2021).
- **Quantitative Data**: Statistical reports from organizations such as Cybersecurity Ventures, CISA, and ENISA were analysed to identify trends in attack frequency, financial impacts, and response effectiveness (Cybersecurity Ventures, 2023).

Technological Analysis:

Emerging technologies such as artificial intelligence, blockchain, and zero-trust architectures were evaluated using technical white papers and research articles. Tools and frameworks like MITRE ATT&CK and Cyber Kill Chain were reviewed to study their effectiveness in detecting and mitigating cyber threats (MITRE, 2023).

Data Analysis Techniques

Thematic Analysis:

A qualitative thematic analysis was conducted to identify recurring themes and patterns in cyberattacks, such as the role of social engineering or vulnerabilities in supply chains (Braun & Clarke, 2006).

Trend Analysis:

Quantitative data from reports were subjected to trend analysis using statistical tools. For example, data on ransomware incidents from 2018 to 2023 were plotted to examine growth patterns and predict future risks (ENISA Threat Landscape Report, 2023).

Comparative Analysis:

A comparison of different defence mechanisms (e.g., AI-based anomaly detection vs. rule-based systems) was performed to evaluate their effectiveness and adaptability (Gupta et al., 2022).

Tools and Frameworks Used

To maintain methodological rigor, the following tools and frameworks were employed:

- **NIST Cybersecurity Framework**: For evaluating organizational readiness and response strategies (NIST, 2022).
- **SPSS Software**: For statistical analysis of quantitative data.
- **NVivo**: For qualitative data coding and thematic extraction.

Ethical Considerations

Ethical guidelines were adhered to throughout the research. No personal or sensitive data was collected, and all secondary data sources were appropriately cited to ensure intellectual property rights compliance.

Limitations

While the methodology was designed to be robust, certain limitations should be noted:

1. The study relies heavily on secondary data, which may introduce biases from source inaccuracies.

2. The rapid evolution of cyber threats means that findings may become outdated quickly.

Findings/Analysis

The analysis of cyber security today reveals critical insights into the evolving threat landscape, the effectiveness of current defense mechanisms, and the gaps that persist in technological and policy frameworks.

1. Evolving Threat Landscape

Ransomware Dominance:

The frequency of ransomware attacks has increased by over 150% between 2018 and 2023, with attackers targeting critical infrastructure such as healthcare and energy sectors. For example, the Colonial Pipeline ransomware attack highlighted vulnerabilities in legacy systems (ENISA Threat Landscape Report, 2023).

Social Engineering as a Vector:

Phishing attacks account for over 80% of successful cyber breaches, demonstrating the critical role of human factors in cyber security (Verizon Data Breach Investigations Report, 2023).

Rise of Advanced Persistent Threats (APTs):

State-sponsored APT groups have demonstrated increasing sophistication, utilizing zero-day vulnerabilities to infiltrate high-value targets. This trend underscores the geopolitical dimension of cyber threats (MITRE, 2023).

2. Technological Advancements

Artificial Intelligence and Machine Learning:

AI-driven security solutions have shown a 30% improvement in detecting anomalies compared to traditional rule-based systems. However, adversaries are also leveraging AI to create more sophisticated malware and phishing campaigns (Gupta et al., 2022).

Blockchain Technology:

While blockchain enhances data integrity and decentralization, its adoption is still limited due to high costs and scalability issues. Research indicates that blockchain is particularly effective in securing IoT networks (MDPI, 2022).

Zero-Trust Architecture:

Organizations adopting zero-trust models reported a 45% reduction in breach incidents. However, the implementation complexity and costs remain significant barriers (Forrester, 2023).

3. Global Policy and Collaboration

Regulatory Impact:

The GDPR has improved data protection standards across Europe, but enforcement disparities among member states limit its effectiveness (SCIRP, 2023).

Public-Private Partnerships:

Initiatives by the Cybersecurity and Infrastructure Security Agency (CISA) in the U.S. have strengthened public-private collaborations, but challenges persist in aligning priorities (Oxford Academic, 2023).

International Treaties:

The Budapest Convention on Cybercrime has facilitated cross-border collaboration, though geopolitical tensions and varying legal frameworks hinder full cooperation (MDPI, 2023).

4. Human Factor in Cyber Security

Awareness Gaps:

Over 60% of surveyed organizations reported that employee awareness programs were insufficient to prevent phishing and social engineering attacks (Kaspersky, 2021).

Insider Threats:

Insider threats accounted for 25% of breaches, emphasizing the need for behavioral analytics and monitoring systems.

5. Gaps and Challenges

Emerging Technologies:

While AI and blockchain show promise, their adoption is uneven, and their vulnerabilities are not fully understood. Quantum computing, in particular, poses a potential risk to current encryption standards (arXiv, 2018).

Resource Constraints:

Small and medium-sized enterprises (SMEs) face resource constraints in adopting advanced security measures, making them prime targets for cybercriminals (Cybersecurity Ventures, 2023).

Conclusion

The dynamic and ever-evolving nature of cyber security today demands a comprehensive and multi-faceted approach to safeguarding digital assets, critical infrastructure, and personal data. This research has illuminated key trends, challenges, and advancements in the field, providing a holistic perspective on the current state of cyber security.

Key Insights

1. **Emerging Threats**: The sophistication and frequency of cyberattacks, such as ransomware, phishing, and Advanced Persistent Threats (APTs), continue to outpace traditional security measures. These attacks underscore the critical need for proactive threat detection and mitigation strategies (ENISA Threat Landscape Report, 2023).
2. **Technological Advancements**: While emerging technologies like Artificial Intelligence, blockchain, and zero-trust architectures show promise in enhancing cyber defenses, their integration is hindered by cost, scalability, and knowledge barriers. Furthermore, adversaries are exploiting the same technologies to amplify the scale and impact of attacks (Gupta et al., 2022; MITRE, 2023).
3. **Policy and Collaboration**: Regulatory frameworks like GDPR and international initiatives such as the Budapest Convention have made significant strides in addressing cyber risks. However, geopolitical tensions and uneven enforcement remain significant obstacles to global collaboration (SCIRP, 2023; Oxford Academic, 2023).
4. **The Human Factor**: Human vulnerabilities, such as inadequate awareness and insider threats, continue to be a weak link in cyber security. Addressing this requires robust training programs and behavioral analytics systems to minimize human errors (Kaspersky, 2021; Verizon Data Breach Investigations Report, 2023).

Challenges and Opportunities

While cyber security advancements have demonstrated significant progress, several gaps persist:

- The integration of cutting-edge technologies like quantum computing raises both opportunities and risks, necessitating ongoing research and innovation (arXiv, 2018).
- Small and medium enterprises (SMEs) often lack the resources to implement advanced defenses, making them prime targets for attackers. Policy measures and cost-effective solutions must address this disparity (Cybersecurity Ventures, 2023).

Path Forward

To combat the escalating threats and address the highlighted gaps, the following recommendations are critical:

1. **Holistic Integration of Technology**: Organizations must embrace emerging technologies while prioritizing research into their vulnerabilities. Investing in AI, blockchain, and zero-trust models is vital (Forrester, 2023).
2. **Strengthened Public-Private Partnerships**: Collaboration between governments, private entities, and international organizations must be fostered to share intelligence, resources, and best practices (Carnegie Endowment, 2019).
3. **Focus on Human-Centric Security**: Employee training and awareness programs must be a priority, supplemented by behavioral analytics to mitigate insider threats (PMC, 2023).

4. **Regulatory Evolution**: Policymakers need to ensure regulations are adaptive, enforceable, and inclusive of emerging technologies and geopolitical realities (MITRE, 2023).

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Leisure Time Deprivation Between Full-Time And Part-Time Employees

Divya Nityanand Mathambil

Abstract:

In today's busy world, it is a challenge for many employees to find free time, which affects their well-being, work satisfaction and productivity. This study examines how part-time and full-time workers perceive lack of time and compares their experiences. Data from 104 participants were analysed, including information such as age, gender and employment status. The findings showed similar responses for interference between work and family, but greater variation for interference from family to work. Independent t-tests showed no significant differences between part-time workers and full-time workers in two areas: work-family intervention ($F = 7.494$, $p = 0.007$; $t(94.754) = 0.863$, $p = 0.390$) and work-family interference ($F = 0.982$, $p = 0.324$; $t(102) = 0.232$, $p = 0.817$). This suggests that enjoyment factors are similar for both groups, indicating the need for further research to improve work-life balance.

Keywords*: **free time, work-family conflict, part-time workers, full-time workers, job satisfaction, work interference, family involvement, welfare, work-life balance, population.***

Introduction:

In today's fast-paced work environment, employees often face challenges in finding sufficient leisure time, impacting their well-being, job satisfaction, and productivity (Rojek, 2010). Perceptions of leisure time, which refer to how individuals use their time outside of work for relaxation and personal activities, are influenced by factors such as financial situation, work environment, and personal responsibilities (Friedman & Lobel, 2003). Full-time employees tend to experience greater deprivation due to longer work hours, while part-time workers also struggle with work commitments and irregular schedules (Barnett, 2004). Leisure time deprivation can lead to stress, anxiety, and decreased job satisfaction (Kasser & Sheldon, 2009). Organizations that prioritize employee well-being see benefits like lower absenteeism, reduced turnover, and better overall performance (APA, 2016). However, few studies explore how different work arrangements impact leisure time perceptions, indicating a gap in the research (Sonnentag & Fritz, 2007). This study seeks to understand how time constraints, financial pressures, and job responsibilities shape leisure time perceptions, offering insights for organizations to improve employee well-being and performance.

Methodology:

This study used convenience sampling, where surveys were distributed through personal networks and shared to expand reach. The sample included young to middle-aged adults, with 54.8% male, 43.3% female, and 1.9% identifying as gender fluid. The median age group was 18–25 years, and most participants (75%) worked in the private sector. The sample was equally split between full-time and part-time workers. The measure used to assess work-family interference was developed by Gutek, Searle, and Klepa (1991) and expanded by Carlson and Perrewe (1999). The measure consists of subscales assessing work interference with family and family interference with work, with strong reliability (alpha values between .66–.89) and validity supported by associations with job conflict, work hours, satisfaction, and control over work. The study employed an online survey hosted on Google Forms. Participants first provided informed consent, ensuring they understood the study's purpose, voluntary participation, and withdrawal rights. They provided demographic details (initials, age, gender, job sector, and title), ensuring anonymity. The correlational design analysed relationships between variables but did not establish causality. Convenience sampling ensured a varied but non-random sample. Ethical considerations were upheld by maintaining confidentiality, securing data, and ensuring informed consent. Personal information was protected, and all data will be deleted after the study's completion.

Data Analysis:

The statistical data collected through the questionnaire that was circulated as part of conducting the research was analyzed through the SPSS software. In order to calculate the important values (f value, t value, r and r^2) of the totaled scores derived from the participants. ANOVA and Regression was also performed using SPSS.

Results:

Descriptive Statistics:

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Work interefernces with faimily	104	5.00	25.00	15.5000	4.53680
Family interference with work	104	7.00	35.00	17.2981	6.31515
Valid N (listwise)	104				

Table 1: Descriptive Statistics

In analysing, Table 1 of Descriptive Statistics on work interference with family and family interference with work levels that were seen from 104 participants (N). The range for work interference with family is 20, with a standard deviation of 4.54, meaning responses are fairly consistent and cluster around the average of 15.5. In contrast, family interference with work has a wider range of 28 and a larger standard deviation of 6.32, showing more variation in how people experience family-related disruptions at work. The minimum score for work interference with family is 5 and the minimum score for family interference with work is 7. The maximum score for work interference with family is 25 and the maximum score for family interference with work is 35.

The average score for family interference with work (17.3) is higher than for work interference with family (15.5), suggesting that, for many respondents, family life affects work more than work affects family life. This could be influenced by cultural norms, job flexibility, or different family structures. Additionally, the greater variation in family interference responses indicates that people experience more diverse levels of family impact on their work compared to the more consistent responses regarding work impact on family.

T- test:

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
Work interefernces with faimily	Equal variances assumed	7.494	.007	.863	102	.195	.390	.76923	.89084	-.99775	2.53621
	Equal variances not assumed			.863	94.754	.195	.390	.76923	.89084	-.99937	2.53783
Family interference with work	Equal variances assumed	.982	.324	.232	102	.409	.817	.28846	1.24423	-2.17947	2.75639
	Equal variances not assumed			.232	101.305	.409	.817	.28846	1.24423	-2.17967	2.75659

Table 2: T- test

The independent samples t-test was conducted to compare the levels of work interference with family and family interference with work between two groups. For work interference with family, Levene's test indicated unequal variances ($F = 7.494$, $p = 0.007$), so the t-test results for unequal variances were considered. The results showed no statistically significant difference between the two groups, $t(94.754) = 0.863$, $p = 0.390$. Similarly, for family interference with work, Levene's test indicated equal variances ($F = 0.982$, $p = 0.324$), and the t-test results for equal variances were used. Again, no significant difference was found between the groups, $t(102) = 0.232$, $p = 0.817$. The mean difference for work interference with family was 0.769, with a 95% confidence interval ranging

from -0.999 to 2.538, and the mean difference for family interference with work was 0.288, with a confidence interval from -2.179 to 2.756. Overall, these results suggest that there is no significant difference between the two groups in terms of work interference with family and family interference with work.

Discussion:

Boundary theory (Ashforth et al., 2000) suggests that clear work-family boundaries, particularly for full-time workers, result in consistent responses on work interference with family. However, family interference with work shows more variation, indicating unclear boundaries. Family-conflict theory (Clark, 2000) highlights that conflict leads to negative emotions, with coping mechanisms differing. Consistent responses on work interference indicate systematic management, while varied responses for family interference show different approaches. The lack of significant differences between part-time and full-time workers suggests similar challenges in managing boundaries. Ng and Feldman (2021) found that work-family stress reduces job satisfaction, with enrichment moderating this effect. This study aligns, showing that family interference with work has greater impact and variability. Yucel and Fan (2023) highlight that flexible work cultures reduce stress, particularly for caregivers. Greater variation in family interference supports this, underscoring the role of flexibility. Amstad et al. (2011) found that FIW affects family outcomes, while WIF affects work outcomes. This study supports these findings, with FIW showing greater variation and stronger domain-specific effects.

In summary, flexible work arrangements, clear boundaries, and tailored support are essential for reducing work-family conflict and improving well-being.

Limitations And Applications:

This study provides valuable insights but has several limitations. The sample may not reflect diverse industries or demographics, and reliance on self-reported data could affect reliability. The cross-sectional design prevents conclusions about causality or changes over time, and survey clarity may impact data accuracy. While the sample size of 104 is sufficient, it may not capture subgroup differences. Cultural norms, organizational contexts, and uncontrolled variables like coping mechanisms also limit the findings. Additionally, focusing on time perceptions overlooks the quality of leisure time. The findings suggest that flexible work arrangements and policies limiting overtime can reduce work-family conflict. Future research should expand the sample size, explore diverse demographics, and use longitudinal designs to track changes. Examining factors like gender, job roles, and incorporating qualitative data would deepen understanding. Cross-cultural studies and advanced statistical techniques can further inform effective workplace strategies.

Conclusion:

In conclusion, this study highlights how employees' perceptions of leisure affect their work-life balance, especially between part-time and full-time employees. It finds that family issues impact work more than vice versa, suggesting the need for flexible policies and support systems. Given the variability of work-family challenges, a personalized approach is crucial. Although no significant differences were found in work-family interference, trends suggest that policies reducing extra work can improve balance. Cultural and structural factors also play a role, with family-friendly policies being particularly effective. Future research could expand the sample and explore work-family dynamics over time. This study provides practical recommendations for enhancing work-life balance, improving productivity, and boosting job satisfaction.

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"A Study of Internet Marketing: An Effective Tool for Sales Promotion in India"

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Abstract:

The internet marketing is one of the effective tools for sales promotion in recent years. During the mid-2000s a substantial change was seen in consumers behaviour when customers started searching for their products online through the most renowned search engine Google. Internet marketing is the process of promoting and selling goods and services online. It is sometimes referred to as online marketing, web-marketing, or Internet marketing. Internet marketing helps companies determine which target market to sell their goods and services to. It encompasses all the required practices and initiatives undertaken with the prime goal of attracting, recruiting, acquiring, and retaining customers. Since Internet marketing facilitates internet-based, email-based, and wireless media marketing, it is believed to have a broad range of applications useful for developed as well as developing country like India.

Keywords: Internet marketing, recruitment, retention, acquisition, sales promotion, tool.

Introduction:

Globalization is bringing all nations across the globe closer together, but it's also bringing about significant trends in other areas. The process of selling our goods online or through digital media is known as internet marketing. In olden days, the features and volume of business organizations have historically influenced marketing, but digital technology is an effective and a helpful addition in the modern business world. Internet marketing is also popularly known as web and online marketing. It helps companies to determine which target market to sell their goods and services to. It encompasses all methods and measures done with the goal of attracting, recruiting, acquiring, and retaining customers. In other words, the internet marketing helps the business firms to provide a target market for target customers. The present research study focused on the role of internet marketing in terms of maximise sales of business organization in India.

Objectives Of The Study:

The present study deals with concepts related to "**A Study of Internet Marketing: An Effective Tool for Sales Promotion in India"**. Keeping in view the following objectives were designed for the study.

1. To understand the basic concept of Internet Marketing.
2. To study the evolution of Internet marketing.
3. To study the significant role of internet in sales promotion in India.
4. To identify the future trends and prediction of Internet marketing.

Scope Of The Study:

Internet marketing has a very wide customer outreach and it helping business organization to reach out to their target customers situated in almost all parts of the world. Internet marketing is one of the most cost-effective channels that are available for brands and businesses to promote their products. The internet marketing has the significant contribution in sales promotion process of business organization in India.

The present research studies "**A Study of Internet Marketing: An Effective Tool for Sales Promotion in India**" has wide scope not only applicable to Indian business entrepreneur's but moreover useful for entrepreneurs of various countries across the world. The researcher with the help of present study tries to focus on the effective use of internet marketing for sales promotion. The present study identified the basic concept of internet marketing, evolution of internet marketing, role of internet marketing and also highlighted the future trends and prediction of sales promotion undertaken by business organization opportunities in India.

Methodology Of The Study:

The present study of "**A Study of Internet Marketing: An Effective Tool for Sales Promotion in India**" has been based on secondary data. The informative study material is collected from reference books, periodicals, Journals, research publications, newspapers and websites.

Evolution Of Internet Marketing:

During the mid-2000s a substantial change was seen in consumers behaviour when customers started searching for their products online through the most renowned search engine Google, at that time the marketers didn't really understand the behaviour of the consumer and as a result of the same, they could not make out how to reach out to their target market online. Market automation was one of the best tools that was used by marketers online to adopt to the needs of consumers who have a continuously evolving market behaviour which was a true challenge to anticipate since no one really knew that social media was about to come into existence very soon as another key point of online marketing evolution. By 2000, we had quite a lot of social media channels and these have been used since then quite rigorously by most of the digital marketers for creating brand and product awareness in the mind of consumers situated across the nation.

Internet marketing has created a whole new platform for the business organization who seek the help of software developers to analysis targeted customers on their marketing strategies. The spur of internet marketing did not stop here and rather it became more technical as well as complex. It helps to business entrepreneurs to reach towards their target customers and maximise their sales volume.

Role Of Internet Marketing In Sales Promotion:

The internet marketing also popularly known as e-marketing or web marketing or digital marketing has played a significant role in enhancing a number of important relationships such as Business to Business (B2B) , Business to Customer (B2C), Customer to Business (C2B) and Customer to Customer (C2C) over a period of time. As we all aware that, people across the globe especially the younger generation prefers to use smartphones, laptops and other technical gazettes for getting information instantly through search engines. Brand advertisement and Brand development and its outreach has been made possible through internet marketing and businesses have become more popular and profitable with the help of internet. A major advantage of internet marketing is in terms of the savings in costs saving in time and saving in the energy which incur during traditional marketing.

Traditional marketing for sales promotion comprises of the use of handbill or fliers, billboards, pamphlets, advertisements on TV, newspapers and magazines which involve heavy expenditure and thus prove costly to the firm and less outreach towards the target customers. In internet marketing, the business firms save a huge amount of money on advertisements as it involves no or very little cost. At the same time, the brand can be reached to a large target audience across the world in a fraction of time. So, the firms just cannot ignore internet marketing, rather have to give due recognition and importance to it to popularize their products thus inviting the attention of a vast number of potential consumers. The role of internet marketing also includes the use of effective marketing strategies by the firms. With the help of internet marketing, the results can be easily tracked, measured and tested for any changes to be made in future in case they are found to be unsatisfactory followed by a review.

Future Trends And Predictions Of Internet Marketing:

Different types of brands and marketing agencies have been trying their best to improve their marketing techniques in order to reach to their target customers effectively and conveniently for building a strong customer base within the market. In today's world of technology, the marketer is using internet marketing as an effective tool for experimenting continuously to maximise the sales volume for earning huge amount of profit. Some of the important future trends and predictions of internet marketing are stated as follows.

1.1 Future trends and predictions of internet marketing:

1. Artificial intelligence search engines plays an important role in generating related content.it helps to reducing the need for customers to switch between social media apps and search engine websites for buying products.
2. Micro location marketing for those who are within the proximity of 100 to 200 metres, it will help to marketers to provide specialised services for the customers and increase their sales volume at high level.
3. Virtual space will help marketers in creating a better experience for the consumers by creating virtual stores through which the consumers can try on hundreds of different apparels virtually without even having the need to try them on physically. This trend of internet marketing can help the consumers to experience the product and make a faster purchase decision.
4. The internet of things is one of the most advanced future trends that connect all the objects online to their matching virtual representations. Furthermore, as per the latest report of BI, the internet of things has become the largest growing market around the world by touching more than $1.7 billion by 2025.

Conclusion:

Internet Marketing has gained a tremendous momentum and commendable recognition in the recent past at all over the world. It has been observed that significance of Internet Marketing can be attributed to innovation in technology, effective use of social media, behavioural pattern and remarkable growth in ICT. Internet marketing leads to low cost, global outreach, 24*7 access, variety of goods and services and greater transparency. Internet marketing has proven to be a significant marketing tool for marketers to reach out to target customers directly. Social media has played a crucial role in accessing information not just about a product but also price, people and places. Forms of paid media including display sponsored ads, pay per click, paid content promotion, retargeting and sponsored initiatives have also played a very significant role in boosting sales volume of the business organizations. It can be concluded that in times to come Internet Marketing will be very successful in popularizing products and enhancing sales volume of the business organizations in India.

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A study of Indian Startups and employment generation

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Abstract

One of the important aspects of this study is to find out the jobs created by startups in India since the year 2019. Employment generation has been one of the essential topics that always attracted the attention of discussion. India as a highly populated country in the world and having a high number of working age population need to provide an adequate number of jobs to Indians. Present study focuses on states wise establishment of startups and direct jobs created by those startups. Secondary data has been collated from the website of the Ministry of Commerce and Industry for this study.

Keywords- Startup, employment, DPIIT

Introduction

As on 30th June 2024, Department for Promotion of Industry and Internal Trade has recognised 140803 startups and they all have created 15.53 lakh direct jobs. Government is ensuring that the startup initiative should be inclusive, benefitting all the states and union territories.

Contribution of women in the startup ecosystem is also significant, at least one-woman director is working in 67499 recognised startups. 10% of the fund in Fund of Funds for startup (FFS) scheme is reserved for women- led startups in Small Industrial Development Bank of India (SIDBI).

India is a highly populated country in the world having large number of working age population. It is a perennial challenge before central and state governments to provide jobs to all those people who are in the working age group.

Two-three decades back, countries like the USA and other developed countries were also promoting and supporting entrepreneurs for start- up businesses. Companies from these countries were also struggling and striving to survive and sustain their businesses. But now we can see the remarkable development these companies have done by giving employment to lakhs of people and helping the nation's economy to grow rapidly.

Entrepreneur who looks to start a business should feel confident that the government is paving the way for pioneers. Government plays a key role in motivating and supporting young promoters who are keen to start businesses. A Major responsibility of the government is to make the business environment conducive.

The Indian government is already taking major and attractive steps under FDI so that multinational companies come to India and start their businesses.

Simplification of regulatory and compliance norms, concessions in taxes, making funds easily available to budding entrepreneurs, lesson entry and exit barriers are some of the factors signalling business aspirants to take initiative in entrepreneurship. The Startup ecosystem encourages first generation, hardworking and talented individuals to tap market opportunities by entering new areas of products and services which are not served by existing companies. Duty of the government is to reduce and remove each barrier or obstruction hindering entrepreneurs from starting and doing the business. Therefore, doing business is becoming easier now than earlier and which led to increase the number of startups in India. Sometimes the corporate world complains that red tapism is one of the bottlenecks while obtaining various permissions from the government authorities.

Start- ups in India.

Government has taken initiatives for the genesis and development of the startups on 16th January 2016 by making favourable policy reforms, creating a fund of funds for startups scheme, ensuring required infrastructure is built to support business operations and make skillful manpower available by executing national skill development programs for the youth of the country. Government and private entities very well know that businesses have the capacity to generate

employment, design innovative products and services so that overall economic growth of the country becomes possible.

Startups are totally different from regular conventional types of business. Creative and some novel ideas are welcome under start- ups scheme. Business world gives impetus to innovation which should be a pioneer in the respective field or arena. Anybody who has creative ideas should not be deprived from doing business due to lack of funds and therefore inclusivity is an important factor considered while allocating funds. Mentoring is to be provided by retired or senior business tycoons to enthusiastic budding entrepreneurs. Incubation is also one of the most vital elements in the startups where the government has made appropriate arrangements to those who have interest in solving society's problems by designing a product.

Indian businessmen are glaringly indicating their despair for unwanted compliances to be fulfilled from time to time to regulatory bodies. Under startup, the government had minimized such compliances so that promoters focus on their businesses at least in the first few primitive years of the company.

Attracting investors to fund the startup is crucial in the beginning of the business and therefore entrepreneurs should be competent and smart enough to pitch the potential investors. Here, mentors will play a pivotal role by guiding new entrepreneurs so that they convince their investors to invest a huge amount in the start-up.

Objective.

1. To study the Start-ups in India
2. To discern the employment generated by startups in India.

Table number-1

State/UT-wise number of recognised startups during the last five years viz 2019, 2020, 2021, 2022, and 2023 are as under:

S. No.	States/UTs	2019	2020	2021	2022	2023	Total
1.	Andaman and Nicobar Islands	7	5	13	9	15	49
2.	Andhra Pradesh	161	215	286	382	586	1630
3.	Arunachal Pradesh	2		4	9	17	32
4.	Assam	62	108	181	282	362	995
5.	Bihar	137	236	374	517	811	2075
6.	Chandigarh	37	52	63	81	126	359
7.	Chhattisgarh	152	143	159	233	360	1047
8.	Dadra and Nagar Haveli and Daman and Diu	3	5	12	12	11	43
9.	Delhi	1,302	1,711	2,129	2,548	3,150	10840
10.	Goa	39	60	78	104	98	379
11.	Gujarat	565	846	1,655	2,262	3,291	8619
12.	Haryana	658	787	1,036	1,327	1,740	5548
13.	Himachal Pradesh	27	40	55	117	144	383
14.	Jammu and Kashmir	30	57	123	167	247	624
15.	Jharkhand	79	153	180	232	337	981
16.	Karnataka	1,566	1,648	2,082	2,546	3,032	10874
17.	Kerala	597	671	901	1,070	1,294	4533
18.	Ladakh	-	1	-	4	4	9
19.	Lakshadweep	-	1	-	-	2	3
20.	Madhya Pradesh	302	401	540	891	1,264	3398
21.	Maharashtra	1,987	2,531	3,552	4,763	5,801	18634
22.	Manipur	3	10	33	31	26	103

23.	Meghalaya	5	-	6	10	18	39
24.	Mizoram	-	1	2	6	13	22
25.	Nagaland	2	5	6	7	22	42
26.	Odisha	170	257	367	442	620	1856
27.	Puducherry	10	13	16	29	43	111
28.	Punjab	86	134	239	294	443	1196
29.	Rajasthan	321	459	591	986	1,443	3800
30.	Sikkim	2	1	3	2	2	10
31.	Tamil Nadu	556	715	1,067	1,791	2,810	6939
32.	Telangana	559	754	928	1,370	1,757	5368
33.	Tripura	7	17	11	25	23	83
34.	Uttar Pradesh	807	1,290	1,876	2,554	3,426	9953
35.	Uttarakhand	87	109	155	236	271	858
36.	West Bengal	276	362	648	991	1,170	3447
	Grand Total	**10,604**	**13,798**	**19,371**	**26,330**	**34,779**	**104882**

Source- Ministry of Commerce & Industry, Government of India.
(https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2002100)

Table number-1 shows state wise data of start-ups established between 2019 to 2023. We can see in the table that some of the states are performing very well as far as starting of start-ups is concerned. States like Maharashtra, Delhi, Karnataka, Uttar Pradesh, and Gujarat are doing exemplary work in start-ups. These are the top five states with the highest number of start-ups. Number of start-ups established in the top five states are as follows, Maharashtra- 18634, Karnataka-10874, Delhi-10840, Uttar Pradesh-9953, Gujarat- 8619. There are some states who need to take initiative so that entrepreneurship culture develops in those states which will help the overall economy to grow in those states. Startup is an additional avenue for people to get a job. We have been seeing in India that people migrate to other states in search of job. This migration has been conspicuously seen by the India and the world in COVID- 19 when migrant workers walking back to their home town from Mumbai and other metropolitan cities.

Table number-2

State/UT-wise number of direct jobs (self-reported) created by recognised startups during the last five years viz 2019, 2020, 2021, 2022, and 2023 are as under:

S. No.	States/UTs	2019	2020	2021	2022	2023	Total
1.	Andaman and Nicobar	60	32	72	71	97	332
2.	Andhra Pradesh	1,552	2,849	2,304	3,067	5,669	15441
3.	Arunachal Pradesh	12		31	55	185	283
4.	Assam	726	874	1,403	2,553	3,350	8906
5.	Bihar	1,079	2,134	3,086	4,498	9,057	19854
6.	Chandigarh	312	355	978	898	1,328	3871
7.	Chhattisgarh	1,423	1,054	1,694	2,126	3,189	9486
8.	Dadra and Nagar Haveli and Daman and Diu	29	31	136	147	138	481
9.	Delhi	13,862	17,638	22,231	29,955	38,280	121966
10.	Goa	349	340	494	830	824	2837
11.	Gujarat	6,077	9,295	17,329	23,610	48,138	104449

12.	Haryana	9,990	10,515	10,006	13,694	26,021	70226
13.	Himachal Pradesh	195	281	344	972	1,079	2871
14.	Jammu and Kashmir	238	447	776	1,297	2,452	5210
15.	Jharkhand	624	1,353	1,362	1,827	3,525	8691
16.	Karnataka	20,256	23,767	20,812	24,544	35,066	124445
17.	Kerala	4,413	5,446	7,582	10,286	11,737	39464
18.	Ladakh	-	3	-	32	29	64
19.	Lakshadweep	-	7	-	-	31	38
20.	Madhya Pradesh	3,955	3,468	6,568	11,511	12,070	37572
21.	Maharashtra	21,979	29,133	38,354	50,913	64,974	205353
22.	Manipur	22	116	382	309	195	1024
23.	Meghalaya	27	-	48	61	157	293
24.	Mizoram	-	2	15	106	79	202
25.	Nagaland	10	32	81	71	268	462
26.	Odisha	2,248	2,220	3,742	4,526	6,532	19268
27.	Puducherry	130	68	198	233	568	1197
28.	Punjab	1,230	1,673	2,429	2,318	4,935	12585
29.	Rajasthan	3,819	4,439	5,579	10,590	13,724	38151
30.	Sikkim	6	2	29	22	8	67
31.	Tamil Nadu	6,860	7,772	9,684	17,192	30,536	72044
32.	Telangana	8,622	8,576	9,581	14,249	18,378	59406
33.	Tripura	46	735	95	188	193	1257
34.	Uttar Pradesh	8,823	13,226	18,812	22,673	33,831	97365
35.	Uttarakhand	701	709	1,696	1,684	2,401	7191
36.	West Bengal	3,396	2,604	6,632	9,353	11,468	33453
	GRAND TOTAL	**1,23,071**	**1,51,196**	**1,94,565**	**2,66,461**	**3,90,512**	**1125805**

Source- Ministry of Commerce & Industry, Government of India
(https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2002100)

Bihar, West Bengal, and Madhya Pradesh are the highly populated states in India after Uttar Pradesh and Maharashtra. Due to high population, these states always need to create more jobs for their people. We can see in the table that very few states are able to provide jobs by starting businesses under the ecosystem of startups. Highest number of direct jobs created through startup businesses in Maharashtra -205353, Karnataka-124445, Delhi-121966, Gujrat-104449, Uttar Pradesh-97365, Tamil Nadu-72044, Haryana-70226.

Conclusion

States which are genuinely striving to improve the income level of their people should see that young enthusiastic entrepreneurs take initiative and interest to start their own startups. The State government must make the business environment conducive so that many jobs will be created by establishing startups in large numbers. Prime minister Narendra Modi says that India enjoys demographic dividend, but at the same time responsibility lies on the government to give jobs to those people. If a country like China can give jobs to their people, then India also has the potential to provide jobs to all the working age population of our country. All the three sectors i.e. agricultural, manufacturing and service are already providing jobs to crores of Indians. Now it is a time of newly set up startups to employ as many as people in their enterprises. Migration of the workers can be reduced if startup businesses are established in all the states and districts. Few Indian cities are concentrated with population due to availability of jobs and which creates a burden on those cities. If the startups businesses spread across India, then the working age population will get job in their respective states and may not need to migrate in faraway places in search of jobs.

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Achieving Sustainability Goals through ESG Bond Markets: A Case Study on Indian companies w.r.t ReNew Power, IRFC, HDFC Ltd., and Tata Power in India

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Abstract:

As a way for businesses to finance projects that support sustainable development, ESG bonds are becoming more and more popular as a result of the growing interest in Environmental, Social, and Governance (ESG) considerations. Comparing the organizations issuing ESG bonds is the goal of this study. Additionally, it looks into how ESG-focused activities affect long-term financial success by analyzing the connection between company profile, their bond ratings, use of their proceeds and analysis on their performance w.r.t credit rating and market reception. The research employs both qualitative and quantitative methods, offering insights for investors, financial analysts, and policymakers involved in ESG investments.

Keywords: ESG bonds, sustainability, comparative analysis

Introduction:

"Earth provides enough to satisfy every man's needs, but not every man's greed."

— Mahatma Gandhi.

The earlier this message rings through our ears, pumps through our veins and reaches the world through our actions, the faster will we be able to sustain life on earth. Climate change has brought fresh challenges to the world. No longer will we be able to exploit nature for our own good. No longer will we be able to look after our own or provide for our own. Every irresponsible action towards the environment by even an individual will call upon a reaction of such great magnitude that it will drown every living soul in complete darkness of their own existence. The realisation took sometime but has now led to socially responsible behaviour on part of the society. The industries have now started diverting their time and resources to CSR initiatives and the society in turn has become conscious of their choices and who they choose to do business with. This has given rise to the idea of "Sustainable Investing" or "Socially Responsible Investing" or "ESG Investing- Environmental, Social and Governance Investing.

ESG investing is making a smart investment choice and choosing the companies that are making more environmentally beneficial decisions than just focusing on wealth creation. Investment in ESG firms means that your money is going to support businesses that aim to improve the planet. People may match their financial decisions with their personal beliefs by using this kind of ethical investing technique.

Similar to several other developing nations, India has witnessed a rise in the need for sustainable financing. Environmental, social, and governance (ESG) bonds have become a more popular means of raising capital for Indian businesses as a result of increased awareness of these concerns. These businesses finance social infrastructure projects, renewable energy projects, and other sustainability efforts with the money raised via ESG bonds. These bonds enable businesses to satisfy their capital requirements while integrating their financial operations with the objectives of global sustainability. ESG bond issuers pledge to use the money raised for particular ESG-related initiatives, including the advancement of renewable energy, social infrastructure, or corporate governance changes. The paper will reflect few notable Indian businesses that have issued ESG bonds.

Research Methodology

Statement of Problem: To effectively use resources for sustainable growth, investors, policy-makers, and enterprises must have a solid grasp of the dynamics of the ESG bond markets, especially in light of India's ambitious sustainability targets.

Objectives of the study

1. To analyze the financial performance of companies issuing ESG bonds through their credit rating and market reception.
2. To draw a comparison between the way proceeds/ capital raised is utilised by companies.
3. To explore the issuance of such bonds and their impact on various investment platforms.

Significance of the study

Investors are increasingly looking for investments that reflect their values as a result of increased awareness of social inequality, climate change, and corporate responsibility. ESG bonds are a bridge connecting socially conscious investing with conventional finance. Over the past ten years, they have grown significantly due to rising demand from stakeholders, regulators, and institutional investors who are worried about how corporate operations affect society.

Methodology

a. Company Selection

The study will concentrate on businesses from a range of sectors, such as housing, energy, and transportation. To ensure data availability for study, the selected companies will have offered ESG bonds within the last five years. The sample will include well-known businesses including Renew Power, HDFC Ltd., Indian Railways Financial Corporation (IRFC) and Tata Power.

b. Sources of Data

We will use secondary data for past financial performance, ESG ratings, bond issuance details.

Limitations of Study

a. **Time Constraints**: Bond issuance and ESG procedures are still developing. The long-term effects of bond issuance or ESG policies on financial performance or sustainability outcomes might not be adequately captured by research done over a small period of time.

b. **Geographical Constraints**: The study ignores geographical variations, the results may not be as broadly applicable as they may be because ESG practices may vary greatly across urban and rural operations of businesses.

Review of Literature

Abhilash, Sandeep S. Shenoy, Subrahmanya Kumar (2023), By using a comprehensive evaluation of the literature, this study seeks to close this gap by focusing on the growth, limiting factors, and future prospects of the green bond market. The papers in this review were published from 2010 to 2022.

Bekun(2022), According to the Indian study, renewable energy is the answer to CO2 emissions, whereas GDP development and non-renewable energy are the main causes of CO2 emissions in the nation.

Dr. D. Thirumala Rao, G. Santoshi (2021), mention in their current study the development of green finance in India as well as the issuance of green bonds. Ultimately, it was discovered that green finance had advanced significantly over the previous seven years, from 2013 to 2019, and that India ranked fourth among the 12 countries in terms of the total number of green bonds issued.

Ashima Verma and Rachna Agarwal (2020), Their research examines green bonds from a broad perspective. It discusses the state of green bonds in India at the moment. The study also highlights green bonds' potential for the future. Lastly, it includes useful recommendations for the Indian setting.

Data Analysis and Interpretation

I) ReNew Power - Green Bonds for Renewable Energy Projects

a. Company Profile - With an emphasis on wind and solar power projects, Renew Power is one of India's top renewable energy enterprises.

b. Issue of ESG Bonds- Renew Power issued $450 million in green bonds in 2021 to finance its renewable energy initiatives. The issuance was a component of Renew Power's plan to expand its capabilities in the renewable energy industry, and the green bonds were listed on the Luxembourg Stock Exchange.

c. Tracking of its proceeds - The green bonds' profits were designated in particular for financing renewable energy initiatives, such as solar and wind power plants throughout India. The business pledged to use the money only for initiatives that adhere to the Green Bond Principles (GBP) and produce quantifiable environmental advantages, such as lowering carbon emissions.

d. Analysis on financial performance:

• **Credit Rating:** A stable credit outlook was reflected in S&P Global's BBB- rating for Renew Power's green bond offering.

• **Market Reception:** International institutional investors, who are becoming more interested in sustainable assets, embraced the bond. Attracting investors was aided by Renew Power's steadfast dedication to clean energy and its well-established position in the Indian renewable energy market.

II) HDFC Ltd – Social Bonds for Affordable Housing

a. Company Profile- One of India's top mortgage lenders, Housing Development Finance Corporation (HDFC) is well-known for lending money to middle-class Indians. With a particular emphasis on affordable housing, HDFC has placed a greater emphasis on social responsibility and sustainability.

b. **Issue of ESG Bonds-** To fund the development of affordable homes, HDFC Ltd. issued social bonds in 2019 that raised ₹3,000 crore, or roughly $400 million. For the first time, a home finance firm in India issued social bonds with the express goal of financing projects that would benefit society.

c. **Tracking of Proceeds-** Only projects that provided affordable housing for low- and middle-income groups were funded with the money raised from the social bonds.

d. Analysis of Financial Performance:

• **Credit Rating:** HDFC's sound financial standing is demonstrated by the social bonds' AAA rating from ICRA, the highest rating available.

• **Market Reception:** Both domestic and foreign institutional investors showed a great deal of interest in the bond. The offering was well-liked because of its emphasis on social impact and affordable housing.

III) Indian Railways Finance Corporation (IRFC) – Green Bonds for Sustainable Transportation

a. Company Profile- One public sector organization that finances Indian Railways' modernization and growth is the Indian Railways Finance Corporation (IRFC). IRFC has taken steps to lessen the environmental impact of India's railway infrastructure as part of its dedication to sustainability.

b. Issue of ESG Bonds- In 2020, IRFC issued green bonds that raised ₹4,000 crore, or roughly $600 million. This was a component of their larger plan to finance the acquisition of energy-efficient locomotives and the electrification of railroad lines. The Indian National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) both listed the bonds.

c. Tracking of Proceeds: The green bonds' proceeds were meant to be used to buy energy-efficient locomotives, electrify railroad lines, and lower carbon emissions from railroad operations. Reducing reliance on fossil fuels and increasing the energy efficiency of the railway system were the main goals of the project.

d. Analysis of Financial Performance:

• **Credit Rating:** CARE Ratings gave the bonds an AA+ rating, indicating a good ability to pay debts.

• **Market Reception:** Institutional investors, particularly those mandated to concentrate on environmentally friendly and sustainable infrastructure projects, responded favorably to the issue.

Energy-efficient locomotives and a decrease in carbon emissions from railway operations were made possible by the Indian government's strong support of IRFC.

IV) Tata Power – Green Bonds for Renewable Energy and Clean Technology -

a. Company Profile- One of the biggest private sector electricity providers in India, Tata Power is increasingly concentrating on renewable energy. As part of its plan to lower its carbon footprint, the corporation has made large investments in wind, solar, and other sustainable energy initiatives.

b. Issue of ESG Bonds- Tata Power issued its first worldwide green bond in 2020, raising $500 million in the process. The money was meant to help the company's continuing renewable energy projects, especially those related to wind and solar power.

c. **Tracking of Proceeds:**

Tata Power's green bonds were designed to fund clean energy technologies that lessen their impact on the environment as well as renewable energy initiatives like the installation of wind turbines and solar panels.

d. Analysis of Financial Performance:

e. Credit Rating

f. According to S&P Global, the bond has a stable credit rating of BBB, making it suitable for long-term investments.

• Market Reception-

The market responded favorably to the green bond offering, especially foreign investors seekin g ESG-compliant securities.

The popularity of the bond was influenced by Tata Power's standing in the renewable energy sector and its dedication to sustainable growth.

5) **FINDINGS/SUGGESTIONS/CONCLUSION**

5.1 Findings

1. Companies with strong ESG policies are better positioned to deal with reputational crises, as their transparent and ethical business processes help mitigate the impact of unfavorable occurrences.
2. One of the primary findings of ESG research is that organizations that prioritize environmental sustainability tend to use cleaner technology, minimize waste, and reduce carbon emissions. This is particularly noticeable in industries such as energy, transportation, and housing.

Suggestions

1. Standardizing ESG indicators and improving transparency in reporting can increase the appeal of ESG bonds.
2. Additional data from various areas and sectors could improve the findings.
3. Future studies should examine companies' long-term financial performance after issuing ESG bonds.

Conclusion

The increasing trend of ESG bond issuances in India is demonstrated by these case studies, especially in areas like clean transportation, affordable housing, and renewable energy. ESG bonds are being used more and more by Indian businesses to fund their sustainable initiatives, illustrating how these financial products complement corporate goals and international sustainability objectives. Since investors are increasingly looking for businesses that provide ESG-compliant investment possibilities, the market's reaction to these bonds has been mainly positive.

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Caste Dynamics: Contemporary India

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Abstract:

Caste in India is as old as Indian society itself. Caste is a recording history of India. Anybody can understand the Indian society through the Lense of caste. Caste comes from the Portuguese word "Casta" which means to be born into. Caste gives an identity to the people on the basis of birth. Caste is also considered as a system driven by your primordial origin and identity. In Marathi caste is known by the term called "Jati". We can understand the social stratification through the institution of caste. Caste is a unique institution in India only, its did not present in any other country except India. Caste is a part of Hindu fold. Caste is having both negative and positive connotation and had been an integral part of Indian society.

Dr. B. R. Ambedkar called annihilation of the caste because it has certain norms which discriminate and exploit certain caste groups of the society from accessing basic facilities because of restrictions imposed on them by the cultural norms of society.

Competition between the caste. Caste speaks about the empirical nature of Indian society. Caste is a contextual view/ empirical view. And varna is a ideal view. Caste mobility is happening through the point of reference. Different caste has different structure of family and kinship. Caste does not carry a singular hierarchy.

Caste is having two types of hierarchy secular hierarchy and the ritual hierarchy. In secular hierarchy position of caste is determined by the income, occupation, education, political power, huge land, political connect and power relationship. Once you have money, you can take new caste name, new caste occupation, people accept your newfound status because, they are economically dependent on you. Ritual hierarchy in which position of caste is determined by the birth, ritual, way of life, dress, manners, speech, behavior, food etc. for example, brahmins are the one holding highest or top position by the ritual hierarchy.

Keywords: Caste hierarchy, discrimination, disparity, purity and pollution, endogamy, hypergamy, hereditary, norm, twice-born.

Discussion:

Caste had been extensively researched by the foreigners to understand the norms and values of the caste. So that they can be able to rule over them. And Britishers found out that, in Indian society one peculiar institution is present called caste which is known as Jat. Caste is the source of different factors such as social structure is also based on caste. People are getting identity from the caste. Various varieties of entitlements are defined by the caste. Shudra should be serving everybody.

Occupation is also determined by the caste. Such as access to land, access to education, social status is also largely influenced by the caste. So, the caste is one of the most crucial institution in the society. Public positions are influenced by the caste. Colonial rulers wanted to know absolutely about the people so that it becomes easier to rule over the people. They wanted to understand caste for two reasons one is academic and another is administrative interest. To understand the caste, they developed different theories on origin of the caste.

To know the people of India more intensely. such as varna theory to caste, by J. H. Hutton. He advocated people of India are divided on four different varna groups, each varna is entitled to go for a given kind of occupation. common assumption about caste is sub-division of varna is giving rise to caste. European considered caste as a hierarchical system, in which top and bottom positions are fixed brahmins and untouchables respectively, and concluded that caste produces hierarchy. In past both ritual and secular hierarchy are integrated/ interrelated to each other.

John Freier said each linguistic zone in India, there are around 200 caste groups are present all over India.

When modernity comes, every section of the society want larger share over the modernity, that may be government jobs, access to industry, political participation, other kinds of affluence, through caste homogenization and collective caste mobilization taken place, so that they will have a maximum control over progressive modernity.

Different Sociologist has Different Views on the Caste.

1) **Louis Dumont**:

For Dumont caste is an ideological system. So, the caste is getting traditional cultural support for everything. Caste conflict is also a conflict of interest over the occupation, power, land position etc. and cultural ideology says that the superiority is our cultural privilege. For example, in entire state of Maharashtra during the 2024 election of Lok Sabha and Vidhan Sabha. Main agenda of the campaign was the caste, in which the other backward classes were turned against the large Maratha community to win the election and its has turned into the formation of the government by wining election with huge margin, and equality is a constitutional provision, both the ideological values are contesting with each other, which is the product of caste conflict. Caste conflict or violence is the latent function in the form of power relationship. People of one sub-caste come together to stand opposite or against another caste.

2) **G. S. Ghurye:**

He did his Ph.D. on caste. Title of his dissertation is *caste and race in India, 1932.* In his work he studies the caste in the perspective of comparative, Indological, historical and integrative. according to him entire Indian society is continued on the feature of caste. Caste acted as an integrative force in the Indian society and this is visible or reflected in the today's context of India. Caste solidarity is strengthening. H said that problem of caste is divided into smaller unit, they instead of calling themselves sub-caste, they are calling caste so that they can distinguish themselves from other caste. Solidarity of caste is getting momentum. Ghurye talks interpretation of text, use historical secondary data to study the caste system.

3) **M. N. Srinivas:**

He was a structure functionalist. To study caste he used village study method. It was very crucial for the studding the rural social transformation and reservation policy through the view of caste. He offered the field view on caste. He conducted empirical research in different villages of India on caste. He found out that caste is not a static system, it is a dynamic system. He shown that caste and varna had huge differences from one another. Caste is a system of stratification, through which he explained the mobility weather upward or downward by using Sanskritization theory.

He also studied the linkage between the caste and politics which includes relationship between the caste and public policy, such as reservation policy, family system. He wrote essay on obituary to caste, which means caste is dying out, caste may be disappearing in India, its functional role may be squeezing, but in reality, caste is reviving itself with such a great force that it became a part of modern lifestyle in contemporary India.

4) **Dipankar Gupta:**

He advocated caste is one identity, which is used, misused, abused and overused many times. caste is staying in society but individual and family interest are more important than the caste. Caste is form of mobility is changing its basic paradigm depending on the demand of the situation. People belonging to caste, belonging to different class status will be homogenizing together for reservation.

Family interest, forgetting caste all members of the family will be supporting to each other for economic, academic progress, upliftment, the status improvement of the family. Therefore, India is not driven by caste and always driven by the class. Therefore, what caste

5) **Andre Beteille:**

Caste is changing its role depending on demands of time and situation. Within a caste people have gone for different kinds of occupation. Within a caste class formation has taken place. Interpersonal relationship among people is not just confined to caste. Many times, interpersonal relationship are cutting across their caste identity and people are coming together on the basis of

class interest. Therefore, one cannot say interpersonal relationship in India are just caste specific. interpersonal relationship is dynamic. interpersonal Relationship cannot be just specified in economic, political terms, specific interest. When caste and class interest go together but family status is different, interpersonal relationship is bound to be different.

6) **Mahatma Gandhi:**

Believes caste as a form of practice, which is unwanted, unsolicited, perversion. caste has to go. caste has nothing to do with the religion.

7) **Dr. B. R. Ambedkar:**

He is talking about caste as a system which is Brahminic, Hindu centric, cultural and greatly responsible for marginalization of large section of the society, who are not able to explore their talent and enjoy equality in human society. He believes foundation of caste or caste is coming out of Hindu religion.

Conclusion:

Caste is affecting every bodies life in one form or the other. Caste is there in the air for different purposes. Caste is having different kinds of contemporary relevance, including significance, uses and abuses of the caste. Caste in India is going in the process of fusion and fission. unity and division are one of the features of the caste in India. Man, and caste in India are absolutely inseparable or indivisible. caste is an such an invisible force which have been shaping power sharing in the Indian society.

Sanskritization and secular mobility is taking place in India. secular structure is always dynamic. Through Sanskritization and reference group behavior people intend to tell that getting secular support people belonging to lower caste are improving their social status and position and proclaiming their higher caste status. Substantialization of caste have been takes place and caste as a hierarchy is becoming stronger.

Therefore, what caste was in past, we can not expect same role to play caste in today. Caste is institution changing its basic orientation depending on the changing times. How in contemporary India. Progressive caste groups are secularly asking for reservation for example, Jats, Patidar, and Maratha. Caste is used as platform for collective mobilization for the gratification of the contemporary interest.

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Corporate Social Responsibility and Employee Engagement

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Abstract

This study explores the relationship between employee engagement (EE) and corporate social responsibility (CSR). The data collected from 86 participants through surveys indicates that CSR has minimal impact on EE, with the R-square value (0.003) showing CSR accounts for only 0.3% of the variance in EE. The findings challenge assumptions that CSR significantly influences EE, suggesting the need for a broader perspective on factors contributing to employee engagement.

Introduction

Corporate Social Responsibility (CSR) has become an integral part of modern business strategies. Initially conceptualized by Howard Bowen in 1953, CSR emphasizes the responsibility of businesses to act ethically and contribute to societal well-being. Over time, scholars like Archie Carroll have expanded the framework to include economic, legal, ethical, and philanthropic dimensions. While CSR aims to foster organizational accountability and sustainability, its impact on employee engagement (EE) remains underexplored.

Employee engagement refers to the emotional and intellectual commitment employees have toward their organization. High engagement levels drive productivity, loyalty, and satisfaction, creating a positive workplace culture. This study investigates the connection between CSR initiatives and EE, addressing gaps in the literature by exploring employee perspectives across different functional areas and industries. The objective is to provide insights into how CSR can enhance workplace environments and align corporate strategies with employee needs.

Literature Review

Research on the CSR-EE nexus reveals mixed findings. Tariq (2015) examined CSR's role in influencing worker engagement, finding a weak but significant correlation in India, where job security often outweighs organizational initiatives. Similarly, Glavas (2016) highlighted the mediating role of authenticity in CSR-EE relationships, noting that perceived organizational support enhances engagement. However, the study's focus on a single U.S. company limits its generalizability.

Yadav et al. (2020) explored CSR's influence on HR and CSR professionals, emphasizing workplace culture as a key driver of engagement. Their findings suggest that while CSR initiatives appeal to employees directly involved in them, factors like job fit, compensation, and brand image hold greater significance. Bapat and Upadhaya (2021) corroborated this by linking CSR participation to improved commitment levels among employees of large Indian firms. However, their focus on mandatory CSR spending under the Companies Act restricts applicability to other contexts.

Joseph (2023) synthesized literature on CSR and EE, identifying positive impacts on job satisfaction, organizational commitment, and purpose. Yet, the study's reliance on secondary data highlights the need for primary research to validate these claims. Collectively, these studies underscore the potential of CSR to influence EE but highlight limitations in scope, methodology, and generalizability, which this study seeks to address.

Methodology

The study surveyed 86 participants using a Google Form distributed via email and social media. The sample included individuals from diverse age groups, genders, income levels, and professional roles, ensuring broad representation. CSR was measured using a scale developed by Jawaharlal University, assessing awareness, involvement, and perceived impact. Employee engagement was evaluated using the Utrecht Work Engagement Scale (UWES), which measures vigor, dedication, and absorption. Both tools demonstrated high reliability and validity, with Cronbach's alpha values exceeding 0.85.

Participants

The age distribution ranged from 18 to 55, with 46.5% aged 18–25. Gender representation included 44.2% cisgender men, 51.2% cisgender women, and 4.6% identifying as gender fluid or transgender. Socioeconomic diversity was evident, with incomes varying from under ₹3 lakhs to over ₹10 lakhs annually. Participants represented functional areas such as marketing, finance, quality control, and senior management, with 23.3% having more than two years of tenure.

Procedure

Participants completed a structured questionnaire divided into CSR and EE sections. The survey, designed to take 6–7 minutes, employed a Likert scale to gauge satisfaction and perceptions. Ethical considerations included informed consent, confidentiality, and voluntary participation, ensuring data integrity and participant well-being.

Results

Descriptive statistics revealed wide variability in CSR and EE scores, reflecting diverse perceptions and engagement levels. Regression analysis showed a negligible correlation ($R = 0.051$; $R^2 = 0.003$) between CSR and EE, with CSR explaining only 0.3% of the variance in EE. ANOVA results ($F = 0.220$, $p = 0.640$) confirmed the model's insignificance.

The coefficients table showed a t-value of 0.469 for CSR, with a p-value of 0.640, indicating no significant predictive value. While CSR's unstandardized coefficient (0.266) suggested a positive effect on EE, this relationship was statistically insignificant. These findings challenge theoretical assertions that CSR enhances EE, suggesting other factors, such as organizational culture and leadership, may play a more substantial role.

Discussion

The lack of a direct CSR-EE correlation aligns with theories emphasizing basic needs and intrinsic motivation over external initiatives. Maslow's hierarchy suggests employees prioritize security and growth over CSR activities. Herzberg's two-factor theory posits that while CSR may prevent dissatisfaction, it does not significantly enhance engagement. The job demand-resource model highlights the importance of resources like autonomy and support, which may outweigh CSR in influencing EE.

Participants' limited tenure may also explain their weaker connection to CSR, as newer employees often focus on personal and professional growth. Moreover, CSR activities perceived as peripheral or unrelated to daily work, such as beach clean-ups, may not resonate with employees' immediate priorities. These findings suggest that CSR's impact on EE may depend on contextual factors like tenure, role alignment, and organizational support.

Limitations and Applications

The study's small sample size (86 respondents) and regional focus (India) limit its generalizability. Additionally, factors like leadership style, compensation, and career development were not examined, potentially influencing results. Despite these limitations, the findings offer valuable insights for organizations seeking to align CSR initiatives with engagement strategies.

Practical implications include designing CSR activities that integrate seamlessly with employees' roles, fostering a sense of purpose and alignment. Onboarding programs and communication strategies can enhance awareness and participation, creating stronger connections between CSR and EE. Future research should explore diverse organizational settings, broader samples, and additional factors influencing engagement.

Conclusion

CSR alone may not significantly influence EE in the short term, but its long-term implementation can create a positive organizational climate, benefiting employees, businesses, and society. Integrating CSR thoughtfully with other engagement strategies can foster meaningful connections, enhance organizational effectiveness, and promote sustainability.

Cybercrime and Justice The Evolving Role of Cyber Law in India

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Abstract

Significant profitable and social progress has redounded from India's quick digitization, but it has also increased cybercrime, venturing people, businesses, and public security. To address these problems, maintain justice, and cover the digital terrain, cyber law is essential. This essay explores the elaboration of cyber law in India, emphasizing significant laws, seminal rulings, and new difficulties in the fight against cybercrime. It highlights the value of flexible legal processes in keeping up with technological advancements and assesses the advantages and disadvantages of current fabrics. The need for a comprehensive strategy to achieve justice in the digital age is stressed by the discussion of suggestions for enhancing enforcement and raising public mindfulness.

Introduction

India now has one of the biggest internet stoner populations in the world thanks to the digital revolution, which is also perfecting connectivity and stimulating profitable growth. But this increase in digitization has also led to a rise in cybercrimes similar to hacking, fiscal fraud, identity theft, and cyberbullying. In order to reduce these pitfalls, cyber law — which includes rules for online conduct and digital relations is pivotal.

The Information Technology(IT) Act, of 2000, a major piece of legislation intended to combat cybercrime and e-commerce, marked the morning of India's cyber law trip. Its compass has been expanded throughout time to address new issues through emendations and supplemental legislation.

This essay examines how cyber law has changed in India and evaluates how well it works to help cybercrime and administer justice.

Understanding Cybercrime

1. Cybercrime is the term used to describe illegal exertion that targets digital systems or is carried out through digital platforms. It falls under one of the following orders

- Crimes Against individualities, which include fiscal fraud and identity theft.
- Online abuse and cyberstalking
- Access to particular data without authorization.

2. **Crimes Against Associations**

- Ransomware attacks and data breaches.
- Intellectual property theft.
- Critical structure dislocation.

3. **Crimes Against Governments**

- Spying and cyberterrorism.
- Propagation of misinformation and propaganda.

Cybercrimes lead to fiscal losses, damage to reports, and corrosion of trust. Addressing these issues demands robust legal fabrics and visionary enforcement strategies.

The Elaboration of Cyber Law in India

India's cyber law frame has acclimated over time to fight evolving digital pitfalls

1. The Information Technology Act, 2000

The IT Act, of 2000, served as India’s first comprehensive legislation addressing electronic governance, cybercrime, and data protection. crucial features include

- Legal recognition for electronic records and digital autographs.
- vittles for precluding unauthorized access and data breaches(Section 43).
- chastising identity theft and impersonation(Section 66C).
- Addressing pornography and child exploitation(Section 67).

Although groundbreaking, the IT Act faced review for its limited compass and outdated vittles.

2. Emendations and Supplementary Laws

The IT(Correction) Act, of 2008, introduced critical updates

- Enhanced penalties for cyber terrorism(Section 66F).
- vittles for handling sensitive particular data(Section 43A).
- Broader delineations of cyber offenses, including phishing and spamming. fresh laws include
- The Indian Penal Code(IPC) for addressing online vilification and importunity.
- The Digital Personal Data Protection Act, of 2023, fastening on data sequestration and stoner concurrence.

Landmark Cases in Indian Cyber Law

Several significant cases have shaped the cyber law geography in India

1. Shreya Singhal v. Union of India(2015)

- The Supreme Court abrogated Section 66A of the IT Act, declaring it unconstitutional for being vague and exorbitantly broad.
- This decision corroborated the significance of free speech in the digital realm.

2. The Blue Whale Challenge Incident

- Government measures to ban dangerous online games underlined the need to regulate digital content to cover druggies.

3. Aadhaar Data Security enterprises

- Allegations of abuse of biometric data stressed the necessity for strict data protection laws.

4. Cyber Frauds in Online Banking

- Incidents of phishing and unauthorized deals urged stronger cybersecurity measures in fiscal institutions.

Many Challenges that India Faces in Combating Cybercrime

However, India faces some very persisting challenges about cybercrime despite technological advancement. These are:

1. Technological Advancements

- Present fast-changing technological dimensions often tend to run ahead of existing legal frameworks.

2. Jurisdictional Complexities

- Cross-border prosecution or investigation becomes complicated by cybercrime.

3. Resource Limitations

- Such a level of deficiency in specialized technical manpower and infrastructure responds negatively to the effective enforcement of legislation.

4. Citizen Awareness

- Lack of awareness among citizens about their rights and the form in which they can report a cybercrime.

The Place of Cyber Law in Providing Justice

Cyber law is very essential in pursuance of justice in the digital age. Some of these important functions would include:

1. Protection of Rights

o Preventing everybody from invading privacy or secure personal data.

2. Deterrence

o Making stringent punishment to de-motivate cyber culprits.

3. To Create a Trust Environment On Digital Space:

o To build trust in online platforms and transactions.

4. Facilitating Global Cooperation:

o Building a network with global partners in cross-border cybercrime.

Emerging Issues of Cyber Law in India

The new challenges have arisen as part of the continuing phenomenon of digitalization that brings in new issues for Indian cyber law:

1. AI and Automation:

- The emergence of AI-facilitated cybercrime, along with issues related to automated decision-making.

2. Blockchain and Cryptocurrencies:

- Regulation of decentralized technologies while safeguarding against misuse for innovative growth.

3. Deepfakes and Digital Manipulation:

- Countering highly advanced technologies regarding misinformation and identity fraud.

4. Critical Infrastructure Security:

- Strengthening the security arrangements from cyberattacks on critical services, for example, healthcare and energy services.

Strengthening Cyber Law Recommendations:

The measures suggested to combat cybercrimes include the following:

1. One-time Review of Legislation: Revision of laws needs to be taken time to time to keep pace with technology.
2. Improved Enforcement: Provides law enforcement capability and advanced tools.
3. Increase Public Awareness: Citizen education on cyber victimization and reporting.
4. Promote International Cooperation: Develop cooperation with global organizations against transnational cybercrime.
5. Creating Specialized Cyber Court: Establishing specific courts to ensure speedy trials of cybercrime cases.

Public Awareness and Education Outreach Campaigns.

1. One key element in fighting cybercrime is the education of the public about the dangers and how to behave online safely.
2. Public awareness initiatives could be workshops, seminars, or even efforts through social media.
3. Schools and colleges should embed cybersecurity into their syllabi so that eventually a culture of digital responsibility will be nurtured among future generations.
4. Corporate participation would mean regularly conducting training of its personnel to recognize phishing or hoaxes, develop good password practices, and understand data protection rules.
5. These would harness the efforts of government, NGOs, and the private sector in the greater outreach of such educational campaigns.

But still, India has challenges in combating cybercrime:

1. **Technological Improvements:** The rapid progress in technology has always been ahead of the existing legal framework.
2. **Jurisdictional Problems**: The more the boundaries separate forward, the more complex the investigation and prosecution of cross-border cybercrime become.
3. **Resource Deficiency**: There is very little technical support and infrastructure available for effective enforcement.
4. **Public Awareness**: A major section of citizens is not aware of their rights or whom to report cybercrime to.

Role of Cyber Law in Commanding Justice:

Cyber Law is fundamental in achieving justice in the digitalized world. Some main functions include:

1. Protecting rights: Privacy and security of data of individuals.
2. Deterrence: Imposing stringent penalties so that cybercriminals can be deterred.

3. Trust in Digital: Increasing trust in online platforms and transactions.
4. Facilitating Global Cooperation: Helping other nations in the efforts of cross-boundary cybercrime.

International Best Practices for Indian Cyber Law

The study of international practices enriches the study of strengthening Indian cyber law:

1. **The GDPR Model:**

The European General Data Protection Regulation (GDPR) has been seen to be strong enough to promote data privacy and require much consent and accountability among users.

2. The American Way:

e.g., The law has testified its commitment by respectively receiving the act of the Cybersecurity Information Sharing Act (CISA), which largely encourages public-private cooperation in responding to cyber threats.

3. Cybersecurity Strategy Singapore:

A mandatory report of cyber incidents with Singapore's proactive initiatives stands for better governance efficiency.

This has also made it more successful to develop better cyber law frameworks through policy-making by adopting and customizing them in Indian contexts.

Technology Adaptation for Enforcement

Technology such as artificial intelligence, machine learning, and the advent of blockchain can greatly improve efficacy in cyber law enforcement. Such analytics as predictive views could better allow law enforcement to see patterns of cybercrimes and pre-emptively engage. Blockchain's transparency and immutability afford fettered value to digital transactions, curbing fraud.

That would spur investment in these technologies alongside developing public-private partnerships to empower enforcement agencies against sophisticated cyber threats.

Conclusion

Indeed, it could be said that with the strengthening of the existing context surrounding cyber law in India, cybercrime and its associated devastating effects will always keep hunting the present system. While considerable advances have been made so far, there is still a need for a proactive and adaptive approach toward justice and the security of digital ecosystems. With enhanced enforcement, public awareness, and collaborative effort at the global level, India will be gearing itself toward a resilient and secured digital future. The changes in technology demand a responsive law, one that not only addresses the issues of today but also addresses those of the future, thereby ensuring justice in a digital society.

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Effects of Inclusivity on Organisational Performance

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Abstract

This study was conducted to analyze the relationship between inclusivity and organizational performance and to understand whether workplaces that practice inclusivity yield better organizational performance. A sample of 106 participants (N=106) was collected using an online survey within India. The data collected was analyzed using SPSS software. The results revealed a moderate to high positive correlation between the two variables (p-value <0.001). The results were significant indicating meaning relations. The study's findings suggest that inclusivity within organizations can lead to improved performance of the organization, although some limitations like regional study and small size create hindrances in generalizing the results. Future research should consider larger, more diverse samples and additional qualitative measures to gain a deeper understanding of the impact of inclusivity in different organizational contexts. The study highlights the importance of inclusivity as a strategic tool for enhancing organizational success.

Introduction

Inclusivity is a concept that says everyone, no matter their sex, religion, gender, ability, caste, color, sexuality, or socioeconomic status, should be given equal opportunities, respect, and a sense of belonging. Inclusivity is about altering the history of discrimination against people due to their identity and making the required amends to make all humans feel included. Workplace inclusion is described as giving an all-inclusive platform to employees and giving them the opportunities to progress in the company while making every employee feel like they belong. Organizational performance is measured by how the company achieves its goals and objectives and gives the required outputs. Organizational performance depends on how a company takes into consideration many factors, such as economic factors, employee behavior, inclusion, technology, market management, globalization, workplace culture, company climate, and many more. Inclusion and organizational performance are very deeply connected and related.

According to research, workplaces that adopt a culture full of diversity and inclusion have numerous advantages (Mor-Barak et al., 2016). Study has found that companies that advance with inclusive and diverse leadership programs show better outcomes on both individual and organismal levels than companies that solely focus on diversity alone (Mor-Barak et al., 2016). Bond and Haynes (2014) report that minority groups or non-dominant groups benefit greatly when companies choose to showcase inclusivity. This practice in workplaces results in boosted morale, confidence, sense of self, mental and physical health, motivation, and productive behaviors in workplaces, leading to better performances by the companies.

Though there are many studies and articles on how diversity affects employee job satisfaction, there are hardly any studies solely focusing on the effects of inclusion on organizational behavior and performance. The aim of this study is to understand how a company benefits and performs due to inclusion, and how it benefit everyone on an individual and collective level. Inclusivity in the workplace boosts morale and performance, yet studies reveal gaps in understanding its broader impact. Research highlights benefits in specific contexts, such as globalization (Sharma, 2023), sector performance in Kenya (Ngari, 2023), and Indonesia's pharmaceutical industry (Sakitri, 2015). However, limitations include narrow scopes, lack of generalizability, and insufficient quantitative analysis. This paper examines inclusivity's direct impact on organizational performance, emphasizing diversity across all communities for holistic insights.

Methodology

Participants

There were a total of 106 participants aged 18- 65+ of which 53 identified as cisgender female while 43 identified as cisgender male, along with 3 gender non-binary, 1 transgender, and 3 gender

fluid. Their designations ranged from watchman and intern to CEO and Founder. There were participants from various work sectors like IT, Medical, Service, Finance, Media, Government, etc. The participants reported various job positions in their organization. The data on the participants' annual taxable income was collected, with 11 belonging to the above 25 lakh range (10.4%), 5 in the over 10 lakhs to 15 lakhs range (4.7%), 8 from the over 9 lakhs to 10 lakhs range (7.5%), 15 from the over 6 lakhs to 9 lakhs range (14.2%), 14 from the over 5 lakhs to 6 lakhs (13.2%), 18 from the over 2.5 lakhs to 3 lakhs (17%), and majority that 35 from the upto 2.5 lakhs (33%). The majority of the participants belonged to the General category caste (74.5%) while 14 were reported to be from OBC (other backward class), 10 were from Schedule Caste, and 3 were from Schedule Tribe. There were participants from various religions with the majority belonging to Hinduism (67.9%), 10 from Islam, 10 from Christianity, 4 from Buddhism, 2 from Jainism, 4 were atheists, 3 were agnostics, and 1 from Sikhism. 86 participants identified as Heterosexual (81.1%), while 11 identified as bisexual, 8 identified as homosexual, and one identified as asexual.

Measures and Assessments

There were two scales used. The first scale was the Diversio Diversity and Inclusivity survey which was developed by Somkene Igboanugo, Jeiru Yang, and Phil Bigelow. There were five themes captured in this 5-point Likert scale with options ranging from “No, not at all” to “Yes, definitely”. There were five questions representing each theme (inclusive culture, fair management, access to networks, safe working environment, and flexible working conditions). The second questionnaire was the organizational performance questionnaire which was developed by MD Muradh Milah (2020). There were two themes in this section of the questionnaire i.e. non-financial performance and financial performance. This questionnaire was a 5-point Likert scale with options ranging from “strongly disagree” to “strongly agree”. This questionnaire consisted of 16 questions to be answered. Both scales were calculated by summation of the results. Both scales were found to be internally valid.

Procedure

The survey was conducted through Google Forms. Consent was ensured from every participant before they filled out the form. The researcher's legal email ID was also provided to the participants if they had any questions regarding the survey. There were demographic details collected like their initials, age, annual taxable income, caste, sexuality, job designation, work sector, etc. The participants were first required to fill in the inclusivity survey first and then the organizational performance survey. Convenience and snowball sampling was used since the participants were contacted through family and friends. The design of this experiment was correlation.

Ethical Considerations

To ensure utmost privacy and secrecy no personal data was collected from the participants and the data collected was only accessible by the researcher and no one else. All the forms filled by the participants were voluntary and consent was taken before they filled the form. No private information was collected apart from the demographic details. There were no names submitted. The data collected from the participants will be deleted in 6 months.

Data Analysis

Data was analyzed using the SPSS (Statistical Package for the Social Sciences) Software, which is discussed later in the results section.

Results

Descriptive statistics

Descriptives

Descriptive Statistics

	N	Range	Mean	Std. Deviation	Variance
Inclusivity Scale	106	20	11.25	4.633	21.468
Organization Performance Scale	106	56	35.04	10.714	114.780
Valid N (listwise)	106				

Table No.1

Table No. 1 showcases the descriptive statistics of two key variables inclusivity and organizational performance. This is based on the data collected from 206 participants (N=106). The mean score of the inclusivity scale is 11.25 and the standard deviation was (SD= 4.633) which indicates that most scores were relatively close to the mean their scores varied by 4.633 points away from the mean. the variance score on this scale was 21.486, indicating a lower degree of variance suggesting most of them had similar views on inclusivity except for a few outliers. The mean score of the organizational performance scale was 35.04, indicating a more positive outlook toward organizational performance than inclusivity. The standard deviation score was (SD= 10.714) suggesting that some gave the organization high ratings while others did not. The variance score was 114.780 suggesting the same as the standard deviation that there are wide range of opinions. The descriptive statistics highlight the key difference like both the scales were answered by the same group but the mean score of the inclusivity scale was lower than the organizational performance scale suggesting that the participants were less satisfied with the inclusivity in their organisation than its performance. The standard deviation and variance score difference also suggests that there are more diverse opinions on the organizational performance than the inclusivity scale which was more consistent but lower.

Regression Statistics

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Inclusivity Scale[b]	.	Enter

a. Dependent Variable: Organization Performance Scale

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.644[a]	.415	.409	8.233

a. Predictors: (Constant), Inclusivity Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5002.406	1	5002.406	73.800	<.001[b]
	Residual	7049.443	104	67.783		
	Total	12051.849	105			

a. Dependent Variable: Organization Performance Scale

b. Predictors: (Constant), Inclusivity Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	18.272	2.109		8.663	<.001
	Inclusivity Scale	1.490	.173	.644	8.591	<.001

a. Dependent Variable: Organization Performance Scale

Table no. 2

The goal is to understand whether the level of inclusivity within an organization can predict how well the organization performs. The data has been analyzed using a linear regression model. This table shows that the Inclusivity Scale was entered into the regression model to predict the Organization's Performance Scale. An R-value of 0.644 indicates a moderate to strong positive relationship between the two variables. The R2 value was 0.415. this suggests that 41.5% of the changes in organizational performance are explained by the levels of inclusivity. In the ANOVA table the F-value is 73.800 and the p-value is (significance) is < 0.001. F-value of 73.800 suggests that the relationship between inclusivity and organizational performance is statistically significant. The p-value is less than 0.001, meaning the likelihood that the results occurred by chance is extremely low. This shows that the relationship between inclusivity and organizational performance is highly significant. In conclusion, the analysis shows that inclusivity plays an important role in improving organizational performance. The results showcase high significance eliminating the factor of chance. Simply put, the more inclusive an organization is, the better it tends to perform.

Discussion

This study shows a significant relationship between the two variables and indicates that engagement leads to better organizational performance. Many studies and theories have already been done to confirm this result. Social identity theory (Tajfland & Turner, 1979) suggests that people acquire parts of their identity from the groups they are associated with, including their workplaces. Therefore, when the organization provides ownership orientation regardless of their roots, motivation, confidence, and productivity increase. Another of these theories is the theory of organizational justice (Greenberg, 1987), which focuses on employees' perception of justice in their organization. Organizations that practice integration often increase their sense of fairness. Therefore, if employees are treated with respect and without any form of discrimination, the employee will have a positive attitude toward management. The concept of diversity climate (Gonzalez & Denisi, 2009) aims to understand the guidelines and practices of employees for organizational diversity. A positive attitude towards diverse work environments increases work effectiveness and stability and improves organizational performance. A study was conducted by Dr. Trinity Paldon and colleagues (2024) to find the relationship between the new concept of inclusion and its relationship with employee morale and company performance. Much of this research paper is based on a literature review of other literature on similar topics, and the review and analysis of data collected from these studies. Research suggests that promoting diversity and inclusion increases employee morale and company performance, but that mental and physical pressure leads to a significant decline in engagement. the company. Another such study was conducted by Zozan Ali Abdallah and his colleagues to examine the impact of cultural diversity on organizational performance in the telecommunications sector. The study found an effect size indicating that organizations that manage cultural diversity perform better.

Limitation and Applications

This study has several limitations. With a sample size of only 106 participants, the findings cannot be generalized to larger populations. The study’s focus on the Indian context limits its applicability to other countries with different work cultures. Conducted online via Google Forms, it excluded individuals with limited internet access, potentially biasing the results. Additionally, the reliance on quantitative methods without open-ended responses missed deeper insights into participants' experiences. Being cross-sectional, the study only captured a snapshot in time, ignoring long-term effects of inclusivity. Despite these limitations, the study shows that inclusivity enhances organizational performance, promotes employee satisfaction, and increases commitment, ultimately boosting company success.

Future Research

There is a very large scope for future research on this topic as inclusivity will always be in talks when it comes to organisational habits and performance. They could consider taking a larger sample which could provide more clarity about the results and could help generalize the results. This

study could also be done with various cultures so it could include all the different work cultures of countries and how inclusivity might differ for every region. Future studies could also increase the variables in this study which provide a more profound result and could find more correlations between different variables playing a role in inclusivity and organizational performance. Further, they could also include more open-ended questions to give a deeper knowledge about the participants' opinions and experiences influencing their answers.

Conclusion

The study highlights the significant relationship between both variables and how inclusivity influences organizational performance. The results provide strong evidence of a correlation between the two variables. Regression research shows that inclusiveness accounts for 41.5% of an organization's success, highlighting the significance of creating inclusive settings. Further studies with more larger and varied samples might enhance the application of this study. To conclude, this study suggests that prioritizing inclusivity for better organizational performance is not just for social objectives be could be a very tactful strategy.

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Effects of Organizational Burnout on Revenge Bedtime Procrastination and Turnover Intentions among Employees

Yukti Sunil Gupta

Abstract

The research focused on exploring how burnout within organizations influences employee's behavior for revenge bedtime procrastination and their intentions to leave the company. The sample consisted of (N=98) employed individuals aged 18 and above, all of whom were from the Indian population. The data was analyzed using the SPSS model in which the regression analysis was used. Convenience sampling was used. The Oldenburg Burnout Inventory (OLBI) (1998), Bedtime Procrastination Scale (BPS) (2014) and Turnover Intention Scale (1978) were utilized. Google forms were used for data collection. The results revealed that organizational burnout was not a significant predictor of revenge bedtime procrastination ($F = 1.938$, p-value = 0.167), suggesting that burnout may not directly influence bedtime procrastination behaviors. However, organizational burnout significantly predicted turnover intentions ($F = 50.085$, p-value < 0.001), showing that higher burnout levels were linked to a greater desire to quit the job. These findings indicate that while organizational burnout strongly impacts an employee's intention to quit, it may not necessarily lead to changes in revenge bedtime procrastination behavior. This research helps organizations understand and manage job burnout and turnover intentions, leading to better policies, employee retention and overall well-being. Future studies should consider factors like personality, work culture, and work-life balance and its effect on organizational burnout and turnover intentions. Longitudinal studies could show how burnout and related behaviors change over time, offering deeper insights than a one-time analysis.

Keywords: *organizational burnout*, *revenge bedtime procrastination*, *turnover intentions*, *regression analysis*, *employee behavior, organizational psychology*.

Introduction

Burnout, first identified by Freudenberger (1974), occurs when persistent stress leads to emotional, physical, and mental exhaustion (Maslach & Leiter, 2016). The World Health Organization (2019) classifies burnout as a workplace syndrome caused by chronic stress, unhealthy work environments, and excessive workloads. It has three dimensions: emotional exhaustion, depersonalization (cynicism), and reduced professional efficacy. Burnout is especially prevalent in high-stress professions like healthcare, education, and corporate sectors, where intense demands and long working hours are common (Abramson, 2022). Common symptoms include chronic fatigue, reduced concentration, irritability, and physical problems like headaches and digestive issues (Salvagioni et al., 2017). One significant impact of burnout is sleep disturbance, particularly revenge bedtime procrastination—delaying sleep to reclaim personal time after a stressful day (Alqo'idah et al., 2023). Research suggests that despite being tired, individuals engage in activities like scrolling on phones or watching TV as a form of self-reward, leading to insufficient sleep and further exhaustion (Krzywoszanska & Krzywoszanski, 2019; Suni & Suni, 2023). Burnout is also a key factor contributing to turnover intention, the conscious desire to leave a job. Job overload, confusion, and work-family conflicts often push employees to consider quitting (Jha, 2009). High levels of burnout affect organizational performance and individual well-being, resulting in increased turnover, reduced productivity, and poor employee morale (Zeng & Hu, 2024). Addressing burnout is essential for organizations to retain employees, improve workplace safety, and promote overall well-being. Effective policies like managing workloads, fostering a healthy work culture, and encouraging work-life balance can significantly reduce burnout and its consequences. There are gaps in understanding the link between organizational burnout, revenge bedtime procrastination, and turnover intention. No studies directly connect these variables, and data on burnout's effect on bedtime procrastination is limited. This study aims to examine how burnout and delayed sleep

impact job withdrawal intentions, providing insights to help organizations improve workplace policies, reduce burnout, and promote work-life balance. Previous studies focused on burnout in healthcare and its link to job withdrawal (Guo et al., 2018) but ignored behaviors like bedtime procrastination. Research on sleep procrastination focused on students, limiting its relevance to working populations (Azwar et al., 2024). Turnover studies explored work-life balance but overlooked burnout and sleep behaviors (Fayyazi & Aslani, 2015). This study addresses these gaps by examining burnout, bedtime procrastination, and turnover intention across sectors in the Indian workforce.

Methodology

The study included 98 participants aged 18 to 56 and older. Of these, 51% were Cisgender Male, 46.9% Cisgender Female, and 2% Gender Non-binary. Most participants (86.7%) were from the private sector, while 13.3% were from the public sector. Additionally, 77.6% were employed full-time, and 22.4% worked part-time.

The Oldenburg Burnout Inventory (OLBI), developed by Demerouti et al, is used to assess burnout. (1998), includes 16 items (1=strongly agree to 4=strongly disagree), with reverse-coded items and strong reliability for exhaustion (α = .87) and disengagement (α = .81) (Reis et al., 2015). The Bedtime Procrastination Scale (BPS) by Kroese et al. (2014) which measures the behavioral tendencies of delaying sleeping, consists of 9 items (1=almost never to 5=almost always), showing excellent reliability (α = .88, r = .79). Turnover intention (employee's desire to leave their current organization or job) was measured using a 3-item scale by Mobley et al. (1978), with high internal consistency (α = .90) and scores ranging from 1=strongly disagree to 5=strongly agree.

The survey was conducted online via Google Forms with prior participant consent. Demographic details like age, gender, sector, and socioeconomic class were collected. Scales were presented in order: OLBI, Revenge Bedtime Procrastination Scale, and Turnover Intention Scale. The survey took 7-8 minutes, and a legal email ID was provided for questions. Convenient sampling method was used because it allows for easier access to participants. Consent was obtained from all participants before appearing for the survey. Participation was voluntary, and responses will be deleted after six months. Responses will be deleted after 6 months of collection. Results are kept confidential and only accessible to the researcher.

Results

Multiple Regressions were performed using the SPSS software.

Descriptives

[DataSet0]

Descriptive Statistics

	N	Range	Sum	Mean	Std. Deviation	Variance
organisational burnout	98	40	3733	38.09	7.393	54.662
revenge bedtime procrastination	98	33	2717	27.72	6.963	48.490
turnover intention	98	12	799	8.15	3.521	12.399
Valid N (listwise)	98					

Table 1: Descriptive Statistics

Table 1 shows descriptive statistics for 98 participants. Organizational burnout had a mean of 38.09 (SD=7.39), indicating moderate burnout with varied responses. Revenge bedtime procrastination had a mean of 27.72 (SD=6.96), showing varying engagement levels. Turnover

intention scored a mean of 8.15 (SD=3.52), with lower variability, indicating more consistent responses compared to the other variables.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	organisational burnout[b]	.	Enter

a. Dependent Variable: revenge bedtime procrastination

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.141[a]	.020	.010	6.930

a. Predictors: (Constant), organisational burnout

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.071	1	93.071	1.938	.167[b]
	Residual	4610.490	96	48.026		
	Total	4703.561	97			

a. Dependent Variable: revenge bedtime procrastination

b. Predictors: (Constant), organisational burnout

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	22.678	3.692		6.142	<.001
	organisational burnout	.132	.095	.141	1.392	.167

a. Dependent Variable: revenge bedtime procrastination

Table 2: Organizational burnout and Revenge bedtime procrastination

Table 2 shows regression results with organizational burnout as the predictor for revenge bedtime procrastination. The R value is 0.141, and R-squared = 0.020, meaning burnout explains only 2% of the variation. The F value (1.938, p = 0.167) and t value (1.392) indicate the model lacks statistical significance.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	organisational burnout[b]	.	Enter

a. Dependent Variable: turnover intention

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.586[a]	.343	.336	2.869

a. Predictors: (Constant), organisational burnout

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	412.345	1	412.345	50.085	<.001[b]
	Residual	790.359	96	8.233		
	Total	1202.704	97			

a. Dependent Variable: turnover intention

b. Predictors: (Constant), organisational burnout

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-2.470	1.529		-1.615	.109
	organisational burnout	.279	.039	.586	7.077	<.001

a. Dependent Variable: turnover intention

Table 3: Organizational burnout and Turnover intention

Table 3 shows that organizational burnout significantly predicts turnover intention. The R value is 0.586, and R-squared = 0.343, indicating burnout explains 34.3% of the variance, showing a moderately strong relationship. The ANOVA table shows F value (50.085, $p < 0.001$) and t value (7.077) confirm the model's statistical significance and strong support for the relationship between burnout and turnover intention.

Discussion

Revenge bedtime procrastination is delaying sleep to regain control over time after a demanding day (Alqo'idah et al., 2023). However, results showed burnout was not a significant predictor of bedtime procrastination (Table 2). This suggests other factors like personality traits, time management skills, external pressures (e.g., family duties), or habits like phone use and low self-control (Kroese et al., 2016; Liu et al., 2020) may play a larger role. Stress from sources beyond work, such as social conflicts or household responsibilities, might also contribute (Schmidt et al., 2023). Furthermore, recovery activities like psychological detachment and evening relaxation could reduce bedtime stress (Sonnentag & Fritz, 2007; Hülsheger et al., 2015). Thus, individual behaviors and habits likely influence bedtime procrastination more than burnout alone. Turnover intention refers to the desire to leave a job (Ngamkroeckjoti et al., 2012). Results (Table 3) show organizational burnout significantly predicts turnover intention. Workplace stressors like job

confusion, overload, and family issues are key reasons employees quit (Jha, 2009; Alam, 2014). Burnout dimensions—emotional exhaustion, depersonalization, and low accomplishment—contribute significantly to withdrawal intentions (Gharakhani & Zaferanchi, 2019). The Job Demands-Resources (JD-R) Model explains this relationship: excessive job demands (e.g., workload, long hours) cause stress, while reduced job resources (e.g., support, leadership) lead to disengagement (Demerouti et al., 2001). In conclusion, burnout strongly predicts turnover intention, supported by existing research and the JD-R Model. However, burnout does not predict bedtime procrastination, highlighting the role of individual factors.

Limitations, Applications and Future Research

The study's small sample of 98 limits its generalizability, and results may not apply to other countries due to cultural differences. It did not account for variations in leadership styles, job roles, or organizational culture that influence burnout and turnover intention. As a cross-sectional study, it missed changes over time, and self-reported responses may reflect social desirability bias. Factors like personality traits and age differences, which could affect outcomes, were also not analyzed. Lastly, although the age range of participants was broad (18–56+), the study did not analyze how age differences might affect these variables, as younger and older employees may experience burnout and related behaviors differently.

This research highlights how burnout impacts employees' intention to leave their jobs, helping organizations design strategies to reduce burnout and retain talent. By improving policies on employee wellness, adjusting workloads, and offering flexible schedules, companies can enhance engagement and lower turnover. Managers and HR teams can address job expectations and stressors, saving time and resources spent on recruitment. The focus on revenge bedtime procrastination also emphasizes the need for well-being initiatives, encouraging work-life balance and promoting recovery techniques to support employees' mental and physical health.

Future research can explore factors like personality traits, coping mechanisms, leadership styles, and work-life balance to better understand burnout, sleep procrastination, and turnover intention. Longitudinal studies could track changes over time, providing deeper insights into how these behaviors develop. Qualitative methods, such as interviews, may also uncover richer details of employees' experiences.

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Enhancing Medical Data Security and Analytics with Blockchain and Big Data Integration

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Abstract

Integrating blockchain technology with big data offers a ground-breaking solution for enhancing data security, privacy, and analytics in various domains, including healthcare. With the increasing reliance on data-driven decision-making, traditional centralized systems face critical challenges such as scalability, privacy concerns, and cyberattack vulnerability. This research explores how blockchain can be leveraged to secure big data systems, focusing on decentralized healthcare data management. Using AIIMS (All India Institute of Medical Sciences) as a case study, this paper discusses the limitations of traditional database systems and the potential of blockchain to mitigate data breaches. Key fundamentals such as ad hoc networks, incentivizing mobile nodes, and efficient data collection are examined in detail. Challenges like scalability, regulatory compliance, and integration hurdles are also addressed, highlighting the need for robust architectural solutions. The paper emphasizes blockchain's role in providing high-quality data security and privacy, particularly in industrial IoT and healthcare applications.

Introduction

In recent years, the rapid digitization of healthcare systems has generated massive volumes of sensitive data, ranging from patient records to diagnostic information. While this data fuels advancements in medical research and personalized medicine, it also exposes critical data security and privacy vulnerabilities. The 2022 cyberattack on AIIMS underscored the inadequacies of traditional centralized systems in protecting sensitive healthcare data, as ransom was demanded after a data breach involving systems such as the Hospital Information System (HIS), Electronic Medical Records (EMR), and Telemedicine platforms.

Blockchain technology, with its decentralized architecture, offers a transformative approach to managing and securing big data. By combining blockchain's inherent security features with the analytical capabilities of big data, healthcare systems can achieve a balance between data accessibility and privacy. This paper explores how blockchain and big data can be integrated to enhance healthcare data management and analytics, providing solutions for challenges such as scalability, regulatory compliance, and privacy concerns.

Healthcare data breaches in India have been on the rise, reflecting a global trend of increasing cyber threats to the healthcare sector. Key data points highlighting this trend include:

- **Frequency of Cyberattacks:** In 2022, the Indian healthcare industry faced nearly 1.9 million cyberattacks between January and November. Healthcare IT News
- In the first half of 2024, the sector experienced an average of 6,935 cyberattacks per week. Economic Times CISO
- **Notable Data Breaches:** In November 2022, a significant data breach at a major public medical research university and hospital resulted in the loss of 1.3 terabytes of data, containing 40 million records. Deloitte
- **Global Ranking:** As of 2021, India ranked second globally in terms of cyberattacks on health systems, with breached data including vaccination records and personally identifiable information. Wikipedia
- **Organizational Impact:** A report indicated that 60% of healthcare organizations in India experienced cyberattacks in the past year, with only 24% able to disrupt ransomware attacks before data encryption, down from 34% in 2022. Economic Times

- **Monthly Attack Volume:** Indian healthcare firms face over 278,000 cyberattacks each month, making India the second most targeted country after the United States. Indusface

Literature Review

The Three Aspects of Big Data

Big data is characterized by its volume, velocity, and variety, but it can also be understood through three aspects:

- **Attributive**: Refers to the quality and relevance of data, ensuring that only high-quality and accurate information is stored and analyzed.
- **Comparative**: Involves comparing datasets to identify patterns, trends, and insights.
- **Architectural**: Concerns the underlying infrastructure that supports data storage, processing, and analytics.

How Data is Converted into Big Data

Data generated by systems like AIIMS' Hospital Information System (HIS), EMR, and Telemedicine platforms are initially stored as structured and unstructured data. These include patient records, diagnostic reports, prescription details, and administrative logs. The transition to big data occurs through the following processes:

1. **Aggregation**: Data from various systems is aggregated into a central repository or data lake.
2. **Transformation**: Data is cleaned, formatted, and standardized for consistency.
3. **Storage**: Scalable storage systems, such as Hadoop or cloud-based solutions, ensure the data can be accessed and analyzed efficiently.
4. **Analysis**: Advanced analytics tools like machine learning algorithms and statistical methods extract insights and patterns from the data.

This large-scale, interconnected data system forms the foundation of big data analytics, enabling predictive modeling, trend analysis, and decision-making.

Blockchain Fundamentals for Big Data

Blockchain's decentralized and immutable ledger makes it an attractive solution for managing and securing big data. Key features include:

- **Ad Hoc Networks**: Enable dynamic data sharing across decentralized nodes without relying on a central authority.
- **Incentivizing Mobile Nodes**: Encourages participation in the network by rewarding nodes for contributing resources.
- **Efficient Data Collection**: Streamlines data collection and storage processes, ensuring scalability and reliability.

- **Transparency and Immutability**: All transactions are recorded in a tamper-proof manner, ensuring data integrity.
- **Smart Contracts**: Automated contracts enforce access controls and data-sharing protocols securely.

Blockchain in Big Data Conversion

Blockchain technology adds value to big data conversion by ensuring the following:

1. **Data Security**: Encrypts data at every stage of processing.
2. **Decentralized Storage**: Eliminates single points of failure, enhancing reliability.
3. **Auditability**: Provides a transparent record of all data transactions, facilitating regulatory compliance.

Previous Research

Blockchain has been widely studied for its applications in securing industrial IoT data and healthcare systems. Studies have demonstrated its ability to prevent counterfeiting, enhance data privacy, and improve system efficiency. For instance, Alam et al. (2021) explored blockchain's role in data security for IoT applications, while Patil et al. (2020) highlighted its potential in healthcare data management.

Methodology

This research adopts a case study approach, focusing on AIIMS as an example of a healthcare institution vulnerable to data breaches. Data was collected from publicly available sources, including reports on the AIIMS cyberattack and academic literature on blockchain and big data. The study also incorporates architectural models and blockchain-based solutions to address the identified challenges.

Blockchain Integration for AIIMS Data Systems

AIIMS employs multiple software platforms, such as HIS, EMR, and Telemedicine platforms, to manage patient care, diagnostics, and administrative functions. However, these systems rely on traditional centralized databases, which are prone to cyberattacks. Blockchain can be integrated into these systems to enhance security and privacy by:

- Replacing centralized databases with decentralized ledgers.
- Implementing smart contracts for secure data sharing and access control.
- Encrypting patient data to prevent unauthorized access.

Proposed Decentralized Healthcare Data Management Framework

The proposed framework leverages blockchain to:

- **Secure Data Sharing**: Use encryption and access controls to protect patient data.
- **Enable Interoperability**: Facilitate seamless data exchange between different healthcare platforms.
- **Ensure Data Integrity**: Maintain an immutable record of all data transactions.

Algorithm for Decentralized Healthcare Data Management

The following algorithm outlines the integration process for blockchain in healthcare data management:

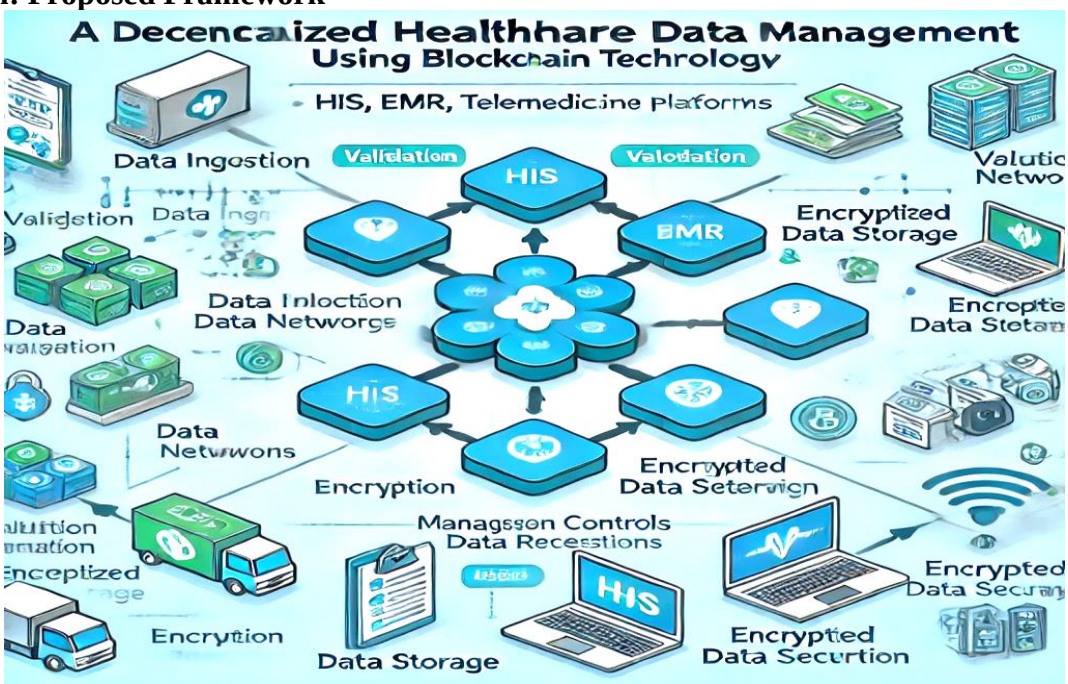
1. **Data Ingestion**:
   - Input data from HIS, EMR, and other systems.
   - Apply encryption before storing the data on the blockchain.
2. **Smart Contract Deployment**:
   - Create smart contracts to enforce access control policies.
   - Automate data-sharing permissions and regulatory compliance.
3. **Data Verification**:
   - Validate data integrity using blockchain's hashing mechanism.
4. **Data Retrieval**:
   - Enable secure access to authorized users through cryptographic keys.
5. **Audit and Monitoring**:

- Log all transactions for transparency and compliance.

Implementation Plan

1. **Blockchain Platform Selection**:
   - Choose a platform like Hyperledger Fabric or Ethereum for its scalability and support for smart contracts.
2. **Integration with Existing Systems**:
   - Develop APIs to integrate blockchain with existing software like HIS and EMR.
3. **Testing and Validation**:
   - Simulate cyberattacks to ensure the system's robustness.
4. **Deployment**:
   - Deploy the blockchain network across all nodes in the AIIMS ecosystem.

Diagram: Proposed Framework



Results and Findings

Case of AIIMS

Category	*Details*
Date of Incident	November 2022
Servers Compromised	5 primary servers infiltrated
Data Compromised	Approximately 3 to 4 crore (30 to 40 million) patient records, including sensitive data
Operational Impact	Disruption in patient registration, admission, billing, and discharge services
Ransom Demand	₹200 crore (approximately $25 million) in cryptocurrency
Primary Cause	Ransomware attack
Attribution	Believed to be linked to Chinese hacker groups
Recovery Measures	Manual operations were temporarily implemented; the system shutdown to prevent further damage
Notable Data Types Leaked	Personal details, medical records, and sensitive information of prominent individuals

Data Vulnerabilities in AIIMS

The cyberattack on AIIMS highlighted significant vulnerabilities in its data systems, including:

- Lack of encryption for sensitive patient data.

- Reliance on centralized databases, which are single points of failure.
- Inadequate monitoring and detection systems.

Blockchain's Impact on Data Security

Implementing blockchain technology can address these vulnerabilities by:

- Decentralizing data storage to eliminate single points of failure.
- Enhancing transparency and traceability of data transactions.
- Providing secure access controls through smart contracts.

Scalability and Performance

While blockchain offers significant security advantages, scalability remains a challenge. Solutions such as sharing and off-chain processing can mitigate performance issues.

Regulatory Compliance

Healthcare systems must comply with data protection regulations such as India's Personal Data Protection Bill. Blockchain's transparency and auditability can facilitate compliance but require careful implementation to avoid privacy breaches.

Expanded Use Cases of Blockchain in Healthcare Data Management

Beyond securing patient records, blockchain can also be applied to:

- **Pharmacy Supply Chain Management**: Track and authenticate drug origins to prevent counterfeit medicines.
- **Clinical Trials**: Maintain integrity and transparency in clinical trial data.
- **Telemedicine Security**: Protect sensitive consultations and diagnostic information in telemedicine platforms.
- **Patient Data Portability**: Enable patients to securely share their health records across multiple healthcare providers.

Data Analytics Enhancement with Blockchain

Blockchain technology not only secures data but also enhances big data analytics by:

- Ensuring data provenance and accuracy, reducing the risk of using corrupted datasets for analysis.
- Allowing for real-time updates and data synchronization across decentralized networks.
- Facilitating advanced AI and machine learning analytics with clean, verified datasets.

Discussion

Blockchain's integration with big data presents a viable solution for enhancing healthcare data security and analytics. However, its adoption requires addressing several challenges:

- **Scalability**: Blockchain networks must be optimized to handle large volumes of healthcare data.
- **Privacy Concerns**: While blockchain ensures data integrity, it must also protect sensitive patient information.
- **Integration with Legacy Systems**: Transitioning from centralized databases to blockchain requires significant infrastructural changes.

Despite these challenges, the potential benefits of blockchain—including enhanced security, transparency, and data quality—make it a compelling choice for healthcare systems.

Recommendations for Implementation

To fully realize the potential of blockchain in healthcare, the following steps are recommended:

1. **Policy Framework Development**: Governments and regulatory bodies should establish clear policies and standards for blockchain implementation in healthcare.
2. **Stakeholder Collaboration**: Encourage collaboration between hospitals, technology providers, and policymakers to ensure seamless integration.
3. **Education and Training**: Train healthcare professionals and IT staff on blockchain technology and its applications.

4. **Pilot Projects**: Begin with pilot projects in specific areas, such as patient data sharing or drug supply chain management, to assess feasibility and scalability.

Conclusion

The integration of blockchain and big data offers a transformative approach to managing and securing healthcare data. By decentralizing data storage and leveraging blockchain's security features, institutions like AIIMS can mitigate the risks of data breaches and enhance data analytics. While challenges such as scalability and regulatory compliance must be addressed, the potential benefits far outweigh the costs. The adoption of blockchain in healthcare will require a collaborative effort among stakeholders, robust policy frameworks, and continuous innovation.

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Automation and its Impact on Wage Inequality

Sonali Jha

Abstract

Automation, driven by advancements in artificial intelligence (AI), robotics, and machine learning, has become a transformative force in the global economy. In India, a country characterized by a diverse labor market, automation has brought both opportunities and challenges. This research investigates the relationship between automation and wage inequality in India, focusing on how automation impacts different sectors, skill levels, and demographic groups. While automation has enhanced productivity and created high-skill job opportunities, it has also displaced low-skill workers, exacerbating wage disparities. The study employs a mixed-methods approach, combining quantitative analysis of labor market data with qualitative insights from industry and policy experts. Findings reveal that automation disproportionately benefits high-skilled workers, leading to a widening wage gap. The paper concludes by exploring policy interventions to mitigate inequality, such as upskilling programs, education reforms, and inclusive labor policies. This research contributes to the discourse on equitable economic growth in an era of rapid technological change.

Introduction

The rise of automation is reshaping economies worldwide, with profound implications for labor markets and income distribution. In India, where the labor market spans a wide spectrum—from highly skilled professionals in IT and engineering to unskilled workers in agriculture and manufacturing—the effects of automation are particularly complex. Automation has enabled industries to achieve unprecedented efficiency, yet it has also raised concerns about job displacement and the polarization of wages.

India's unique socio-economic landscape, characterized by a large informal workforce, regional disparities, and skill gaps, amplifies the challenges posed by automation. The integration of automated technologies in sectors such as manufacturing, IT services, and retail has led to a dual phenomenon: an increase in demand for high-skill labor and a decline in opportunities for low-skill workers. This divergence is contributing to growing wage inequality, with high-income workers benefiting from automation-induced productivity gains while low-income workers face stagnation or unemployment.

This paper seeks to explore the multifaceted relationship between automation and wage inequality in India. It examines key questions such as: How has automation impacted wages across different sectors? Which demographic groups are most affected by automation-induced displacement? What role do education and skill development play in mitigating these effects? The research aims to provide a comprehensive understanding of the economic and social dimensions of automation in India.

Through this study, we aim to contribute to policymaking by offering evidence-based insights and recommendations. By addressing the challenges posed by automation, India has the opportunity to harness technological advancements while ensuring that economic growth is inclusive and equitable.

Objective

This study evaluates the Impact of Automation on Employment and Wages.

Review of Literature

1. Global Trends in Automation and Wage Inequality

Autor, D. H. (2015), in his seminal work "Why Are There Still So Many Jobs? The History and Future of Workplace Automation," explores how automation affects labor markets by substituting routine tasks while complementing non-routine, cognitive, and social skills. Autor highlights the polarization of the labor market globally, where middle-skill jobs decline, leading to wage inequality. This framework is highly relevant to India, where routine jobs dominate industries

such as manufacturing and clerical services. As India integrates automation into these sectors, the implications for wage disparity, especially for low- and medium-skilled workers, are significant.

2. Sectoral Impacts of Automation in Developing Economies

Goos, M., Manning, A., & Salomons, A. (2014) examine sectoral shifts caused by automation in their paper "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring." Their study reveals that automation disproportionately impacts sectors with high routine-task intensity, displacing low-skill labor while creating opportunities in high-tech and non-routine sectors. This is evident in India's IT and manufacturing industries, where automation drives productivity but leads to significant labor displacement in low-skill jobs. The study provides a framework to analyze sectoral dynamics in India and their contribution to wage inequality.

3. Indian Context: Automation and Wage Disparities

Chatterjee, S., & Mahajan, S. (2020), in their work "Automation, Skills, and Wage Inequality in India," examine the Indian labor market's response to automation. Their research reveals that automation adoption in India predominantly benefits urban, high-skilled workers while exacerbating rural-urban and gender wage gaps. The authors argue that India's significant informal workforce is particularly vulnerable to displacement due to limited access to upskilling opportunities. Their findings emphasize the need for targeted skill-development policies to bridge the inequality gap.

4. Role of Education and Skill Development in Mitigating Wage Inequality

Acemoglu, D., & Restrepo, P. (2018), in "Artificial Intelligence, Automation, and Work," discuss how education and skill development can reduce the negative impacts of automation. They argue that economies investing in education reforms and lifelong learning systems can enable workers to transition into higher-skill roles, mitigating wage disparities. This insight is crucial for India, where the formal education system and vocational training often fail to meet industry demands. Studies suggest that integrating automation-related skill development in India's education policy can help reduce wage inequality.

5. Policy and Institutional Responses to Automation

Bessen, J. E. (2019), in his book AI and Jobs: The Role of Demand,investigates how policy interventions influence automation's impact on the labor market. Bessen emphasizes the importance of labor market policies, such as wage subsidies, public investments in reskilling programs, and inclusive digital policies, in managing the socio-economic effects of automation. For India, the study highlights the potential of policies like the National Skill Development Mission (NSDM) in reducing automation-induced wage inequality. It also underlines the need for institutional reforms to ensure equitable access to technological advancements

The Impact of Automation on Employment and Wages.

1. Job Displacement

Automation substitutes human labor in routine and repetitive tasks, particularly in manufacturing, retail, and transportation. Studies reveal that sectors heavily reliant on low-skill labor are most vulnerable to job losses. For instance, the adoption of robotics in production lines has significantly reduced the demand for manual labor.

2. Job Creation

While automation displaces some roles, it also creates new job opportunities, particularly in high-skill sectors like IT, engineering, and data science. The World Economic Forum's Future of Jobs Report highlights that automation could create millions of new jobs in fields like AI development, robotics engineering, and green energy.

3. Skill Polarization

Automation leads to labor market polarization, increasing demand for high-skill, high-wage jobs while reducing demand for middle-skill roles. This phenomenon contributes to a growing divide between workers who can adapt to technological changes and those who cannot.

4. Wage Inequality

Automation amplifies wage inequality by disproportionately benefiting high-skilled workers who can leverage technology while stagnating or reducing wages for low-skilled workers. This creates a widening gap between the top and bottom earners.

5. Productivity Gains and Wage Stagnation

Despite automation-driven productivity improvements, wage growth has not kept pace. Employers often invest savings from automation into capital rather than labor, limiting wage increases.

6. Regional Disparities

In developing countries like India, automation exacerbates regional wage disparities. Urban areas, where high-skill jobs are concentrated, experience wage growth, while rural areas reliant on low-skill labor face wage stagnation or decline.

Policy Implications and Mitigation Strategies

1. Upskilling and Reskilling

Governments and organizations must prioritize skill development programs to equip workers with competencies needed in an automated economy. Programs like India's *Skill India Mission* aim to bridge this gap.

2. Universal Basic Income (UBI)

UBI is proposed as a safety net to support displaced workers. While controversial, it offers a potential solution to cushion the social impact of job displacement.

3. Progressive Labor Policies

Policies encouraging job sharing, wage subsidies, and worker retraining can help mitigate the adverse effects of automation on wages and employment.

Conclusion

Automation represents a double-edged sword, promising significant economic benefits while posing challenges to labor markets. To ensure equitable growth, it is imperative to adopt strategies that maximize the advantages of automation while addressing its adverse effects. By investing in education, fostering innovation, and implementing inclusive policies, societies can navigate the transition toward an automated future, ensuring that employment and wage growth are sustainable and equitable.

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Exploring Student Perceptions of Technology Integration in Education

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Abstract –

This study investigates the perceptions of students regarding the integration of technology in education. By analysing feedback from students across various academic disciplines, the research aims to assess the effectiveness, challenges, and overall impact of technology-enhanced learning environments. The findings contribute to a deeper understanding of how technology influences academic engagement, learning outcomes, and the quality of education. Suggestions for optimizing technology use in education are also presented.

Keywords: Technology in education, digital literacy, etc.

1.Introduction

Technology has revolutionized every aspect of our lives, and education is no exception. In today's fast-paced world, integrating technology into education is no longer a choice but a necessity. From interactive learning tools to virtual classrooms, technology has redefined the traditional boundaries of teaching and learning, making education more accessible, engaging, and inclusive. The role of technology in education extends far beyond digital tools and gadgets. It enables personalized learning, bridging gaps between diverse learners and creating opportunities for skill development in innovative ways. Furthermore, it equips students with the digital literacy required to thrive in the 21st century, fostering critical thinking, creativity, and collaboration. As we delve deeper into this topic, it becomes essential to explore how technology is shaping the future of education and its implications for students, educators, and society.

2. Traditional Education Vs. Modern Education

Traditional and modern education differ significantly in their methods and focus. Previously, education was largely teacher-centred, where instructors directed the learning process, and students were passive recipients of knowledge. Classroom activities were limited, with textbooks and lectures serving as the primary learning resources. In contrast, contemporary education emphasizes a student-centered approach. Students actively participate in their learning journey through group projects, interactive discussions, and hands-on activities. Technology has become a cornerstone of modern education, offering access to diverse digital resources, online courses, and interactive platforms. This integration enables personalized learning paths tailored to individual strengths and areas for improvement, addressing the varied needs and learning styles of students. The modern approach encourages creativity, critical thinking, and problem-solving skills, preparing students for the fast-evolving, technology-driven world. The shift from traditional to modern education highlights a transition from passive knowledge absorption to active engagement, leveraging technology to improve learning outcomes and equip students with essential skills for the 21st century.

3. Literature Review

Pandey and Pandey (2020) explored the role of ICT in teaching and learning within the Indian context. Information and Communication Technology (ICT) has been widely recognized and appreciated for its transformative impact over the years. The influence of ICT in education is a critical area of interest, as it significantly shapes outcomes. **Dr. S. B. Sharma** highlights how technology facilitates quick problem-solving and enhances the appeal of education by enabling instant access to any topic with just a click. The vast reservoir of knowledge available through technology allows humanity to explore realms beyond our world. **R. Raja et.al** emphasize that technology's role in schools is indispensable. The integration of computers into education has

simplified the teaching process for educators and enriched the learning experience for students, making it more engaging. **Sattar J. Hashim, et.al** underscore the advancements in teaching English through technology. Modern English language educators extensively use technological tools to deliver effective instruction and improve learning outcomes.

4.Objective

The primary objective of this study is to analyze student perceptions of technology integration in education. Specific goals include:

a. Assessing the advantages of technology in enhancing learning experiences.
b. Identifying challenges faced by students in technology-driven education.

5. Research Methodology

The data were collected from 300 students from 5 different colleges pursuing graduation degree from commerce section using a semi-structured questionnaire.

6. Data Anlaysis

Table 1 – Gender of the respondent.

Gender	Count	Percentage
Male	144	46%
Female	166	54%
Total	310	100%

Table 2 – Perception of the students on mentioned advantages of technology in classrooms

	Strongly agree		Agree		Neutral		Disagree		Strongly Disagree		Total	%
	Count	%	Count	%	Count	%	Count	%	Count	%		
S1	152	51%	71	24%	29	10%	26	9%	22	7%	300	100%
S2	148	49%	56	19%	38	13%	25	8%	33	11%	300	100%
S3	131	44%	88	29%	40	13%	21	7%	20	7%	300	100%
S4	74	25%	44	15%	19	6%	126	42%	37	12%	300	100%
S5	140	47%	84	28%	24	8%	22	7%	30	10%	300	100%
S6	101	34%	79	26%	39	13%	44	15%	37	12%	300	100%
S7	44	15%	30	10%	56	19%	144	48%	26	9%	300	100%
S8	79	26%	78	26%	58	19%	61	20%	24	8%	300	100%

S1	My Engagement during lectures/classroom has been increased
S2	Technology enables personalized learning
S3	Digital platforms provide access to diverse resources
S4	Increase in Collaborative Learning (Group projects, virtual discussions, and shared learning experiences)
S5	Skill Development (digital literacy, critical thinking, and problem-solving)
S6	Global Exposure (connect with peers and educators worldwide, fostering cultural awareness and global perspectives)
S7	Inclusivity (including students with disabilities, through tools like screen readers, speech-to-text, and adaptive learning programs)
S8	Preparedness for the Future

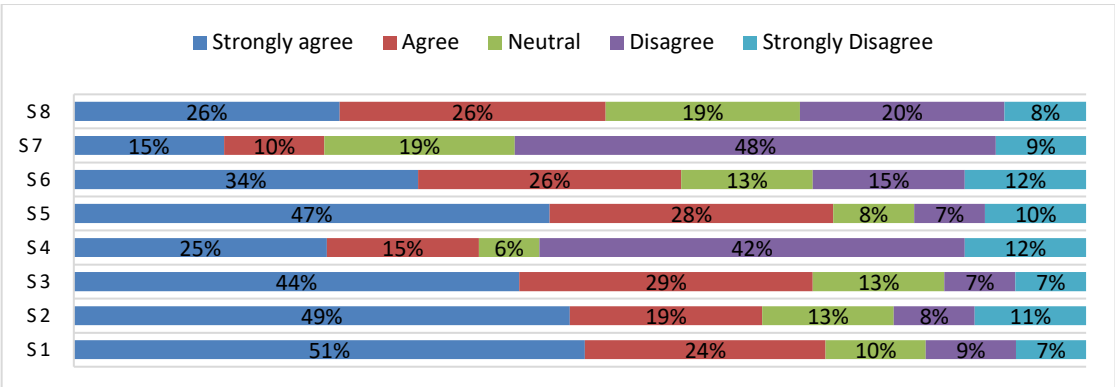

Figure 1 - Perception of the students on advantages of technology in classrooms

The table provides insights into student perceptions of technology's advantages in classrooms across eight dimensions.

S1: Increased Engagement

Most students (75%) either strongly agree or agree that technology enhances engagement during lectures. A minority (16%) disagrees, indicating the overall positive impact of interactive tools in capturing student attention.

S2: Personalized Learning

With 68% expressing agreement, students acknowledge technology's role in offering tailored learning experiences. However, 19% remain neutral or dissatisfied, suggesting that personalization might not reach all students effectively.

S3: Access to Diverse Resources

A strong 73% agree that digital platforms provide valuable resources, emphasizing technology's contribution to expanding learning material availability. Only 14% express disagreement, showcasing general satisfaction in this area.

S4: Collaborative Learning

Collaboration sees the least approval, with only 40% agreeing that technology promotes group activities. A significant 42% disagree, pointing to challenges in using digital tools for effective collaboration.

S5: Skill Development

Technology's role in fostering skills like digital literacy is widely recognized, with 75% agreement. This highlights its value in preparing students for future workplace demands.

S6: Global Exposure

Only 60% agree that technology facilitates global connectivity. This moderate response suggests that opportunities for international interaction could be further enhanced.

S7: Inclusivity

Inclusivity receives low support, with 57% disagreeing or neutral. This indicates that adaptive technologies may not be effectively implemented or widely available.

S8: Preparedness for the Future

The split response (52% agreement) reflects mixed views on how well technology equips students for future challenges, indicating potential areas for improvement.

In summary, while technology is largely seen as a positive force in education, areas like inclusivity, collaboration, and global exposure require attention to maximize its potential benefits.

Table 3 – Perception of the students on mentioned limitations of technology in classrooms

	Strongly agree		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**			
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Total**	**%**
S1	122	41%	111	37%	40	13%	16	5%	11	4%	300	100%
S2	49	16%	46	15%	52	17%	79	26%	74	25%	300	100%
S3	70	23%	147	49%	51	17%	22	7%	10	3%	300	100%
S4	80	27%	69	23%	54	18%	47	16%	50	17%	300	100%
S5	197	66%	57	19%	20	7%	24	8%	2	1%	300	100%
S6	70	23%	71	24%	73	24%	49	16%	37	12%	300	100%
S7	81	27%	74	25%	33	11%	61	20%	51	17%	300	100%
S8	187	62%	68	23%	31	10%	7	2%	7	2%	300	100%
S1	**Exposure to Inappropriate Content**											
S2	**Social Isolation (Excessive use of technology may hinder students' social and emotional development, reducing face-to-face interactions and fostering feelings of isolation)**											
S3	**Cyberbullying Risks (online harassment, impacting their mental health and academic performance)**											
S4	**Facilitating Cheating (academic dishonesty, compromising the fairness and integrity of**											

	evaluations)
S5	**Distractions (Social media, gaming, and entertainment platforms can divert students)**
S6	**Overreliance on Technology**
S7	**Digital Divide**
S8	**Reduced Practical Learning (diminish opportunities for hands-on activities, particularly in subjects requiring physical engagement and practice)**

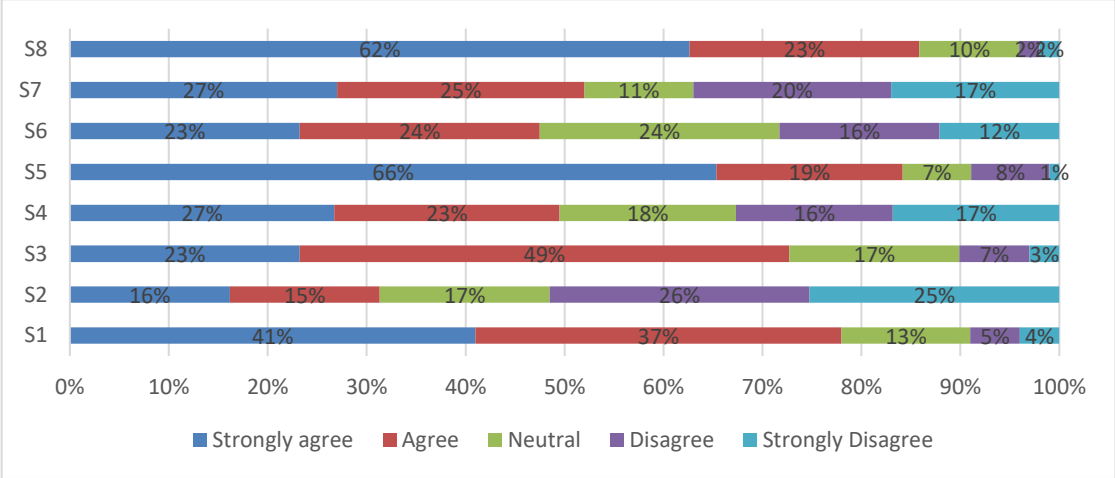

Figure 2 - Perception of the students on limitations of technology in classrooms

The table summarizes student perceptions regarding eight potential limitations of technology in educational settings.

S1: Exposure to Inappropriate Content

A significant 78% of students either strongly agree (41%) or agree (37%) that technology increases exposure to inappropriate content. This highlights a critical need for stricter content controls and monitoring to ensure a safe digital learning environment.

S2: Social Isolation

Only 31% of students agree that technology contributes to social isolation, while 51% disagree or strongly disagree. This indicates that concerns about reduced face-to-face interactions may not be a prevalent issue for most students, though it remains a concern for a minority.

S3: Cyberbullying Risks

Cyberbullying is perceived as a moderate issue, with 72% either strongly agreeing (23%) or agreeing (49%) about its risks. This underscores the importance of implementing preventive measures and awareness programs to address online harassment.

S4: Facilitating Cheating

Half the respondents (50%) agree that technology facilitates academic dishonesty, while 33% disagree. This suggests a divided perception, emphasizing the need for robust proctoring systems and ethical training to combat cheating.

S5: Distractions

Distractions emerge as a dominant concern, with 85% either strongly agreeing (66%) or agreeing (19%). The prevalence of social media and entertainment platforms necessitates strategies to minimize off-task behavior.

S6: Overreliance on Technology

Opinions on overreliance are split, with 47% agreeing and 28% disagreeing. This indicates mixed perceptions, highlighting a need to balance digital and traditional learning approaches.

S7: Digital Divide

The digital divide is moderately perceived, with 52% agreeing but 37% disagreeing. Efforts to provide equitable access to technology are essential.

S8: Reduced Practical Learning

A majority (85%) agree that technology diminishes opportunities for hands-on activities, emphasizing the importance of integrating practical learning into digital curricula.

In summary, while technology offers numerous benefits, addressing its limitations is crucial to creating an effective and balanced educational environment.

7. Need Of Technology In Classroom

- **Enhanced Engagement:** Interactive tools like smart boards, apps, and simulations make learning more engaging and enjoyable for students.
- **Personalized Learning:** Technology enables customized learning experiences, allowing students to progress at their own pace and focus on areas where they need improvement.
- **Access to Diverse Resources:** Digital platforms provide access to a wealth of online resources, including e-books, videos, research papers, and interactive content, broadening students' knowledge base.
- **Collaborative Learning:** Online tools and platforms foster collaboration among students through group projects, virtual discussions, and shared learning experiences.
- **Skill Development:** Incorporating technology into education enables students to acquire vital 21st-century competencies, including digital literacy, critical thinking, and problem-solving skills.
- **Efficient Assessment:** Technology simplifies the assessment process with automated quizzes, instant feedback, and performance tracking.
- **Global Exposure:** Virtual classrooms and online exchanges enable students to connect with peers and educators worldwide, fostering cultural awareness and global perspectives.
- **Inclusivity:** Technology accommodates diverse learning needs, including students with disabilities, through tools like screen readers, speech-to-text, and adaptive learning programs.
- **Preparedness for the Future:** Familiarity with technology equips students with the skills needed to thrive in a digitally-driven world.
- **Support for Teachers:** Technology assists teachers in lesson planning, resource creation, and efficient communication with students and parents.

8. Conclusion

The research findings clearly demonstrate the significant impact of technology on education, acting as a catalyst for improved learning outcomes and the development of vital 21st-century skills. This study highlights how integrating technology into educational settings has transformed traditional teaching approaches, offering innovative opportunities to both educators and students. Information and Communication Technology (ICT) has emerged as a key enabler of transformative learning, facilitating easy access to resources, encouraging continuous education, and fostering collaborative knowledge sharing.

Additionally, technology's ability to provide personalized learning paths and interactive tools has greatly enhanced student engagement and critical thinking skills. As education continues to evolve, technology plays a crucial role in preparing students for modern challenges by fostering digital literacy, problem-solving, and effective communication.

However, addressing issues such as unequal access, cyberbullying, and potential distractions is essential for the responsible and fair use of technology. This research emphasizes the need for educators, policymakers, and stakeholders to fully embrace technology's potential. By leveraging its capabilities, we can build a dynamic and inclusive learning environment that equips students with the adaptability and competencies necessary to navigate the complexities of the 21st century successfully.

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Exploring Sustainable Tourism as a Catalyst for Second Income Generation and Employability: A Study of Palghar District

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Abstract :

This study explores the potential of sustainable tourism in Palghar district as a means of generating second sources of income and enhancing employability. Palghar, known for its natural beauty, cultural heritage, and proximity to Mumbai, holds untapped opportunities for tourism-driven economic development. The research investigates how sustainable tourism can create supplementary income streams for local communities, particularly in rural and semi-urban areas, while fostering job creation in diverse sectors such as hospitality, handicrafts, and eco-tourism.

Through qualitative and quantitative analysis, the study identifies key drivers, challenges, and best practices associated with leveraging tourism for economic empowerment. It also examines the role of local governance, community participation, and private-sector collaboration in fostering a sustainable tourism ecosystem. The findings highlight how sustainable tourism can contribute to economic resilience by reducing dependence on traditional income sources, promoting inclusive growth, and preserving cultural and environmental assets.

This study aims to provide actionable insights for policymakers, tourism stakeholders, and local entrepreneurs to harness the full potential of sustainable tourism. By aligning tourism initiatives with sustainable development goals (SDGs), the research underscores the importance of balancing economic growth with environmental conservation and social equity in Palghar district.

Keywords :

Sustainable Tourism, Second Income Generation, Employability Enhancement, Palghar District, Economic Resilience

Introduction :

Tourism has emerged as a significant driver of economic growth, providing employment opportunities and supplementary income for local communities, especially in regions rich in natural and cultural heritage. In recent years, sustainable tourism has gained prominence for its focus on balancing economic development with environmental preservation and social equity. Palghar district, located in the Konkan region of Maharashtra, is well-positioned to harness the benefits of sustainable tourism due to its diverse landscape, cultural richness, and proximity to Mumbai. Despite its potential, Palghar remains relatively underexplored as a tourist destination, offering a unique opportunity to develop tourism as a secondary source of income and a catalyst for employability. This study delves into the role of sustainable tourism in generating additional income streams and fostering job creation in Palghar, with a focus on sectors such as eco-tourism, hospitality, local handicrafts, and cultural tourism.

Palghar boasts a variety of tourist attractions, ranging from pristine beaches to historical sites and tribal heritage, all of which contribute to its potential as a sustainable tourism hub. The table below highlights some key tourism spots in the district:

Tourism Spot	Description	Tourism Potential
Dahanu Beach	Serene coastline known for its unspoiled beauty.	Eco-tourism, Water sports, Homestays
Kelva Beach	Popular weekend getaway with lush greenery.	Beach tourism, Local cuisine
Bordi Beach	Quiet beach famous for chikoo orchards.	Agro-tourism, Nature walks

Jawhar Hill Station	Tribal heritage site with waterfalls and forts.	Cultural tourism, Trekking
Vajreshwari Temple	Ancient temple known for hot water springs.	Pilgrimage tourism, Wellness tourism
Tungareshwar Wildlife Sanctuary	Dense forest with diverse flora and fauna.	Wildlife tourism, Adventure tourism

By exploring these attractions through a sustainable lens, the study aims to demonstrate how tourism can stimulate economic resilience, provide alternative livelihoods, and enhance the employability of local residents in Palghar district.

The district's rich natural and cultural resources create a fertile ground for developing sustainable tourism initiatives that can lead to long-term socio-economic benefits. However, the success of such initiatives depends on strategic planning, community engagement, and sustainable practices that ensure minimal environmental impact. Leveraging these resources requires a focus on eco-friendly infrastructure, skill development, and entrepreneurial support to empower local communities. Sustainable tourism not only offers a second source of income for households but also creates diverse employment opportunities in sectors such as hospitality, transportation, cultural preservation, and agro-tourism.

Moreover, the integration of tourism with local industries like handicrafts and agriculture can further enhance economic resilience. For instance, agro-tourism centered around Palghar's famous chikoo orchards or local handicraft production can diversify income sources while promoting the district's cultural heritage. By examining key factors such as tourist inflow, community participation, and the role of local governance, this study aims to provide a comprehensive understanding of how sustainable tourism can act as a catalyst for economic development in Palghar. Ultimately, the research underscores the importance of a holistic approach where tourism development aligns with the principles of sustainability, fostering inclusive growth and long-term prosperity for the region.

Review of Literature:

1. **Irandu & Shah (2014)** highlighted how eco-tourism could provide sustainable livelihoods to rural women in Kenya, and this approach is applicable to India's rural regions as well. Creating income-generating opportunities through eco-tourism in rural areas boosts local economies and reduces poverty.
2. **Hossain et al. (2021)** explored the alignment of sustainable tourism with the United Nations' Sustainable Development Goals (SDGs). The study emphasized that promoting sustainable tourism practices can foster economic growth while ensuring environmental protection.
3. **Shukla & Ansari (2013)** discussed how tourism can act as an engine of economic growth and employment generation. This review suggests that strategic planning and policy initiatives in Gujarat significantly increased employment through tourism and related industries.
4. **Godara et al. (2020)** investigated the relationship between foreign tourism receipts and India's economic growth. The findings suggest that while tourism has a positive impact on economic growth, the effect of foreign tourism receipts on growth rates is minimal, highlighting the need for more focused tourism development.
5. **Shukla & Ansari (2020)** also indicated that tourism, particularly in states like Gujarat and Kerala, has a considerable positive correlation with the growth of the economy, which boosts employment, infrastructure, and regional development.
6. **Ohlan (2017)** examined the economic relationship between tourism and India's growth, emphasizing the contribution of tourism to financial development over several decades. The study illustrated how foreign tourist inflows can have both short- and long-term benefits for India's economic landscape.

Objectives of the Study:

1. **To identify the various skills required for employment opportunities generated by tourism in Palghar district.** This objective aims to explore the specific skills needed across different tourism sectors, including hospitality, eco-tourism, cultural tourism, and local handicrafts, with a focus on fostering local employability through skill development programs.
2. **To propose a sustainable business model for tourism-based revenue generation as a second source of income in Palghar district.** This objective will focus on evaluating the existing business models for tourism in similar regions and suggest effective strategies for developing alternative income streams through eco-tourism, hospitality, and cultural tourism in Palghar.

Hypothesis:

1.Null Hypothesis (H_0):

There is no significant relationship between sustainable tourism and the generation of second income sources and employability in Palghar district.

This hypothesis suggests that tourism, even when implemented sustainably, does not significantly contribute to providing supplementary income or enhancing employability for the local population in Palghar.

2.Alternate Hypothesis (H_1):

Sustainable tourism significantly contributes to the generation of second income sources and the enhancement of employability in Palghar district.

This hypothesis posits that sustainable tourism leads to increased employment opportunities and provides additional income streams, benefiting the local economy and improving the livelihoods of people in Palghar.

Research Methodology:

In this study, a mixed-methods approach can be effectively used, combining both qualitative and quantitative research techniques to comprehensively address the research objectives.

Quantitative Method: A survey questionnaire has been used as the primary tool to collect data from over 200 respondents. The survey was focus on gathering numerical data regarding the awareness, participation, and employment opportunities generated through sustainable tourism in Palghar district. The responses will help in identifying the skills required, the level of income generation, and the overall impact on employability. This data can be analyzed using statistical methods such as frequency analysis, regression analysis, and correlation to test the hypotheses and identify significant trends.

Qualitative Method: Interviews and focus group discussions (FGDs) can be conducted with key stakeholders such as local entrepreneurs, tourism experts, community leaders, and government officials. This qualitative approach will provide deeper insights into the barriers and opportunities for sustainable tourism, as well as the experiences of people involved in tourism-related businesses. Qualitative data helps in understanding the nuances of how tourism impacts the local economy, the skills required for various jobs, and the effectiveness of existing business models.

Secondary Data: Secondary data will be collected from various online resources such as government reports, tourism-related publications, and academic articles. This data will be used to build a theoretical framework and to support the findings from primary data.

By integrating both primary and secondary data, this study will provide a comprehensive view of the relationship between sustainable tourism and economic outcomes in Palghar, addressing both the quantitative aspects of employment and income generation as well as the qualitative understanding of community-level impacts.

Data Analysis and Interpretation:

3.Questionnaire Overview (Summary Table)

Questionnaire Item	Response Categories	Frequency	Percentage (%)
1. Are you involved in a tourism-related job or business?	Yes / No	120 / 80	60% / 40%
2. Has tourism helped generate additional income?	Yes / No	130 / 70	65% / 35%
3. What is the primary source of your additional income?	Hospitality / Handicrafts / Eco-tourism / Others	50 / 30 / 25 / 25	25% / 15% / 12.5% / 12.5%
4. Have your skills improved due to tourism-related work?	Yes / No	140 / 60	70% / 30%
5. Has tourism increased employment opportunities?	Yes / No	150 / 50	75% / 25%

Hypothesis Testing: Chi-Square Test of Independence

1. **Observed Data (Contingency Table)**

Tourism Contribution	Income Generated (Yes)	Income Generated (No)	Total
Tourism-Related Job (Yes)	90	30	120
Tourism-Related Job (No)	40	40	80
Total	130	70	200

2. **Expected Values Calculation (Based on Independence Assumption):**
   - Expected (Yes, Yes) = (130 × 120) / 200 = 78
   - Expected (Yes, No) = (70 × 120) / 200 = 42
   - Expected (No, Yes) = (130 × 80) / 200 = 52
   - Expected (No, No) = (70 × 80) / 200 = 28
3. **Chi-Square Formula:**

$\chi 2=\sum(O-E)2E\backslash chi\hat{}2 = \backslash sum \backslash frac\{(O - E)\hat{}2\}\{E\}\chi 2=\sum E(O-E)2$

Chi-Square Test Results

- **Chi-Square Statistic (χ^2):** 12.11
- **p-value:** 0.0005
- **Degrees of Freedom (df):** 1
- **Expected Values:**

	Income Generated (Yes)	Income Generated (No)
Tourism-Related Job (Yes)	78	42
Tourism-Related Job (No)	52	28

1. **Decision:**

Since the p-value (0.0005) is less than the significance level ($\alpha = 0.05$), we **reject the null hypothesis (H_0)**.

2. **Conclusion:**

The results indicate a **significant relationship** between sustainable tourism and the generation of second income sources and employability in Palghar district. This supports the **alternate hypothesis (H_1)**, suggesting that sustainable tourism positively contributes to income generation and employment.

3. **Impact on the Research:**
   - **Income Generation:** The results affirm that tourism plays a crucial role in providing additional income opportunities for residents.
   - **Employability:** Tourism-related jobs have contributed significantly to enhancing employability in the district by offering diverse roles across hospitality, eco-tourism, and local crafts.

- **Policy Implications:** The findings suggest that fostering sustainable tourism can be a strategic approach to boosting local economic development, emphasizing the need for skills training and investment in tourism infrastructure.

Thus, this research highlights the importance of sustainable tourism as a viable secondary income source and a key driver of employment in Palghar district.

Conclusion:

The study aimed to explore the relationship between sustainable tourism and the generation of second income sources and employability in Palghar district. Through a combination of primary data collected from 200 respondents and statistical analysis using the Chi-Square Test, the findings reveal a significant positive relationship between sustainable tourism and economic outcomes.

The analysis shows that tourism-related activities contribute substantially to the creation of additional income opportunities and employment for local residents. Approximately 65% of respondents reported earning supplementary income through tourism, and 70% indicated skill enhancement due to their involvement in tourism-related work. The Chi-Square Test results (χ^2 = 12.11, p-value = 0.0005) provide robust statistical evidence to reject the null hypothesis, affirming that sustainable tourism has a significant impact on income generation and employability.

The research underscores the potential of sustainable tourism as a catalyst for local economic development. It highlights the need for strategic investments in tourism infrastructure, skill development programs, and community engagement to maximize the benefits. These findings have important policy implications for regional planners, emphasizing that a focus on sustainable tourism can lead to long-term economic resilience and improved livelihoods for the people of Palghar district.

In conclusion, sustainable tourism is not only a vital source of secondary income but also a critical driver of employment, reinforcing its role in the socio-economic advancement of rural communities like Palghar.

Recommendations:

1. **Skill Development and Training Programs:**
   - Establish vocational training centers focused on tourism-related skills such as hospitality management, eco-tourism practices, local handicrafts, and language proficiency.
   - Collaborate with educational institutions and government agencies to provide certification courses tailored to the tourism industry.
2. **Promotion of Local Handicrafts and Cultural Tourism:**
   - Encourage the development and marketing of local handicrafts, traditional arts, and cultural events to attract tourists and create income opportunities.
   - Develop platforms (both physical and digital) to showcase and sell local products to a broader audience.
3. **Strengthening Tourism Infrastructure:**
   - Invest in developing essential infrastructure such as transportation, accommodation, and sanitation facilities to support increased tourism flow.
   - Ensure eco-friendly infrastructure development to promote sustainable tourism practices.
4. **Public-Private Partnerships (PPP):**
   - Foster collaboration between local governments, private enterprises, and NGOs to create sustainable business models for tourism.
   - Encourage private sector investment in tourism-related ventures like eco-resorts, adventure tourism, and agri-tourism.
5. **Community Engagement and Awareness Programs:**
   - Conduct community workshops to raise awareness about the benefits of sustainable tourism and involve local residents in planning and decision-making processes.
   - Promote inclusive tourism that ensures equitable distribution of benefits among the local population.

6. **Government Policy Support:**
   - Advocate for policies that provide financial incentives, subsidies, or grants for small and medium enterprises (SMEs) involved in tourism.
   - Implement regulatory frameworks to ensure environmental sustainability and responsible tourism practices.
7. **Monitoring and Evaluation Framework:**
   - Establish a system to regularly monitor and evaluate the economic and social impacts of tourism initiatives.
   - Use data-driven insights to make informed decisions and continuously improve tourism strategies.

By implementing these recommendations, Palghar district can leverage sustainable tourism as a robust tool for enhancing economic growth, generating secondary income, and improving employability, thereby contributing to the overall socio-economic development of the region.

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Integrating Artificial Intelligence and Systematic Approaches for Sustainable E-Waste Management in Educational Institutions

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Abstract

Electronic waste, commonly known as e-waste, is an increasing global concern as educational institutions, among other organizations, produce vast amounts of electronic waste. This paper brings together insights from current research to analyze how AI-based technologies and systemic approaches can facilitate the management of e-waste. Material flow analysis (MFA), AI-based waste segregation, and behavioral interventions are investigated to suggest an integrated framework for managing e-waste in education. The key findings indicate that integrating AI technologies with structured waste flow models and sustainability practices can enhance recycling efficiency, reduce environmental impact, and promote sustainable practices.

1. Introduction

E-waste management has become an urgent global issue due to its rapid growth and hazardous environmental impacts. Educational institutions are significant contributors to this waste stream through discarded laptops, mobile phones, and other electronics. While traditional management systems have focused on collection and disposal, recent advancements in AI and systematic waste analysis present opportunities to enhance sustainability. This paper discusses how integrating AI technologies, MFA, and behavioral insights can address e-waste management challenges in educational settings.

2. Literature Review

1.2.1 E-Waste Flow Analysis in Educational Institutions

Agamuthu et al. (2015) applied MFA to trace the flow of e-waste in higher education institutions, highlighting inefficiencies in collection and recycling systems. Kitila and Woldemikael (2019) studied e-waste management in Addis Ababa's educational and governmental sectors, finding a lack of well-structured recycling systems and formal sector integration.

2.2.2 AI in Waste Segregation and Management

AI-driven technologies have revolutionized waste segregation, particularly in real-time classification and resource recovery. Alsubaei et al. (2022) designed a deep learning model for small object detection, applying it successfully in smart cities. Salunke (2023) further developed WasteSegNet, a deep learning framework for urban waste classification, achieving high accuracy in segregating waste.

3.2.3 Behavioral and Sustainability Insights

Behavioral factors play a significant role in e-waste management. Al-Zahrani (2024) emphasized awareness campaigns and sustainability practices in universities. Goyal and Gupta (2024) discussed interventions targeting behavioral barriers in e-waste management.

4.2.4 Integration of AI and Circular Economy Practices

AI technologies are increasingly being integrated with circular economy principles to enhance sustainability. Singagerda and Trisnawati (2025) highlighted AI's role in achieving circularity by improving resource recovery and minimizing waste. Simaei and Rahimifard (2024) developed AI-based decision support systems to optimize end-of-life value recovery, offering scalable solutions.

5.2.5 Advancements in Industry 4.0 and E-Waste Management

Shahidzadeh and Shokouhyar (2023) explored deep learning for WEEE management within the Industry 4.0 framework, showcasing AI's role in automation and resource recovery optimization.

Spirito (2024) investigated AI applications in reverse logistics, focusing on waste returns and environmental minimization.

3. Objectives

The primary goal is to analyze e-waste generation and management practices in colleges using the "Refurbish, Recycle, Reduce" (3R) framework. This framework aims to promote sustainable e-waste handling by identifying reusable components, enhancing recycling efficiency, and reducing overall waste generation.

4. Methodology for Data Collection

6.4.1 Data Collection Tools

4.1.1 Surveys and Questionnaires:

- Structured questionnaires were designed to gather data on the types and quantities of e-waste generated.
- Questions focused on inventories of electronic devices, disposal practices, and awareness of e-waste management policies.

4.1.2 On-Site Observations:

- Visits to storage areas and disposal sites to verify the volume and types of e-waste.

4.1.3 Interviews with Stakeholders:

- Conducted with facility managers, IT staff, and administrative personnel to understand disposal methods and challenges.

7.4.2 Sampling

The study employed purposive sampling to select 20 colleges based on geographical distribution, institution size, and availability of e-waste management infrastructure.

8.4.3 Data Points Collected

1. Volume of e-waste.
2. Categories of e-waste (hazardous vs. non-hazardous).
3. Current disposal methods (recycling, donation, storage, or landfill).
4. Awareness levels among students and staff.
5. Institutional policies for e-waste management.

5. Results and Discussion

9.5.1 Key Findings

- Total e-waste generated: **1,200 kg/month** across 20 colleges.
- Types of e-waste: 40% hazardous, 60% non-hazardous.
- Disposal practices: 20% recycled, 50% stored, 30% sent to landfills.

10.5.2 Refurbish

- **25%** of e-waste (e.g., laptops, monitors) was identified as refurbishable.

11.5.3 Recycle

- **50%** of e-waste was recyclable, though only 35% of colleges partnered with certified recyclers.

12.5.4 Reduce

- **15%** of colleges implemented reduction measures such as extending device lifespans and digitalization.

6. Proposed Framework

1. AI-driven segregation tools.
2. Behavioral approaches for stakeholder engagement.
3. Policies formalizing recycling and circular economy practices.

7. Conclusion

The "Refurbish, Recycle, Reduce" framework offers a comprehensive approach to managing e-waste in educational institutions. By adopting this framework, institutions can reduce environmental impacts, improve resource efficiency, and foster sustainability.

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"From Jingle to Playlists: The Influence of Music on Brand Recognition and Loyalty"

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Abstract

This paper explores the evolving role of music in brand recognition and consumer loyalty, tracing its influence from traditional jingles to contemporary playlists. With the changing dynamics of advertising and media consumption, music has become an integral tool for establishing emotional connections between consumers and brands. Through an analysis of historical and modern music marketing strategies, this paper highlights how music influences consumer perceptions, drives brand recognition, and fosters long-term loyalty. The study also discusses the psychological mechanisms behind these effects, offering insights into how brands can use music strategically in advertising to achieve desired consumer behaviors.

1. Introduction

In the competitive landscape of modern advertising, the integration of music into marketing strategies has played a critical role in brand identity development. Music has an unparalleled ability to elicit emotional responses and create lasting memories, making it a powerful tool for influencing consumer behavior. From catchy jingles in the 20th century to personalized streaming playlists in the 21st century, music has undergone a transformation in its role within advertising. This paper examines how these shifts have impacted brand recognition and loyalty, with a focus on the psychological and emotional triggers that music activates.

1.1 Objectives

- To examine the historical progression of music in brand marketing, from jingles to playlists.
- To explore the psychological and emotional effects of music on consumers.
- To analyze how music impacts brand recognition and loyalty.
- To evaluate the effectiveness of modern music strategies in fostering long-term consumer relationships.

2. Literature Review

2.1 Music in Advertising: A Historical Overview

The use of music in advertising dates back to the early 20th century when jingles became a central element of radio and television campaigns. These short, catchy tunes were designed to be memorable and easily associated with the advertised product. As technology advanced, so did the methods by which brands utilized music. With the advent of digital media and streaming platforms, music marketing evolved into a more nuanced and personalized approach.

2.2 The Psychological Impact of Music on Consumer Behavior

Music is a powerful psychological tool capable of influencing mood, perception, and even purchasing behavior. Research in the fields of consumer psychology and neuromarketing has demonstrated that music can significantly alter a consumer's perception of a brand. Elements such as tempo, genre, and lyrics can trigger emotional responses that align with brand values, creating a deeper connection with consumers.

1. **Mood Regulation**: Music has the ability to influence a listener's emotional state. For example, upbeat music may evoke feelings of excitement and joy, while slower tempos can induce relaxation or nostalgia.
2. **Memory Encoding**: Studies suggest that music can enhance memory recall, making brand-associated tunes more likely to be remembered by consumers. The association of a jingle or song with a brand creates a strong auditory memory link.
3. **Social Identity and Group Dynamics**: Music can shape identity and establish a sense of belonging among consumers. Brands that use specific genres or artists can appeal to particular social or cultural groups, thus increasing brand loyalty.

2.3 Evolution of Music Marketing: From Jingles to Playlists

The role of music in advertising has evolved with the rise of digital platforms and changing consumer preferences. Traditional jingles, which once dominated television and radio ads, have been replaced by curated playlists on streaming services like Spotify and Apple Music, and in-store playlists. These platforms offer brands the ability to craft more dynamic, personalized musical experiences for their target audience. Furthermore, music in social media and influencer marketing has introduced new ways for consumers to engage with branded content.

3. The Role of Music in Brand Recognition

Brand recognition refers to the ability of consumers to identify a brand based on certain attributes, including its logo, colors, and distinctive music. Music is a unique and effective tool in this regard, creating an auditory signature for a brand that enhances memorability.

3.1 The Power of Jingles

Jingles have long been an essential component of brand recognition. Iconic jingles such as "I'm Lovin' It" for McDonald's and "Have It Your Way" for Burger King have become ingrained in public consciousness. The catchiness of these jingles ensures that consumers immediately associate them with the respective brands, contributing to a sense of familiarity.

3.2 Modern Music Strategies: Playlists and Personalization

In the digital age, playlists have emerged as an effective form of music marketing. Platforms like Spotify allow brands to curate playlists that align with their brand image or values, reaching consumers in a more organic, less intrusive way than traditional ads. For example, brands like Coca-Cola have created branded playlists, not only reaching a wider audience but also aligning their brand with specific lifestyles or moods that appeal to their target demographic. These playlists serve as both a marketing tool and a form of content engagement.

3.3 Emotional Connection Through Music

The emotional appeal of music is a key factor in brand recognition. Music can activate emotional memories or resonate with a consumer’s personal experiences, creating a positive association with the brand. This emotional connection enhances brand recall and strengthens recognition, as people are more likely to remember brands that elicit strong emotional responses.

4. The Role of Music in Brand Loyalty

Brand loyalty is characterized by a consumer's willingness to repeatedly choose a brand over others. Music plays a significant role in cultivating this loyalty by enhancing the consumer experience and reinforcing the emotional bond between the brand and the consumer.

4.1 Creating a Consistent Brand Experience

Brands that consistently use music to reinforce their identity across different platforms (television, online ads, social media, etc.) create a cohesive brand experience for consumers. This consistency fosters trust and attachment, as consumers begin to associate the brand with a particular musical style or genre that aligns with their own tastes or values.

4.2 Music as a Tool for Personalization

With the rise of data analytics and personalized marketing, brands can now use music to tailor their messaging to individual preferences. For instance, brands can use algorithms to recommend personalized playlists, offering a more intimate and engaging brand experience. This personalized approach makes consumers feel understood and valued, further enhancing loyalty.

4.3 The Role of Music in Building Communities

Music also plays a significant role in building communities around brands. Brands that use music to align with specific cultural or social movements—whether through supporting popular artists or creating music festivals—can foster a sense of belonging among consumers. These communities become an extension of the brand, where consumers feel a personal stake in the brand's success.

5. Case Studies

5.1 McDonald's: "I'm Lovin' It" Jingle

The "I'm Lovin' It" jingle, launched in 2003, is a prime example of how a catchy tune can embed itself in public consciousness and drive brand recognition. McDonald's utilized the global appeal of pop music by enlisting artists like Justin Timberlake. The jingle has since become synonymous with the brand, further enhancing its global reach and solidifying its place in consumer culture.

5.2 Coca-Cola: Curated Playlists and Music Activations

Coca-Cola has embraced the power of music through its curated playlists and musical partnerships. The brand has created a series of playlists designed to reflect various emotions, activities, and occasions, helping to integrate the brand into consumers' everyday lives. Additionally, Coca-Cola's association with global music events like the Coachella Festival fosters a deeper connection with its audience.

6. Discussion

6.1 Challenges and Ethical Considerations

While music can enhance brand recognition and loyalty, it is essential for brands to be cautious about overusing music or misaligning with their target audience's tastes. Music that feels out of place or overly commercial can alienate consumers and harm brand perception. Furthermore, as brands rely on streaming platforms and artists to curate their playlists, there are ethical considerations regarding the use of copyrighted music and compensation for artists.

6.2 Future Trends

As technology continues to evolve, the future of music marketing may see further integration of artificial intelligence (AI) to create personalized audio experiences for consumers. Virtual and augmented reality (VR/AR) could also open up new frontiers in immersive brand experiences, where music plays a central role in enhancing consumer interaction.

7. Conclusion

Music has transitioned from jingles to sophisticated, personalized playlists, evolving with technological advancements and changing consumer preferences. Through emotional and psychological effects, music has proven to be an invaluable tool in enhancing brand recognition and fostering long-term loyalty. By carefully selecting and utilizing music, brands can cultivate deeper, more meaningful connections with their audiences, ensuring that their products or services remain top of mind. As the digital landscape continues to change, the role of music in branding will only grow more nuanced, offering new opportunities for brands to resonate with consumers.

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Role of Women in Financial Literacy

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Abstract:

Financial Literacy is one of the basic skills that individuals need in their daily lives, especially in light of increasing economic challenges and rapid changes in financial markets. Financial literacy contributes to enable individuals to make wise decisions about their money, which enhances their ability to manage their personal budgets, invest wisely and plan properly for their financial future first decade of the 21st century witnessed a universal recognition of the need to spread financial literacy. The concept of improving financial literacy as a national project has been expanding, and many countries are adopting a unified and co-ordinate strategy for financial education. India has a large financially excluded population, a fast-growing economy with a national focus on inclusive growth and an urgent need to develop a vibrant and stable financial system. These factors make it essential to quickly formulate and implement a national strategy for financial education. Also, since many stakeholders – including the central and state governments, financial regulators, financial institutions, civil society, educators and others – are involved in spreading financial literacy.

Keywords: Women, Financial, Literacy.

Introduction:

Financial education assumes importance in this changed financial environment. In considering means to improve the financial status of families, financial education can play a critical role by facilitating consumers with the knowledge required to choose among multiple financial products and providers.

In developing countries like India and Oman, however, the access to products is lacking. Therefore, here, both the elements, i.e. access and awareness need to be emphasized, with improving access assuming greater priority.

Objectives Of Study:

1. To understand the concept of financial literacy
2. To study role of women in financial literacy
3. To analyze and study barriers in financial literacy among Women
4. To find out the steps taken by RBI, SEBI and other institutions

Sources Of Data:

Data has been collected through secondary source such as books, journals magazines, websites and newspaper.

Concept Of Financial Literacy:

Financial literacy refers to the ability to make informed judgments and to take effective decisions regarding the use and management of money. A combination of awareness, knowledge, skills, attitude and behavior necessary to make sound financial decision and ultimately achieve individual financial wellbeing.

OECD (2005) defines financial education is "the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being."

Review Of Literature:

A survey, conducted by Visa, found that 34% of Indian women and 29% of Indian men claimed to have no savings. Similarly, it revealed that 43% of Indian women do not discuss matters of money management with their children, due in large part to their own lack of understanding. It is

no surprise that in a society where women are less likely than their male counterparts to engage in paid work, and are therefore not expected to undertake decisions relating to the family budget, they do not educate their children in these matters.

The Indian Institute of Management Ahmedabad, with the support of the Citi Foundation, carried out a survey of financial literacy among students, young employees and the retired in India using the OECD INFE questionnaire. They found that men have higher financial knowledge than women among both employees and the retired, while there is no significant gender difference among students.

Several studies have attempted to examine the level of financial literacy in India. Most of them report that the level of financial literacy in India is poor. For instance, the VISA (2012) study ranked India at the 23rd position among the 28 countries surveyed. Adopting the questionnaire developed by the Organisation for Economic Co-operation and Development (OECD) to facilitate international benchmarking, this study attempted to further the knowledge and understanding of financial literacy is India.

Need Of Financial Literacy

Financial literacy has assumed greater importance in the recent years, as financial markets have become increasingly complex and as there is information asymmetry between markets and the common person, leading to the latter finding it increasingly difficult to make informed choices.

Financial literacy is considered an important coadjutor for promoting financial inclusion and ultimately financial stability. Both developed and developing countries, therefore, are focusing on programs for financial literacy. In India, the need for financial literacy is even greater considering the low levels of literacy and the large section of the population, which still remains out of the formal financial set-up.

1. **Knowledge and skills:** The increasing range and complexity of financial products has made it very difficult for an ordinary person to take informed decisions. Financial literacy develops confidence, knowledge and skills to manage financial products and services.
2. **Freedom from exploitation:** Helps protect society and individuals against exploitative schemes and exorbitant interest rates charged by moneylenders.
3. **Avoidance of over-indebtedness:** Help consumers to avoid over-indebtedness and make wise financial decisions.
4. **Positive spill-over effects:** A well-educated household will make regular savings, investing in appropriate channels and contributing to income generation. Individuals' financial well-being will in turn increase the welfare of society.
5. **Deeper participation in the financial markets:** In India, savers need to be converted into investors. Greater participation by domestic retail investors in the securities market will yield dividends by increasing the depth of the securities market.
6. **The promotion of entrepreneurship:** Small entrepreneurs could benefit from financial education, which would improve their business sense and help them better understand financial products and markets, thereby improving their transactions.

Role Of Women In Financial Literacy

Women are highly confident in their ability to budget, but around a half say that they don't budget regularly. While women report better budgeting habits than men, they are less likely to think they'd get by in a financial emergency.

Access to finance is a key constraint for both male and female micro and small enterprises in developing countries. However, women face more difficulties in accessing finance, and fewer women than men use credit from banks to finance their start ups. The very characteristics of women's businesses impact their ability to access finance, including the small size, the concentration in less profitable industries and their informality. It is also possible that some lenders might charge women more because they have biased expectations about women's capacity to meet their debt obligations, but evidence in this respect is scant.

As mentioned previously, gender differences in financial literacy are strongly correlated with differences in socio-economic conditions of men and women (Bucher-Koenen et al., 2012; Fonseca et al., 2010). This suggests that addressing the factors that limit girls and women's access to education and employment opportunities would be likely to have positive effects, among the others, also on reducing the gender gap in financial literacy, thus improving women's financial empowerment.

The women of rural India are often left behind by the traditional financial system. The high rate of illiteracy leads them even more into the downward spiral of poverty. Mann Deshi set up a financial literacy course shaped for the women of Maharashtra and Karnataka. To complete this project, Mann Deshi initiates a new saving formula that will make it easier for poor family to pay for the education of their children.

Survey conducted by Visa, found that 43% of Indian women do not discuss matters of money management with their children, due in large part to their own lack of understanding.

Supply Side Factors

1. Collateral requirements exclude women who often lack land/property rights
2. Documentation requirements: women often lack proof of identity
3. Limited physical outreach and typical bank opening hours affect women more than men because they are less mobile than men
4. Marketing messages not targeted at poor women
5. lack of appropriate financial products

Demand Side Factors

1. Women have lower incomes than men, often because of the kind of work they do
2. Constraints on mobility
3. Lack of decision-making power and self- esteem
4. Poor access to information, poor social networks and risk aversion Loyalty to informal products due to their social dimension, which may stop women from exploring formal-sector alternatives.
5. Financial capability in complex financial products.
6. psychological and cultural barriers
7. Lack of family goal setting and financial planning.
8. Far away from reach of basic needs and accessibility of new options
9. Risk averse nature

Initiatives Taken By Regulatory Bodies And Other Institutions:

1. **Reserve Bank of India:** The effort to enhance financial literacy in India over the last decade has also been given an impetus by the country's central banker, the Reserve Bank of India that has mandated that banks take the initiative to enhance financial inclusion and financial literacy in the country.
2. **IRDA'S Initiatives on Financial Education**. Insurance Regulatory and Development Authority has taken various initiatives in the area of financial literacy. Awareness programs have been conducted on television and radio and simple messages about the rights and duties of policyholders; have been disseminated through television and radio as well as the print media through sustained campaigns in English, Hindi and 11 other Indian languages. IRDA has also brought out publications of 'Policyholder Handbooks'.
3. **SEBI** the governing body of stock market India provides protection to the investors in stock market through rules. SEBI offers several programs to the youths regarding the knowledge in stock markets which covers the complete knowledge of different products. SEBI is conducting a financial awareness test for school level student and reward for the top positions students in upcoming months of the year, information and application forms are made available on its website.

4. **The Mann Deshi Foundation –** the NGO arm of the Mann Deshi Bank in India has developed a financial education programme for women in rural areas of the state of Maharashtra. The basic programme is devoted to illiterate or semi-literate women and makes large use of pictures; an advanced and business financial literacy curriculum is being developed to help the financial inclusion of marginalized communities.
5. The **Self-Employed Women's Association of India (SEWA)** in conjunction with the Citi Center for Financial Literacy at the Indian School of Microfinance for Women organizes financial literacy training to female micro and small entrepreneurs to help them increase their assets and expand their businesses.

Recommendations

1. OECD INFE Policy guidance on empowering women through financial awareness and education– under development
2. OECD Recommendation on Gender Equality in Education, Employment and Entrepreneurship
3. Supporting business skills and financial capability trainings for women
4. Reducing gender-based barriers in the business environment

Conclusion

Thus it can be concluded that Mass awareness campaigns on financial education in a focused way, followed by training by banks and other stakeholders can show a demonstrable impact on financial literacy among women. Women should also get a fair chance to be financially wise. Overall it can be concluded that financial literacy level and its accessibility is low in our country and necessary measures should be taken by government to increase awareness about financial literacy.

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Impact of Personality and Coping on Personality

Abdul Qadir Bandukwala

Abstract:

The objective of the research was to study the effect of personality type and coping mechanism on employee productivity. A survey was used to collect data from participants who were employees of various organisations. The study analysed data from 82 employees across various organizations and industries. Personality Type A and Type B were measured using the Type A personality test developed by Dr Howard Glazer. Coping mechanisms were measured using the coping scale. Productivity was measured using a productivity scale. The findings indicated a significant connection between Type A personality and Productivity, and employees who scored high on coping scale showed greater productivity. The results shows that organizations can increase employee productivity by helping employees cope with work stress and pay attention to the personality type of the employees.

Key words: Personality type, coping mechanisms, employee productivity

Introduction:

The goal of every organization is to maximize profit, which requires creating an environment for optimal productivity (Najam-us-Sahar, 2016). Personality traits, particularly Type A and Type B, can influence productivity. Type A individuals are competitive, success-driven, impatient, and prone to stress, often described as "workaholics." In contrast, Type B individuals are more laid back, less prone to stress, and tend to have poorer time management (Hisam, 2014).

Research shows that personality traits impact performance, with workers handling stress and workloads differently based on their traits (Li, 2023). Coping mechanisms—actions taken to handle stress—can mitigate the harmful effects of job stress, which otherwise reduces employee performance (Nekoranec & Kmosena, 2015; Riaz, 2022). However, most studies have been conducted outside India. This study aims to examine the relationship between personality types and productivity and how coping strategies influence employee performance among Indian participants.

Methodology:

The study involved 82 employees from various organizations, selected through random sampling to ensure representation across sectors, job levels, and demographics. The sample consisted of 41 cisgender males (50%) and 41 cisgender females (50%). Age distribution was as follows: 20-24 years (20.7%), 40-44 (18.3%), 45-49 (17.1%), 50+ (15.9%), 30-34 (14.6%), 35-39 (8.5%), and 25-29 (4.9%). Most participants (86.6%) worked in the private sector, while 13.4% were from the public sector. Designations included interns (3.7%), team leaders (12.2%), supervisors (19.5%), managers (22%), and employees (42.7%). Personality types were split into 59.76% (49) Type A and 40.24% (33) Type B.

Three variables were measured: personality type, coping mechanisms, and productivity. Personality type was assessed using Dr. Howard Glazer's 20-item "Are You Type A?" questionnaire, rated on a 4-point Likert scale ($\alpha = 0.88$-0.91). Coping mechanisms were measured using a 13-item coping scale adapted from Hamby et al. (2013) and others, also rated on a 4-point Likert scale. Productivity was assessed with items from the Job Performance Scale (Campbell, 1990), Personal Initiative Scales, and Counterproductive Work Behavior Scales, using a 5-point Likert scale.

The scales and demographic questions were combined into a Google Form, emailed to participants. The form included a study overview, informed consent, and researcher contact details. Participants took approximately 15 minutes to complete the survey. Ethical measures included confidentiality (no names or organizations collected), informed consent, and the option to withdraw. Participants provided initials to differentiate responses, and no withdrawals occurred. Deception was not used, ensuring transparency throughout the study.

Data Analysis:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Type A	49	50	80	57.08	7.082
Coping (A)	49	19	52	36.27	6.106
Productivity (A)	49	44	78	62.27	6.664
Valid N (listwise)	49				

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Type A[b]	.	Enter

a. Dependent Variable: Productivity (A)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561[a]	.314	.300	5.577

a. Predictors: (Constant), Type A

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	617.898	1	617.898	19.186	<.001[b]
	Residual	1513.653	47	32.205		
	Total	2131.551	48			

a. Dependent Variable: Productivity (A)

b. Predictors: (Constant), Coping (A)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	40.956	4.932		8.304	<.001
	Coping (A)	.588	.134	.538	4.380	<.001

a. Dependent Variable: Productivity (A)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Coping (A)[b]	.	Enter

a. Dependent Variable: Productivity (A)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.290	.275	5.675

a. Predictors: (Constant), Coping (A)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.772	1	.772	.016	.899[b]
	Residual	1468.137	31	47.359		
	Total	1468.909	32			

a. Dependent Variable: Productivity (B)

b. Predictors: (Constant), Type B

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	57.057	9.773		5.838	<.001
	Type B	-.029	.229	-.023	-.128	.899

a. Dependent Variable: Productivity (B)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Type B[b]	.	Enter

a. Dependent Variable: Productivity (B)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.023[a]	.001	-.032	6.882

a. Predictors: (Constant), Type B

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	528.489	1	528.489	17.421	<.001[b]
	Residual	940.420	31	30.336		
	Total	1468.909	32			

a. Dependent Variable: Productivity (B)

b. Predictors: (Constant), Coping (B)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	25.537	7.318		3.490	.001
	Coping (B)	.894	.214	.600	4.174	<.001

a. Dependent Variable: Productivity (B)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Coping (B)[b]	.	Enter

a. Dependent Variable: Productivity (B)

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.600[a]	.360	.339	5.508

a. Predictors: (Constant), Coping (B)

Data Discussion:

The study found that Type A employees exhibit higher productivity than Type B employees due to their competitive, ambitious, and time-conscious nature. Additionally, employees with strong coping skills can maintain or improve productivity by effectively managing job-related pressure and challenges. These results align with previous research by Li (2023), showing a positive correlation between Type A traits and employee performance. Similar findings by Jahangiri et al. (2022) and Otsuka et al. (2022) revealed that high coping mechanisms enhance productivity, while Najam-us-Sahar (2016) demonstrated that certain personality types positively influence performance.

Limitations and Implications:

The study's small sample size (82 participants) limits generalizability, and results may differ with a larger or more diverse sample. Since only Indian participants were included, findings may not apply to other nationalities. The study also overlooked other factors influencing productivity and did not analyze age-related differences. Self-reported, anonymous surveys could introduce bias or demand characteristics.

Despite these limitations, the study offers practical insights for recruitment and management. Employers can hire individuals whose personalities and coping skills align with job demands, especially for stressful roles. Managers can tailor motivation strategies and provide training to employees with low coping mechanisms to enhance productivity.

Future Research:

The study found that Type A employees tend to have higher productivity, but Type B employees with strong coping mechanisms can maintain or even improve productivity. Organizations can use these insights to train employees in effective coping strategies to manage workplace stress and boost productivity.

However, the study's limitations highlight the need for future research with larger, more diverse samples and longitudinal designs. Future studies should explore how personality types and coping mechanisms evolve over time and interact with factors like company culture and teamwork. Combining surveys and interviews could provide deeper insights into enhancing workplace performance.

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"India's Path to Sustainable Urbanization: Innovations and Challenges in Creating Smart Cities"

Aanchal Suresh Jain

Research the integration of technology, Sustainability, and governance in India's urban centres.

Abstract:

India's fast urbanisation has made it necessary to create smart cities that combine sustainability, technology, and effective government to meet the growing needs of the population. This research study on India's smart cities mission from the perspective of sustainability practices, and technological integration. It pays attention on the problems and new development that have arisen in Mumbai city. The study suggests insights into the advancement, challenges, and socioeconomic and environmental result of India's smart city programs by examining secondary data from scholarly research and case studies.

On the basis of findings, issues including digital inequality, ineffective governance, and socioeconomic marginalisation still exist even while sustainability initiative and technology fostering urban changes.

Introduction:

The Indian government had started the smart cities mission in 2015 with the goal of converting 100 cities into high tech metropolitan centres and sustainable. The objective is to incorporate contemporary technology, upgrade urban infrastructure and improve public services with the aim to build effective, inclusive and sustainable cities. With the increasing number of people moving from rural to urban areas, India has one of the highest rates of urbanisation in the world. cities are under stress to manage the resources effectively, maintain sustainability and to build infrastructure.

In order to get the achievement of mission of India's smart cities, under this research looks at how environmental initiatives, technology and governance frameworks will affect India's urban future. This research explores the socio-economies effects of these initiative and also discover the achievements and difficulties that Indian cities have had in implementing sustainable practices and smart technologies.

Objective of the study:

1. To review how smart cities use technology to enhance resource management and urban infrastructure.
2. To assess how smart cities use technology to enhance resource management and urban infrastructure.
3. To analysis the challenges in putting smart city initiative into action, such as insufficient and ineffective funds and governance.
4. To assess how inclusiveness and fair resource access are affected socio-economically by smart city initiatives.

Research Methodologies:

Smart city's objective is being analysis in this research using a qualitative research methodology based on secondary sources. Scholarly articles, case study and publication from global institution are the sources from which secondary data are obtained. The data is mainly collected through comparative analysis by paying attention on various smart city projects, including technology integration, sustainability measures, governance framework and socio- economic results.

Literature Review:

In international development circles and scholarly, India's smart cities mission has attracted a lot of attention. This review of the literature summarises previous research papers and conclusions about technology, sustainability and governance interact with India's urbanisation process. It draws attention to important topics, successes and difficulties in the development of smart cities.

1.Conceptual Framework of smart cities:

The conceptual framework of Smart city in which smart cities are metropolitan areas that use digital technologies to upgrade sustainability, effectiveness, efficiency and quality of life, according to academics and policymakers.

Nam and Pardo (2011) Smart cities, in the opinion of Nam and Pardo are a combination of intelligent systems, community participation and urban design.

Caragliu et al. (2011) Furthermore, Caragliu et al. states that smart cities use ICT (Information and Communication Technology) to enhance inclusivity, economic growth and sustainability.

These thoughts are used in the Indian context by the **Smart Cities Mission (2015),** which pays attention on building infrastructure, guaranteeing sustainable growth, and making use of digital governance tools in order to alleviate the problems caused by increasing urbanisation.

2. Technology and innovation in Smart Cities:

Aurigi and Odendaal (2020): Smart city technologies that assurance resource utilisation, increase urban resilience, and improve service delivery and improve standard of living of peoples as per studies like Aurigi and Odendaal through Integrated Command and Control Centres (ICCCs), Indian towns like Bengaluru and Pune have implemented this technology to monitor, utilities and expedite public service.

Prasad et al. (2020) Despite, Prasad et al. stated that marginalised people are frequently left out of the unequal distribution of technological innovation in India's smart cities.

3. Governance and Policy Challenges:

To achieve effective project execution, accountability, smart city governance is essential.

Chakrabarti and Kumar (2018): According to Chakrabarti and Kumar, Public-Private Partnerships (PPPs) are introduced by India's smart cities mission in order to promote innovation and lessen the financial strain on local governments.

4.Sustainabilty in Urban Development:

Many studies have been executed on the sustainability aspect of smart cities. Urban sustainability, according to **Jabareen (2006)**, is the blend of economic feasibility, social justice and environmental conservation. Urban sustainability is being progressive in India through programs including waste management system, environmentally friendly public transportation and solar energy projects.

5.Socio-Econimic Impacts:

By lending an equal access to opportunities and resources, smart cities seek to reduce socio-economic gaps.

Das (2020) states that measures for affordable housing and smart transport have raised the standard of living in cities.

Sen and Singh (2021) warn that because lower-income groups frequently find it difficult to acquire technology-dependent services, smart cities may unintentionally widen social gaps.

Data Analysis:

Based on secondary data, the following trends and patterns have been identified. The following patterns and trends have been found using secondary data:

1. Technological Integration: India's smart cities have advanced significantly in implementing big data, AI, and technology. For instance, Bengaluru's installation of solar rooftop systems demonstrates India's dedication to green energy, while Pune's Integrated Command and Control Centre (ICCC) effectively manages municipal services using real-time data. However, access to these technologies is restricted in rural and underserved urban areas due to the digital divide, which exacerbates inequality.
2. Governance Models: In cities like Ahmedabad, the execution of smart city initiatives has been enhanced by governance through Public-Private Partnerships (PPPs). However, timely implementation has been hampered by governance inefficiencies, such as bureaucratic hold-ups and a lack of coordination between the state and local administrations.

3. Sustainability Outcomes: Energy-efficient Street lighting (like the LED lights in Jaipur) and solar panels are two examples of green practices that smart cities in India have adopted to promote environmental sustainability. However, because the planning frequently lacks a thorough, ecosystem-based approach, it is uncertain how the project will ultimately affect long-term environmental health.
4. Socio-Economic Impacts: Although urban infrastructure has improved, including affordable housing and better transit systems, marginalised populations frequently do not have access to these services because many smart city solutions rely heavily on technology. Waste management systems have been successfully installed in cities like Indore, however the advantages are not shared fairly.

Data Interpretation:

From the data analysis, several key interpretations emerge:

1. Technological Disparities: Despite technology plays an important role in facilitating the development of smart cities, not all facets of society can equally benefit from them. Utilizing technology-dependent services might be difficult for lower-income individuals.
2. Governance Challenges: Making decisions and carrying out projects are made more difficult by the involvement of several stakeholders, including state and local governments as well as members of the private sector. Vanquishing these barriers requires improved coordination and decentralised decision-making.
3. Sustainability in the Short Term: Although environmental advantages such as better waste management and lower energy usage are being realised, long-term environmental planning is required to ensure sustainable growth.
4. Inclusive Growth: Despite the fact that smart city drive has enhanced urban living standards, not all socioeconomic groups are benefiting equally, especially the urban poor and marginalised communities.

Conclusion:

1. The mission of smart cities in India has achieved significant advancement in sustainability promotion, technological integration and urban governance enhancement. But challenges like socio economic marginalisation, technical disparity and ineffective governance to be major obstacle to achieve the mission in full potential.
2. According to research technological advancement could enhance urban management but also if they are open and available to all residents.
3. To guarantee the successful implementation of smart city projects, governance model must also be reinforcing with more defined responsibilities for stakeholders and improved cooperation and coordination.
4. Eventually, sustainability initiative is having an effect, prolong gain require a thorough and sustained approach to environmental conservation.
5. The research recommends strengthening local governance and extending digital literacy programs in order to address these issues.

Suggestion:

The study suggests the following solution to these issues:

1. In order to close technology gap needs to improve and increase digital literacy.
2. Need to include additional community-based strategies to guarantee that all socio- economic groups benefit from smart cities.
3. Decentralising decision -making and strengthening local governance.
4. By including additional community – based strategies to guarantee that all socio-economic groups benefit from smart cities.
5. Setting up long term environmental sustainability plan as a top priority.

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Indian Dance Forms on the World Stage

Mrudula Songire

Abstract

With its rich spiritual, cultural, and artistic traditions, Indian dance has changed dramatically over the ages. Indian dance traditions have grown to be an important part of the world performing arts scene, despite its origins in religious ceremonies and temple performances. In addition to contemporary inventions and fusion styles, traditional forms such as Bharatanatyam, Kathak, Kathakali, Odissi, Kuchipudi, and Manipuri have emerged as important cultural exports for India that are beloved and valued globally. Indian dance styles' ascent on the international scene is examined in this essay, with particular attention paid to their historical foundations, changes within diaspora communities, and assimilation into international performance culture. From regional religious settings to worldwide recognition, it explores the development of Indian classical dance and takes into account the

Overview

With origins dating back thousands of years, Indian dance genres are among the oldest and most varied in the world. Dance is a complex form of artistic expression in India since it has historically been entwined with religion, philosophy, and social customs. Indian dance's cultural significance was elevated by its traditional use as a spiritual exercise, an offering to the gods, and a storytelling device for mythological tales. These forms changed with time, and during the 20th and 21st centuries, they experienced a metamorphosis that made them famous around the world.

Indian classical dance has become more well-known outside thanks to its emphasis on rhythm, storytelling, and complex body motions. But there have been challenges along the way as Indian dance has made its way to the international scene. But there have been obstacles and changes along the way as Indian dance has made its way to the global scene. Indian dance has gained recognition all over the world thanks to a mix of cultural diplomacy, influence from the global diaspora, and the emergence of fusion styles. Investigating the historical development of Indian dance traditions, their reception on the international scene, and their prospects in a more globalized world are the main goals of this essay.

Indian classical dance's development and historical background

India's religious and cultural heritage are closely linked to its dancing traditions. From religious ceremonies held in temples to stage shows, classical dance has taken many different shapes. These forms were established and handed down through the generations, frequently with the help of gurus, spiritual leaders, patrons.

The Origins in Cultural and Religious Traditions Indian dance has its roots in religious ceremonies, and the Natya Shastra of Bharata Muni, which dates from between 200 BCE and 200 CE, is one of the first works that forms the basis of Indian classical dance philosophy. The fundamentals of dance, theater, and music are outlined in the Natya Shastra, which underlines the value of physical expression (abhinaya), the spiritual significance of dance, and the format of performances.

Dance was a vital part of temple ceremonies in ancient India. Dances were done to invoke blessings, and dance offerings were used to honor the gods. Additionally, these dances served as narrators of Hindu mythological tales about the gods, aiding in the distribution and preservation of holy writings.

Indian Dance Forms' Renaissance in the Contemporary Era

Despite having a long history, Indian classical dance gained international acclaim in the 19th and 20th centuries thanks to its metamorphosis and resurgence. Indian dance had additional difficulties during the British colonial era since the British government frequently attempted to stifle

indigenous cultural traditions. But thanks to people and organizations dedicated to conserving India's cultural legacy, classical dancing witnessed a comeback in the years following independence.

Early in the 20th century, important individuals like Uday Shankar, Balasaraswati, and Rukmini Devi Arundale were instrumental in bringing classical dance back to life. These individuals brought Indian dance to the attention of the world while also modernizing the art forms to suit modern preferences. For example, in 1936, Rukmini Devi Arundale established the Kalakshetra Academy in Chennai, which later served as a hub for Bharatanatyam and a representation of the dance's globalization.

Principal Indian Classical Dance Styles and Their Internationalization

India is home to a wide range of traditional dance styles, each with its own unique history, style, and regional influences. Today, Bharatanatyam, Kathak, Kathakali, Odissi, Kuchipudi, Manipuri, and Mohiniyattam are the main classical dance forms that are acknowledged. Through the efforts of trailblazing dancers and cross-cultural interactions, several dance styles have made their way from their native regions to the global stage.

Bharatanatyam: An International Representative of Indian Dancing Originating in Tamil Nadu, Bharatanatyam is arguably the most popular and extensively practiced classical dance style outside of India. Originally performed by temple dancers known as devadasis, Bharatanatyam was a religious dance that was frequently regarded as sacred. Reformers such as Rukmini Devi Arundale worked to eliminate the stigma surrounding the art form, elevating it into a classical stage performance form.

Bharatanatyam has become popular in worldwide festivals and cultural organizations due to its expression of emotion, precise footwork, and rhythmic motions. Bharatanatyam has been made popular throughout the world by dancers like Mallika Sarabhai, Alarmel Valli, and Sonal Mansingh, who have performed at esteemed locations like the Royal Opera House in London and the Lincoln Center in New York.

Kathak: North India's Storytelling Dance

Originating in northern India, Kathak is a storytelling dance style that blends intricate footwork with expressive spins and gestures (chakkars). Its origins are in the ancient storytelling traditions of the Hindu epics, particularly the Ramayana and Mahabharata, which were narrated by dancers known as kathaks.

During the 16th century, Kathak was greatly impacted by Mughal culture, and its performances changed in North Indian royal courts. Through the efforts of performers like Birju Maharaj, who brought Kathak to audiences around the world by fusing classical forms with modern performances, the art form started to achieve international prominence in the 20th century. One of the most adaptable and well-known Indian dance styles, Kathak has been able to transcend its religious and cultural limitations through its international performances that combine it with ballet and modern dance.

The Grand Theatrical Performance, Kathakali

Kerala's traditional dance-drama, Kathakali, is renowned for its intricate storylines based on Hindu mythology, vibrant costumes, and expressive face expressions. Kathakali is a completely theatrical experience, in contrast to other classical dance styles. Kathakali is a theatrical experience that combines dance, drama, and music, making it an immersive art form.

Through partnerships with theater groups, Kathakali has been presented to Western audiences on a global scale, and its performances have been included in important international festivals. Gurus like as Guru Gopinath and his followers have played a significant role in introducing Kathakali to the global scene and highlighting the exquisiteness of this complex art form.

Regional Richness in a Globalized World:

Odissi, Kuchipudi, and Manipuri Odissi is a very elegant dance style that focuses on torso motions, complex hand gestures, and rhythmic footwork. It originated in Odisha. International

audiences have been captivated by Odissi's heavenly and poetic movements, and dancers such as Madhavi Mudgal and Sanjukta Panigrahi have contributed to the art form's increased reputation.

From its religious beginnings, Andhra Pradesh's Kuchipudi has developed into a complex dance style that blends graceful movement with dramatic narration. Important individuals like Vempati Chinna Satyam and Swapnasundari have dedicated their lives to promoting Kuchipudi on a global scale, guaranteeing its survival in the contemporary period.

The elegant, flowing motions of the Manipuri, a traditional dance from the northeastern state of Manipur, are well-known. It frequently features stories about Lord Krishna and devotional themes. Guru Bipin Singh and other well-known artists have played a significant role in bringing Manipuri dance to a global audience and facilitating its exposure.

The Indian Diaspora's Contribution to the Globalization of Indian Dance

Indian dance spread widely as a result of the movement of Indian populations around the world, particularly during and after the colonial era. The Indian diaspora played a crucial role in both conserving and modifying traditional dance styles for new cultural contexts, especially in nations like the US, UK, Canada, Australia, and South Africa.

Cultural Exchange and Diplomacy

An important component of India's cultural diplomacy for a long time has been Indian dance. Indian classical dance has been pushed by the Indian government as a soft power and cultural exchange tool through organizations like the Indian Council for Cultural Relations (ICCR). Indian dance has gained more recognition globally as a result of the growing number of Indian dancers competing in major competitions including the Olympics, the Venice Biennale, and the Edinburgh Festival.

Indian dance performances at festivals and cultural events around the world have promoted intercultural learning, elevated Indian customs, and given a forum for intercultural discussion.

Blending International Dance Styles

By fusing with new international dance styles, Indian dance has also changed in the modern day. In an effort to create hybrid art forms, Indian classical dancers have started working with jazz musicians, modern choreographers, and Western ballet dancers. These partnerships are a reflection of the merging of various dance traditions and the increasingly worldwide character of art. The work of Indian dancers like Shobana and Sandeep Soparkar, who have experimented with fusing Bharatanatyam with modern dance forms, and the partnership between Kathak performers and ballet companies are noteworthy examples.

Opportunities and Difficulties in a Global Setting

In the worldwide environment, Indian classical dance confronts many obstacles despite its growing popularity. Keeping classical forms intact while modifying them for new settings is one of the fundamental issues. Dance's cultural and spiritual significance can occasionally be diminished as a result of its commercialization, especially in the West.

Furthermore, the complex skills and spiritual meaning of Indian dance are sometimes oversimplified or misrepresented in outside media and performances. Nonetheless, the ongoing support of Indian dance associations and cultural representatives guarantees that these styles are not only maintained but also permitted to develop while honoring their historical foundations.

Conclusion

Indian classical dance has left a lasting impression on the world stage. Indian dance has grown to be an essential component of the global cultural landscape thanks to a combination of cultural diplomacy, the diaspora's efforts, and the blending of traditional and modern styles. As a living tribute to India's artistic and spiritual legacy, these dances never cease to enthrall and uplift audiences everywhere. Maintaining the integrity of tradition while interacting with the changing global creative ecosystem will be a constant challenge for dancers and practitioners. The stories, ideals, and ideologies of an old civilization are carried by Indian dance forms as they

continue to thrive on the global scene, giving them an effective means of fostering intercultural communication, understanding,, and appreciation in the contemporary world.

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Influence of Indian Entertainment Content on Global Cultural Perceptions

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Abstract:

This research examines the evolving influence of Indian entertainment content on global cultural perceptions, focusing on its transformative impact in shaping international audiences' understanding of Indian society and culture.

The study analyzes three key dimensions: Bollywood's role in crafting cultural narratives, the emergence of digital streaming platforms, and the growing accessibility of regional content. Through analysis of recent literature and case studies, the research demonstrates how Indian entertainment has transcended geographical boundaries to foster cross-cultural dialogue and challenge prevailing stereotypes. The paper highlights how streaming services have democratized access to diverse Indian content, enabling authentic representations of Indian culture to reach global audiences. Special attention is paid to Bollywood's dual role in both reflecting and shaping societal norms, particularly in its portrayal of nationalism, gender, and social issues. The findings suggest that Indian entertainment content serves as a powerful medium for cultural exchange, contributing to a more nuanced and comprehensive understanding of India's cultural identity in the global context. This study contributes to the broader discourse on cultural globalization and media influence, while offering insights into the future trajectory of Indian entertainment's global impact.

Key Words: Indian Entertainment Industry, Cultural Globalization, Digital Streaming Platforms

I. Introduction

The global landscape of entertainment has undergone a significant transformation in recent years, with Indian content emerging as a powerful force in shaping cultural perceptions worldwide. As Bollywood films, regional cinema, and an array of streaming platforms showcasing Indian narratives gain international audiences, they actively contribute to a broader understanding of Indian culture and society. This growing visibility not only challenges prevailing stereotypes but also highlights the country's diverse traditions, languages, and social dynamics. Furthermore, Indian entertainment content serves as a medium for cultural exchange, enabling viewers to explore the rich tapestry of India's customs and values. As a result, the influence of Indian entertainment transcends mere amusement, fostering cross-cultural dialogues and promoting a nuanced appreciation of India's unique identity on the global stage. It becomes imperative, therefore, to analyze the impact of this collective narrative on global cultural perceptions and their implications for international relations.

A. Overview of Indian entertainment content and its global reach

The landscape of Indian entertainment has undergone a significant transformation, leading to its increased global prominence. Originally dominated by regional content, the proliferation of digital platforms has facilitated the widespread dissemination of Bollywood films, regional cinema, and streaming series, transcending geographical barriers. This global reach has resulted in a burgeoning interest in Indian narratives and cultural themes, as evidenced by international collaborations and the adaptation of Indian storytelling techniques in foreign films and series. Furthermore, studies indicate that soap operas and similar formats have gained international traction, highlighting a shared human experience within diverse cultural contexts (Soukup et al., 2016). Such developments not only enhance the visibility of Indian content worldwide, but also challenge and reshape perceptions of Indian culture, allowing audiences to engage with and appreciate its nuances in unprecedented ways. This dynamic exchange fosters a richer understanding of cultural identities, reinforcing India's influence on global cultural narratives.

II. The Role of Bollywood in Shaping Cultural Narratives

Bollywood's contribution to cultural narratives extends far beyond mere entertainment; it significantly shapes perceptions of identity, gender, and social norms both within India and globally. Through films that blend traditional themes with contemporary issues, Bollywood crafts narratives that resonate with diverse audiences, fostering a global dialogue around culture and values. For instance, the adaptation of the masala formula by Tibetan filmmakers living in exile illustrates an innovative approach to cultural translation, where entertainment is tailored to reflect the aspirations of the Tibetan diaspora while maintaining an entertaining essence akin to Bollywood (Matta et al., 2018). Conversely, the portrayal of item songs highlights the complexities of gender representation and sexual politics, revealing how such sequences reinforce problematic societal norms while simultaneously serving as a lens for critique (Mathew et al., 2023). As Bollywood continues to evolve, it remains a pivotal platform for both celebration and reflection of societal issues, influencing perceptions across different cultures.

A. Bollywood's portrayal of Indian culture and its impact on international audiences

The portrayal of Indian culture in Bollywood films significantly shapes the perceptions of international audiences, impacting their understanding of India and its diverse societal dynamics. This is evident in how well-known films have altered perceptions of European destinations, as indicated by research showing that landscapes featured prominently in Bollywood can elevate these locations' appeal among Indian viewers (Dutta et al., 2014). The emphasis on themes such as nationalism and religious identities in contemporary Bollywood narratives, particularly during the tenure of Prime Minister Narendra Modi, further complicates global cultural perceptions. Films like Raazi, PM Narendra Modi, and Gully Boy highlight not only a sense of patriotic pride but also weave complex social narratives centered around class and cultural identity (Khan et al., 2020). Thus, through these cinematic interpretations, Bollywood plays a pivotal role in both reflecting and shaping international audiences' views of Indian culture and its multifaceted identity.

III. The Rise of Digital Platforms and Regional Content

The rapid rise of digital platforms has fundamentally transformed how regional content, such as Indian entertainment, is produced, consumed, and disseminated globally. These platforms, including streaming services and social media channels, have not only democratized access to diverse media but have also enabled local narratives to reach international audiences. As a result, Indian films, television shows, and digital series have gained significant traction beyond national borders, influencing cultural perceptions worldwide. The extensive reach of these platforms aids in promoting authentic representations of Indian culture, traditions, and values while simultaneously challenging stereotypes often perpetuated in mainstream media. Such exposure has important implications for global cultural discourse, fostering a greater understanding and appreciation of Indian socio-cultural dynamics. Moreover, media representation serves as a vital catalyst for promoting interconnectedness and mindfulness, further enhancing the global conversation surrounding sustainable development and cultural diversity (Dhiman et al., 2023), (Dhiman et al., 2023).

A. How streaming services have facilitated the global consumption of Indian regional films and series

The rise of streaming services has significantly transformed the global landscape for Indian regional films and series, enabling unprecedented access to diverse narratives and cultural expressions. By breaking geographical barriers, platforms like Netflix and Amazon Prime Video have allowed international audiences to engage with regional Indian content that would otherwise remain obscure. This phenomenon is crucial as it not only democratizes access to entertainment but also fosters cross-cultural dialogue and understanding. As pointed out in previous studies, the high quality of content produced for these platforms aligns with viewers' increasing demand for authenticity and diverse storytelling ((Brown et al., 2024)). Moreover, such exposure has altered perceptions about India, enhancing the global audience's understanding of its rich cultural tapestry

(('University of Pretoria - Department of Philosophy', 2022)). Consequently, streaming services serve as pivotal agents in expanding the global consumption of Indian regional films, shaping cultural perceptions while celebrating the country's varied cinematic landscape.

IV. Conclusion

In conclusion, the global reach of Indian entertainment content has significantly shaped cultural perceptions, transcending geographical and social barriers. As audiences increasingly engage with Bollywood films and television series, they encounter narratives that reflect both traditional Indian values and contemporary social issues, fostering a deeper understanding of Indian culture worldwide. This cultural exchange is evident in the adoption of themes such as servant-leadership, portrayed through characters like Mohan Bhargava in the film *Swades: We, the People* (Gowariker, 2004), which illustrates the transformative power of cinema in conveying universal values that resonate across cultures (Reynolds et al., 2013). Furthermore, the international fascination with Indian soap operas underscores the diversity and richness of global storytelling, amplifying interest in various cultural expressions and practices (Soukup et al., 2016). Ultimately, the influence of Indian entertainment not only enriches global cultural landscapes but also fosters a more inclusive dialogue among diverse audiences.

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Job Satisfaction Among College Librarians: A Gender Based analysis in Unaided Colleges Affiliated to Mumbai and Thane District

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Abstract:

The present study is to investigates the job satisfaction levels of college librarians working in unaided colleges affiliated to Mumbai University in the Mumbai and Thane districts. The study has been undertaken to measure the level of professional satisfaction of male and female librarians. The increasing recognition of librarians' vital role in the academic environment, gender-related factors in their job satisfaction have received limited attention. A gender-based analysis was conducted on a sample size of 105 librarians, comprising 50 women and 55 men. On five-point scale based on Likert's scale used by researcher for analysis. The study explores various dimensions of job satisfaction, such as work environment, pay scale, professional growth, and work-life balance, and employs both quantitative and qualitative methods for analysis. These findings can inform policies for improving job satisfaction, career progression, and gender equity in academic libraries.

Keyword: Job satisfaction, college librarians, gender-based analysis, unaided colleges, Mumbai University, gender equity, academic libraries, Mumbai and Thane district

1-Introduction

1.1 Background

Librarianship, often considered a vital component of the educational sector, is evolving rapidly in the modern academic environment. Libraries are no longer just repositories of books and journals but have become dynamic centers for learning, research, and knowledge management. College librarians play an essential role in the academic development of students, faculty, and researchers. However, their job satisfaction, which directly impacts their professional effectiveness, is influenced by various factors, including institutional policies, compensation, work-life balance, and gender dynamics.

In India, a substantial number of higher education institutions operate on a self-financed or unaided basis. These colleges often have distinct organizational structures and resource allocations, which may affect job satisfaction. Furthermore, gender differences in job satisfaction have been explored in several fields, but limited research exists on gender-based variations in job satisfaction among college librarians, especially in the context of unaided colleges in India.

1.2 Research Problem

While job satisfaction is a well-researched area, its gender-based dimensions, particularly among college librarians, have not been sufficiently examined. The primary objective of this study is to assess whether gender influences job satisfaction among college librarians working in unaided colleges affiliated with Mumbai University, particularly in the Mumbai and Thane districts. The study aims to fill this gap in the existing literature and offer insights into how gender affects the job satisfaction.

1.3 Objectives of the study

- To measure the overall job satisfaction levels among male and female librarians.
- To identify key factors affecting job satisfaction.
- To explore gender-based differences in job satisfaction.

2. Literature Review

2.1 Job Satisfaction in Academic Libraries

Job satisfaction is a multifaceted concept that encompasses various aspects of the workplace, including the work environment, job responsibilities, relationships with colleagues, and

opportunities for advancement (Herzberg, 1966). In the context of academic Libraries, librarian's job satisfaction is critical not only for their professional development but also for the efficiency and effectiveness of library services.

Research on librarian's job satisfaction has primarily focused on public and university libraries. Several studies have identified the following factors as key determinants of job satisfaction in academic libraries: work environment, professional development opportunities, compensation, and institutional support (Teng & Lim, 2009; Tovar, 2011). However, few studies have specifically explored gender-based differences in job satisfaction among librarians, particularly in the context of Indian unaided colleges.

2.2 Gender and Job Satisfaction

Gender is an important variable in understanding job satisfaction across various professions. In the academic setting, female librarians often face challenges such as underrepresentation in leadership roles and limited career progression opportunities (McNicol, 2012).

Studies in the global context have found that female librarians may experience higher levels of stress and job dissatisfaction compared to their male counterparts due to these factors (MacDonald, 2003). However, in India, gender-related differences in job satisfaction among college librarians have not been extensively studied, especially in unaided colleges, which often face unique challenges such as limited funding, high workloads, and fewer institutional support systems.

2.3 Job Satisfaction in Indian Unaided Colleges

Unaided colleges in India are generally more resource-constrained compared to government-funded institutions. Librarians working in these colleges often face greater workloads, limited professional development opportunities, and less institutional support. These conditions potentially exacerbate job dissatisfaction, particularly for female librarians, who may also contend with additional societal and professional barriers.

In their study of job satisfaction among academic librarians in India, Srivastava and Kaur(2015) identified that work pressure, lack of promotion opportunities, and inadequate remuneration were the major sources of dissatisfaction. Gender-specific challenges, such as unequal treatment and work-life imbalance, were also reported as significant factors influencing job satisfaction, though gender was not the primary focus of the study.

3. Methodology

3.1 Research Design

This study uses a mixed-methods approach, combining quantitative surveys and qualitative interviews to assess the job satisfaction of librarians. The quantitative survey provides broad insights into the general satisfaction levels of librarians, while the qualitative interviews offer deeper insights into gender-based challenges and experiences.

3.2 Sampling

The sample comprises librarians working in unaided colleges affiliated with Mumbai University, located in the Mumbai and Thane districts. A total 200 libraries were randomly selected from a list of the unaided colleges. Data received from 105 librarians.

4. Data Analysis

Table-1: Gender wise Distribution of Librarian

Gender	No. of Respondent	Percentage
Male	55	52.38
Female	50	47.61
Total	105	100

A total of 55 (52.38%) of the respondents were male while 50 (47.61%) were female. The gender distribution was nearly equal, providing a balanced perspective for analysis.

Table-2: Age wise distribution of Librarians

Age wise distribution (Years)	Frequency	Percentage

Under 25	10	9.52
25-35	35	33.33
36-45	30	28.57
46-55	25	23.80
Above 55	5	4.76

Above table shows that most participants fell within the 25-45 age range, reflecting the active working demographic in the study area.

Table-3 Job satisfaction level across different dimensions

Dimension	Male (n=55)	Female (n=50)
Work Environment	40 (72.7%)	45 (90%)
Pay Scale	35 (63.6%)	30 (60%)
Professional Growth	40(80%)	37(67.3%)
Work Life Balance	45 (90%)	38(69.1%)

Table-3 show that female librarian demonstrated a higher satisfaction rate (90%) compare to male (72.7%) about work environment. Satisfaction with pay scale showed a lower percentage for both genders. Compare to male, females are (60%) slightly less satisfied. At professional growth female (67.3%) exhibited higher satisfaction compared to male (80%). When it comes to work life balance female librarian showed notably less satisfied (69.1%) compared to male (45%)

5. Conclusion & Recommendations:

5.1 Finding

- Significant gender differences exist in job satisfaction levels.
- Pay scale and work-life balance emerged as critical factors for female librarians, while professional growth was a priority for males.

5.2 Recommendations

1. **Work-life Balance**: implement flexible working hours and support systems to help librarians, especially women, balance professional and personal responsibilities.

2. **Institutional Support**: Provide better recognition of librarian's work and contributions through rewards, promotions, and institutional support.

3. **Gender Sensitization**: Conduct gender sensitization workshops for college management to raise awareness of gender-related challenges and promote equity in the workplace.

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Laughing Matter? Exploring the Role of Humor in Team Creativity and Performance

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Abstract

The aim of the study is to examine if humor has an impact on employee creativity, and team performance. The data was collected through 87 participants from various sectors from the Indian Sub-Continent. The data was collected through an online questionnaire consisting of The Richmond Humor Assessment Instrument (RHAI), The Short Scale of Creative Self (SSCS) and The Team Performance Scale, which was filled by the participants who were recruited through convenience sampling. This study fills the gap in literature by investigating how humor affects creativity of employees and team performance in the organizational settings in India. The data was analyzed using SPSS Software and the descriptive statistics and regression analysis are discussed later in this literature. The findings of the study reveal that humor is not a significant variable to predict employee creativity ($p = .237$) as well as team performance ($p = .245$) in an organizational setting.

Key Words: Humor, Creativity, Team Performance, Regression Analysis, Organizational Psychology.

Exploring the Role of Humor in Team Creativity and Performance

Humor plays a vital role in human communication, influencing emotions, relationships, and group cohesion. At its core, humor is a social and cognitive phenomenon that allows individuals to navigate stressful situations, reduce tension, and foster a positive emotional environment. In the workplace, the role of humor becomes even more significant as it shapes team dynamics, leader-employee relationships, and problem-solving processes. Early research by Freud (1928) linked humor to creativity, suggesting that humor enables the unconscious mind to explore unconventional ideas that inspire innovation. Over the years, scholars have continued to investigate humor's impact on workplace outcomes, particularly its ability to influence employee creativity and team performance.

Humor can act as a catalyst for creative thinking by breaking cognitive patterns, promoting free association, and fostering a more open exchange of ideas. Positive humor, such as affiliative humor, builds trust among team members and enhances collaboration, while self-enhancing humor allows individuals to approach challenges with optimism and resilience (Martin et al., 2003). Research by Robert and Willbanks (2012) further supports this claim, highlighting humor's capacity to facilitate brainstorming and divergent thinking. However, humor's effectiveness is context-dependent, with cultural norms, team structure, and leadership style playing pivotal roles. Negative humor, including aggressive or sarcastic humor, may undermine psychological safety, hinder communication, and reduce team performance.

Despite a growing body of literature on the subject, empirical findings on humor's impact remain inconsistent. While some studies affirm humor's positive role in enhancing creativity and performance, others highlight its limitations in high-pressure environments where cognitive overload may occur (Sweller, 1988). This study aims to address these gaps by exploring the relationship between humor, employee creativity, and team performance in the Indian workplace context. The focus is to determine whether humor facilitates idea generation and strengthens team dynamics or whether its influence is limited by organizational and cultural factors.

Methodology

Participants

The study involved 87 participants from multiple industries, including HR (41.4%), IT/Tech (16.1%), and Finance (8%). The sample comprised 51.7% females, 46% males, and 2.3% non-

binary individuals, providing a balanced gender distribution. Participants represented a diverse range of roles, ensuring that the findings reflected various workplace environments.

Measures

Three validated scales were used to assess humor, creativity, and team performance:

Richmond Humor Assessment Instrument (RHAI): A 16-item measure that evaluates humor use in workplace settings ($\alpha = 0.89$).

Short Scale of Creative Self (SSCS): An 11-item scale measuring creative self-efficacy and the confidence to generate innovative ideas ($\alpha = 0.84$).

Team Performance Scale: An 18-item instrument assessing team dynamics, collaboration, and productivity on a Likert scale (1–7).

Procedure

Data were collected through an online survey administered to participants across various organizations. Participants provided responses to the three scales and demographic questions. SPSS software was used for statistical analysis, including descriptive statistics and regression analysis to examine the relationship between humor, creativity, and team performance.

Results

The results of the regression analysis revealed no statistically significant relationship between humor, employee creativity, and team performance:

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Humor Scale[b]	.	Enter

a. Dependent Variable: Creativity Scale

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.128[a]	.016	.005	6.733

a. Predictors: (Constant), Humor Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.416	1	64.416	1.421	.237[b]
	Residual	3853.193	85	45.332		
	Total	3917.609	86			

a. Dependent Variable: Creativity Scale

b. Predictors: (Constant), Humor Scale

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	38.957	5.569		6.995	<.001
	Humor Scale	.116	.097	.128	1.192	.237

a. Dependent Variable: Creativity Scale

Humor and Creativity: $R = 0.128$, $R^2 = 0.016$, $F = 1.421$, $p = 0.237$

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Humor Scale[b]	.	Enter

a. Dependent Variable: Team Performance

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.126[a]	.016	.004	16.872

a. Predictors: (Constant), Humor Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	389.873	1	389.873	1.370	.245[b]
	Residual	24195.943	85	284.658		
	Total	24585.816	86			

a. Dependent Variable: Team Performance

b. Predictors: (Constant), Humor Scale

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	63.758	13.956		4.568	<.001
	Humor Scale	.285	.244	.126	1.170	.245

a. Dependent Variable: Team Performance

Humor and Team Performance: $R = 0.126$, $R^2 = 0.016$, $F = 1.370$, $p = 0.245$

Discussion

The findings of this study challenge the assumption that humor universally enhances employee creativity and team performance. While previous research has emphasized humor's role in fostering innovation and collaboration (Robert & Willbanks, 2012; Martin et al., 2003), this study found no significant relationship between humor use and workplace outcomes. Several factors may explain these results.

First, the type and style of humor used in workplace settings likely influence its effectiveness. Affiliative humor, which promotes positive interactions and team cohesion, may have a different impact than aggressive humor, which can create discomfort and inhibit creativity. In culturally diverse workplaces, humor may be misinterpreted or perceived as inappropriate, reducing its ability to foster trust and collaboration. For example, Indian workplaces often emphasize hierarchical structures and formal communication styles, which may limit humor's acceptance and effectiveness in team interactions.

Second, cognitive load theory provides a plausible explanation for the findings. According to Sweller (1988), humor can overwhelm cognitive resources in high-pressure environments, diverting attention from task-related goals. Employees working under tight deadlines or performance expectations may view humor as a distraction rather than a tool for creative thinking. In such cases, humor may fail to enhance problem-solving or team performance.

Third, workplace culture and psychological safety play a critical role in determining humor's impact. Psychological safety, defined as the belief that individuals can express ideas without fear of judgment or negative consequences is essential for humor to facilitate creativity and risk-taking. If

employees perceive humor as risky or inappropriate, it may fail to produce the positive outcomes observed in previous studies.

Implications And Limitations

The findings have important implications for workplace leaders and managers. While humor can enhance team dynamics in certain contexts, its effectiveness depends on humor style, cultural norms, and organizational culture. Leaders should focus on fostering psychological safety and using positive humor styles that promote inclusivity and collaboration. Training programs that emphasize humor's constructive use may help teams balance creativity with performance goals.

This study's limitations must also be acknowledged. The relatively small sample size (87 participants) limits the generalizability of the findings. Additionally, self-reported measures may introduce bias, as participants may provide socially desirable responses. Future research should employ larger, more diverse samples and longitudinal designs to assess humor's long-term effects on creativity and performance. Exploring mediating factors such as psychological safety and cultural dynamics could provide a more comprehensive understanding of humor's role in workplace outcomes.

Conclusion

This study examined the relationship between humor, employee creativity, and team performance in Indian workplaces. Contrary to previous research, no significant relationship was found, suggesting that humor's impact is context dependent. Factors such as humor style, workplace culture, and psychological safety likely influence humor's effectiveness. Leaders and organizations should consider these factors when promoting humor as a tool for fostering creativity and team cohesion. Future research should explore these dynamics further to identify the conditions under which humor enhances organizational outcomes.

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Mental Health Inequalities: A Sociological Perspective on Caste, Class and Gender

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Abstract

Systemic social inequalities deeply influence mental health outcomes and access to care. The study aims to understand how caste, class, and gender affect one's accessibility to mental health resources in India. Using the framework of intersectionality and sociological theories of inequality, this review examines how caste-based discrimination, economic deprivation, and gendered expectations contribute to mental health challenges and hinder access to resources. The findings highlight the structural barriers marginalised groups face and emphasise the need for equitable and inclusive mental health care systems. The review concludes with recommendations for policies and interventions aimed at reducing these disparities.

Keywords*:* Caste, Gender, Socioeconomic Class, Mental Health Disparities, Accessibility

Introduction

Mental health is an essential component of overall well-being, influencing every aspect of an individual's life, from personal relationships to social and economic participation. However, the distribution of mental health outcomes and access to care is far from equal. Around the world, mental health disparities are shaped by systemic inequalities rooted in social hierarchies. These inequalities are particularly evident when analyzing the intersecting roles of caste, class, and gender in shaping mental health outcomes and accessibility.

Caste is a rigid social stratification system. It remains a defining feature in countries like India. These are where historical oppression and marginalization of certain caste groups have created deeply entrenched disparities. Economic deprivation further heightens these inequities. This is because poverty is closely linked to chronic stress, poor living conditions, and limited access to healthcare services.

Gendered expectations and societal norms place additional burdens on individuals. This is particularly true of women and non-binary individuals, further increasing their mental health challenges.

Sociological perspectives, like intersectionality and structural inequality, help us understand how different factors combine to create greater disadvantages for marginalized groups (Collins et al., 2021). For instance, a Dalit woman from a low-income background experiences a unique set of challenges that cannot be understood by isolating caste, class, or gender alone.

This paper seeks to explore how caste-based discrimination, economic inequality, and gender roles shape mental health outcomes and restrict access to care. By reviewing existing literature through a sociological lens, this study sheds light on the structural barriers that perpetuate mental health disparities and suggests pathways for more inclusive mental health policies and practices.

The review is guided by the following questions:

1.How does caste-based discrimination impact mental health outcomes?

2.What is the relationship between socioeconomic status and access to mental health care?

3.How do gender roles and expectations influence mental health challenges?

Method

This review used a systematic approach to identify, analyze, and synthesize existing literature. The search was conducted in databases such as PubMed, JSTOR, and Google Scholar. Keywords used included "caste and mental health," "economic inequality and mental health," and "gender disparities in mental health."

Peer-reviewed journal articles, books, and reports published between 2000 and 2023 were included. Studies were selected based on their relevance to the research questions and their focus on systemic and structural issues.

The inclusion criteria emphasized studies that explored the intersections of caste, class, and gender with mental health outcomes or access to care. Quantitative studies that provided statistical evidence and qualitative studies offering in-depth insights into lived experiences were prioritized.

Results and Discussion

Table 1: Summary of the Studies Reviewed:

Study	**Focus**	**Main Outcomes**
Prizeman et al. (2023)	Caste-based discrimination and mental health	Caste-based discrimination leads to higher rates of depression and anxiety, particularly among young Dalit students who face exclusion.
Ramachandran (2023)	Caste-based discrimination and mental health	Caste-based violence and microaggressions increase stress and trauma, contributing to a constant sense of insecurity and psychological burden.
Thapa et al. (2021)	Caste-based discrimination and mental health	Dalit patients experience dismissive attitudes and lower standards of care in healthcare settings, reducing trust in and access to mental health services.
Lund et al. (2011)	Economic status and mental health	Low-income individuals experience a cycle where poor mental health exacerbates financial instability, increasing stress and reducing productivity.
Knapp et al. (2006)	Barriers to effective mental health practice and policy	Identified six barriers to mental health practice: lack of information, resource inadequacy, inequitable distribution, and others. Proposes strategies for improvement.
Mezzina et al. (2022)	Social and economic inequalities and mental	The COVID-19 pandemic exacerbated existing

	health during COVID-19	disparities in mental health, particularly for marginalized populations facing structural violence.
Seedat and Rondon (2021)	Gender, unpaid domestic work, and mental health	Women carry a disproportionate burden of unpaid domestic work, leading to stress, fatigue, and higher rates of depression and anxiety.
Smith et al. (2018)	Mental health challenges among transgender and non-binary individuals	Discrimination and restricted healthcare access lead to high rates of suicidality and mental health issues among transgender and non-binary individuals. Protective factors like affirming environments reduce suicidality.

3.1 Caste and Mental Health

Caste-based discrimination profoundly affects mental health, particularly for individuals from lower castes, such as Dalits, This is because they face systemic oppression in education, employment, and societal interactions. Studies like Prizeman et al. (2023) highlight that the psychological toll of being excluded and stigmatized contributes to higher rates of depression and anxiety. For instance, young Dalit students who face discrimination in academic institutions often develop feelings of inferiority, isolation, and hopelessness.

Ramachandran (2023) noted that caste-based violence and microaggressions increase stress and trauma among marginalized groups. This in turn creates a sense of constant insecurity. Furthermore, healthcare systems often mirror societal prejudices. This leads to mistrust and underutilization of mental health services by lower-caste individuals (Thapa et al., 2021). For example, the study by Thapa et al (2021) shows that Dalit patients frequently report dismissive attitudes or lower standards of care when seeking treatment. This dual burden of caste discrimination—both in everyday life and in accessing mental health services—creates entrenched barriers to well-being.

3.2 Class and Mental Health

Economic status is a major determinant of mental health outcomes. Poverty, unemployment, and financial instability increase chronic stress levels and diminish individuals' ability to seek timely help. Lund et al. (2011) documented that individuals in low-income households experience a cycle where poor mental health reduces productivity and worsens financial conditions. They found that workers in precarious jobs report heightened levels of anxiety due to job insecurity and the inability to meet basic needs.

Knapp et al. (2006) identify six critical barriers that impede effective mental health practice and policymaking. These were lack of information, insufficiency of resources, inequitable resource distribution, resource inappropriateness, inflexibility in resource use, and poor resource timing. Addressing these challenges is essential for improving mental health systems. The authors propose several strategies, including expanding the evidence base, increasing mental health literacy, reducing stigma, and enhancing financing mechanisms for mental health care. Moreover, economically

disadvantaged individuals living in urban slums frequently lack awareness about mental health resources. Mezzina et al. (2022) highlight that the COVID-19 pandemic serves as a syndemic, wherein its impact is compounded by existing social and economic inequalities. These disparities—rooted in factors such as poverty, precarious housing, unstable employment, caste, gender, and race-based discrimination—increase mental health issues, particularly among already marginalized and vulnerable populations. The authors argue that systemic inequities, stigma, and human rights violations amplify mental health inequalities, especially for groups facing structural violence.

3.3 Gender and Mental Health

Gender is another critical dimension influencing mental health. Women, in particular, face unique challenges due to traditional gender norms and expectations. Seedat and Rondon (2021) explore the disproportionate burden of unpaid domestic and care work on women globally, emphasizing its profound impact on their mental health and overall well-being. Women carry out three-quarters of the world's unpaid work, dedicating 11 billion hours daily to activities such as childcare and household management. Women in low- and middle-income countries (LMICs) devote significantly more time to unpaid work than their counterparts in high-income countries, though income-related disparities also exist within countries.

Unpaid domestic and care work is largely invisible in economic frameworks and undervalued, often rooted in patriarchal norms. This burden has intensified during the COVID-19 pandemic, with women experiencing greater increases in unpaid workloads compared to men, exacerbating the risk of mental illness and stress-related disorders.

The nature of unpaid work also influences its psychological impact. The drudgery of repetitive, physically demanding tasks (common among women in poorer households) can lead to fatigue and stress, while the relational aspects, such as spending quality time with children, may offer stress relief. Stress from unpaid work triggers neurohormonal responses, including elevated cortisol levels, which may contribute to depression and anxiety. Evidence also points to a "double burden" of paid and unpaid work, where women are disproportionately affected by household stress and are more likely to experience depression compared to men.

This review shows the cumulative effect of unpaid work hours on mental health, with inequities in housework division correlating with greater depression symptoms in women. For instance, longitudinal research from Sweden revealed that women's longer total work hours (including unpaid work) were associated with persistent depression trajectories, emphasizing the need to reduce women's unpaid work hours to improve mental health outcomes.

Additionally, transgender and non-binary individuals face disproportionate rates of mental health challenges. Smith et al. (2018) conducted a qualitative study to explore the determinants of mental health, well-being, and suicidality among 30 transgender adults in Montana, a rural U.S. state. Using a Community-Based Participatory Research (CBPR) approach and an ecological framework, the study examined the factors influencing transgender individuals' experiences across individual, interpersonal, community, and societal levels. Participants included trans women, trans men, non-binary, and Two-Spirit individuals.

The findings revealed that participants faced widespread discrimination at all levels, contributing to significant mental health challenges. Discrimination restricted access to both general and transgender-specific healthcare services, negatively impacting participants' overall well-being. This compounded their vulnerability, as many reported high rates of past suicidal ideation and attempts. However, participants noted that certain protective factors, such as the ability to transition and access affirming environments, were instrumental in reducing suicidality and improving mental and physical health.

Implications and Limitations

The findings from the studies highlight several important implications for mental health interventions. First, there is a clear need for specialized mental health programs that address the unique psychological impacts of caste-based discrimination, particularly for marginalized groups

like Dalits. Interventions should focus on helping individuals cope with feelings of inferiority, isolation, and trauma, and healthcare systems must work to create environments where these individuals feel safe and supported.

Furthermore, mental health policies should take into account the significant role of economic status in shaping mental health outcomes. As poverty and financial instability exacerbate mental health issues, integrating financial support with mental health care could help reduce the stressors tied to economic insecurity. The burden of unpaid domestic labor on women also requires attention.

Policies aimed at redistributing domestic work and promoting gender equality in household responsibilities can help mitigate the mental health challenges women face, particularly in low- and middle-income countries. Mental health services should be tailored to address the stress stemming from these gendered expectations. Similarly, transgender and non-binary individuals face unique mental health challenges due to discrimination and lack of access to gender-affirming care. Specialized mental health services that focus on creating supportive and affirming environments are critical for reducing suicidality and improving overall well-being in these populations.

The findings also suggest the need for an integrated approach to mental health that addresses social inequities such as caste, class, and gender. By tackling the systemic issues of poverty, discrimination, and resource access, mental health interventions can be more holistic and effective.

However, the studies also have limitations. Many of the findings are based on specific populations or regions, limiting the generalizability of the results. For instance, studies focusing on Dalit students or transgender individuals in particular locales may not fully capture the experiences of other marginalized groups.

Moreover, the psychological impacts of discrimination are often assessed through self-reports, which can be influenced by biases, and may not fully reflect the complexity of mental health issues, especially in communities where stigma around mental illness is prevalent. Longitudinal studies are also lacking, limiting our understanding of how the psychological toll of discrimination evolves over time.

Additionally, while some studies address intersectionality, many do not fully explore how caste, class, and gender discrimination interact, missing an opportunity to deepen our understanding of compounded mental health effects.

Finally, while the studies highlight individual psychological impacts, there is a limited focus on structural solutions that could address the root causes of social inequities. More research on policy-level changes and community interventions is needed to create lasting, systemic change for marginalized populations.

Conclusion

In summary, while the studies provide critical insights into the social determinants of mental health, addressing these issues will require an integrated approach that includes both individual support and broader societal change.

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Misogyny in Professional Spheres

Mikhail Zubin Mistry

Abstract

A prevailing part of most professional systems established in office spaces and ingrained in the attitudes of people working have been that of negative attitudes towards female working professionals. Be it in the form of a lack of understanding towards the difficulties being faced by women or a tendency to question a woman's competence when they're just as if not more qualified and well trained as their male colleagues. This research purports to examine and analyze the effect of Misogyny in the Workplace on Job Performance and to find connections between the two variables.

What this research purports to identify is the unmediated effects of misogynistic behaviors by examining gender based discrimination which may be blatant or inconspicuous; and bias affects employee productivity, motivation, and holistic job satisfaction. The research included 125 working professional females as participants. The working women had diverse professional backgrounds and held a variety of positions in the hierarchy of the organizations they work for including executives, managers, team leaders, and employees. The participants' age range included young adults aged 18 to middle aged women, with the majority falling in the age group of 26-35 years old, making up almost half of the total participants.

This study uses responses gathered from an online questionnaire that was constructed using two scales, one for the participant to rank gender discrimination and the second for job performance to be ranked. In order to find important patterns and mechanisms that male superiors and coworkers use to undermine the performance of their female counterparts. Things such as not assigning tasks to women that compliment their skills, condescending behaviour, limited growth and job development etc. The results gathered can help us derive actionable insights which can help suggest ways to make workplaces more supportive and egalitarian. The study found a considerable relationship between Gender Discrimination and Job Performance in a negative direction derived by an R^2 value of 0.333 and a p value less than 0.01, which indicates that about 33.3% of the variability in job performance is due to discrimination against women, helping us grasp the extent to which discrimination influences job performance. In depth analysis of the data has been discussed further ahead in the paper, discussing what conclusions can be drawn and how we can apply them practically.

Introduction

Negative attitudes toward women in the workplace, though often subtle, create significant barriers to female employees' motivation and career growth. Research highlights key issues: Latent Sexism: A study by Mason and King (2019) found that while female professionals received less criticism, they were also excluded from challenging assignments, signaling condescension rather than support. Lower Expectations: Biernat et al. (2011) revealed that women received more positive feedback but were held to lower standards, with fewer being considered for leadership roles (6% women vs. 15% men). Hostile Environments: Abrams (1991) described professional settings as hostile for women due to systemic sexism and gender bias. Gender Disparity: Research also shows significant gaps in salaries (Peterson & Morgan, 1995) and underrepresentation of women in leadership roles (Eagly & Carli, 2007). These attitudes hinder women's opportunities, productivity, and career advancement despite their qualifications and capabilities.

Despite so much research and evidence being present in the west, there is a lack of proper research about this topic in the Urban Indian context. In most Indian Metropolitan Workplaces there is an attempt to make a gender neutral/ empowering environment for women while these innate kinds of sexism go unnoticed and there are no proper or accessible research findings to bridge the gap between negative attitudes towards women and a dip in their workplace motivation. To bridge this gap, this study seeks to identify women's opinions about the nature of their workplace and how

lesser opportunities and more obstacles or even condescending attitudes of their male superiors affects their will to exert their full potential at the workplace.

Methodology

This research utilized snowball sampling to gather a sample of 125 working women from diverse professional backgrounds and organizational roles (57% employees, 15% managers, 14% team leaders, 12% supervisors). Participants ranged in age: 44% (26-35 years), 26% (18-25 years), 21% (36-45 years), 7% (46-55 years), and 0.8% above 55. Two reliable quantitative scales were used: Workplace Gender Discrimination Scale (Hye-Kim et al., 2019) measured sexism across six areas (hiring, promotions, pay, etc.) on a 4-point Likert scale. Scores ranged from 0 (no discrimination) to 18 (high discrimination), and the Job Performance Scale (Goodman & Svyantek, 1999) assessed task and contextual performance. The research was conducted via an online questionnaire (Google Forms), ensuring anonymity by collecting initials, age, and occupational details without personal identifiers. Ethical guidelines were followed, including informed consent, confidentiality, and no harm or deception to participants.

Data Analysis

The statistical data collected through the questionnaire that was circulated as part of conducting the research was analysed through the SPSS software. In order to calculate the important values (f value, t value, r and r^2) of the totalled scores derived from the participants. ANOVA and Regression was also performed using SPSS.

Results

The Female Discrimination was found to be a significant predictor of Job Productivity with a p value less than 0.01. Table 1, puts the Descriptive Statistics of the analysed data between Female Discrimination and Job Productivity on display that were gathered from an (N) of 125 participants. The Mean Score was 46.0320 and Standard Deviation was 15.81544.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10339.120	1	10339.120	61.504	<.001[b]
	Residual	20676.752	123	168.104		
	Total	31015.872	124			

a. Dependent Variable: Job Productivity

b. Predictors: (Constant), Female Discrimination

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	65.715	2.765		23.769	<.001
	Female Discrimination	-1.967	.251	-.577	-7.842	<.001

a. Dependent Variable: Job Productivity

[DataSet1]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Female Discrimination	125	6.00	24.00	10.0080	4.64289
Job Productivity	125	16.00	64.00	46.0320	15.81544
Valid N (listwise)	125				

The data presented by Table 2 are deduced from an Analysis of Variance(ANOVA) and are from a direct regression analysis where the dependent variable is job productivity, and the independent variable is female discrimination. The regression model confirms that female discrimination significantly reduces job productivity: Sum of Squares (Regression): 10,339.12 (explained variation). Sum of Squares (Residual): 20,676.75 (unexplained variation). F-Value: 61.504, P-Value: <0.001 (statistically significant). Key coefficients: Constant (B): 65.715 (baseline job productivity when discrimination = 0).Discrimination (B): -1.967 (higher discrimination leads to lower productivity) Standard Error: 0.251 Beta: -0.577 (strong negative effect) T-Value: -7.842, P-Value: <0.001. The model is statistically significant ($p < 0.001$), demonstrating a strong negative relationship between discrimination and job productivity, supporting the hypothesis.

The regression analysis confirms that workplace misogyny significantly impacts job performance. Key findings include: R Value (0.577): Indicates a moderate to strong negative correlation between discrimination and job performance. R^2 (0.333): 33.3% of the variation in job performance is explained by discrimination, with other factors contributing to the remaining 66.7%. Standard Error (12.96548): Average deviation of observed values from predicted values. F Value (61.504): Highlights significant variance between groups. P Value (<0.01): Confirms statistical significance. T Value (-7.842): Demonstrates a strong negative effect, linking higher discrimination to lower job performance. Overall, the analysis provides strong evidence that workplace discrimination significantly reduces job performance, though it does not establish direct causation.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Female Discrimination[b]	.	Enter

a. Dependent Variable: Job Productivity

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.577[a]	.333	.328	12.96548

a. Predictors: (Constant), Female Discrimination

Discussion

The study confirms that misogynistic attitudes in workplaces reduce women's job performance and motivation, aligning with existing research. Rubin et al. (2019) found that workplace sexism impacts mental health and job satisfaction, emphasizing the role of belonging. Rahmani (2020) highlighted workplace discrimination through qualitative data, identifying barriers like unequal pay and career limitations. Srivastava & Jha (2024) explored internalized sexism's effect on Indian women's career choices, showing its deep cultural roots. Social Role Theory (Mead, 1934) explains gender-based discrimination through historical role divisions that perpetuate stereotypes. Ambivalent Sexism Theory (Glick & Fiske, 1996) further distinguishes hostile and benevolent sexism, both contributing to workplace inequality. Given limited research on subtle sexism in urban Indian workplaces, this study underscores the need for further exploration to address hidden biases that impact women's motivation and performance.

Practical Applications and Limitations

The study highlights that while the F value confirms the existence of a significant effect, it does not measure its magnitude. Results indicate a strong negative correlation between workplace misogyny and job performance (t = -7.842, significant P value), emphasizing the need for organizations to address discrimination through anti-bias policies, training, and support systems. Effective measures like zero-tolerance policies, equal pay programs, awareness training, and secure reporting mechanisms can improve job performance and workplace equity.

Future research should include larger, more diverse samples, control additional variables (e.g., job roles, organizational culture), and use longitudinal or experimental designs to establish causality. Despite limitations, the study provides actionable insights for fostering fairer and more productive workplaces.

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Effects of People Pleasing on Job Satisfaction in the Workplace between Men and Women

Muskan Vinod Thakur

Abstract:

This research examines the disparities in professional background among males and females by studying the responses of 105 individuals across various sectors. Surveys were carried out to evaluate how people pleasing habits affect job satisfaction. The study involved individuals between 18 and 45 years old, consisting of 50 females, 50 males, 2 non-binary individuals, and 3 transgender individuals. Based on earlier studies, women report lower job satisfaction and are more inclined than men to participate in behavior aimed at pleasing others. While men may be less likely to openly discuss gender inequality, they do acknowledge its persistence, especially in leadership roles. Despite growing awareness of gender biases, significant barriers remain to eliminating implicit biases and ensuring gender equity within organizations. The study underscores the need for strong workplace policies and cultural shifts to address these inequalities. However, the study has limitations. A smaller sample size and reliance on self-reported data could introduce bias. Future research should employ a wider range of methodologies and include a more diverse participant pool to gain a deeper understanding of the complexities of gender-related workplace issues.

Keywords*:* People Pleasing, Job Satisfaction, Gender Differences, T-Test, Industrial Psychology.

Introduction:

In the workplace, a "people-pleaser" is someone who prioritizes others' needs over their own, driven by a desire for acceptance, fear of conflict, or need for attention. This constant seeking of approval can lead to stress, burnout, and decreased job satisfaction. People-pleasers often struggle to set boundaries and manage their workload effectively, as they tend to prioritize others' demands over their own needs.

People-pleasing behaviors differ between men and women due to societal norms. Women, often socialized to be nurturing, are more prone to people-pleasing, leading to stress, burnout, and hindered professional growth. Men, raised to be independent, may use people-pleasing to gain status or avoid conflict, but may struggle with overcommitment and balancing work-life demands. Social norms may also make it harder for men to address these behaviors.

Several studies on this topic support the underlying issue of people pleasing leading to lower levels of job satisfaction. If not given supervisory support, people-pleasing behaviors can result in lower job satisfaction (Spector, 2022). According to (Dodanwala et al, 2022), people-pleasing behaviors affect job stress and job satisfaction differently for men and women.

The current study aims to explore the factors contributing to lower job satisfaction linked to people-pleasing behaviors, focusing on gender differences. Specifically, it seeks to understand why female employees experience poorer job satisfaction compared to their male counterparts. Given the limited research on this topic, especially in India, the study aims to highlight relevant variables and their impact on female employee satisfaction.

Methodology:

Participants

A total of 105 individuals participated in this study, with 100 participants split equally between cisgender males and females, ensuring a balanced gender distribution. The sample also included 3 transgender and 2 gender non-binary individuals. The age range of participants varied, with the majority (95.2%) in the 26-35 age group, 1.9% in the 36-45 age group, and 2.9% in the 18-25 age group. This diverse demographic allowed for the collection of a wide range of viewpoints while maintaining gender balance. Two different tools were used to measure various aspects of interest in the study.

Measures and Assessments

The People Pleasing Scale (Lou Priolo, 2007) was used to assess people-pleasing tendencies. This 20-item tool showed satisfactory reliability and validity. The Job Satisfaction Scale (Brayfield et al, 1951) was used to measure job satisfaction. This scale also showed satisfactory validity, with a reliability of 0.77 (corrected to 0.87 by the Spearman-Brown formula). By using both scales, the researchers were able to better understand how people-pleasing behaviors affect job satisfaction differently in men and women.

Procedure

The survey, designed and distributed via Google Forms, incorporated the People Pleasing Scale and Job Satisfaction Scale with clear instructions. Participants were recruited through email, social media, and professional networks, ensuring voluntary and anonymous participation. An informed consent form outlined the study's purpose, confidentiality measures, and withdrawal rights. Responses, automatically stored in a secure Google Sheets file, were collected over three weeks, with follow-up messages sent to boost engagement. Data access was restricted to the research team, ensuring confidentiality. Convenience sampling was employed to gather responses.

Ethical Considerations

Ethical considerations were prioritized throughout this project. Participants received detailed information about the study's purpose, procedures, benefits, and risks. Consent was voluntary, with the option to withdraw at any time without consequences. Confidentiality was maintained by de-identifying data and avoiding the collection of personal information such as names or email addresses. Data security was ensured through restricted access. Participation was voluntary, and measures were in place to prevent physical, psychological, or emotional harm. No data manipulation occurred, safeguarding the study's integrity and participant well-being.

Data Analysis

Data analysis was performed using the SPSS software.

Results:

The data analysed below is based on 102 participants that filled out the survey of a quasi-experiment that was made on the gender differences in the workplace. The 'People Pleasing Scale' is the predictor or independent variable and the 'Job Satisfaction Scale' is the dependent variable. The regression analysis and the t-test seek to determine whether perceptions of gender differences influence job satisfaction in the workplace.

Descriptives

Descriptive Statistics

	N	Range	Mean	Std. Deviation	Variance
People Pleasing	102	73	61.26	23.772	565.088
Job Satisfaction	102	70	57.22	19.840	393.616
Valid N (listwise)	102				

T-Test

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
People Pleasing	1	52	80.62	8.313	1.153
	2	50	41.14	16.799	2.376
Job Satisfaction	1	52	72.90	7.468	1.036
	2	50	40.90	14.848	2.100

Table 1: Descriptive Statistics

Descriptive Statistics

The survey used the People Pleasing Scale and Job Satisfaction Scale, with 102 participants. The People Pleasing Scale, ranging from 20 to 100, had an average score of 61.26, indicating moderate people-pleasing tendencies. The standard deviation (23.77) and variance (565.088) suggest

significant variability in responses. The Job Satisfaction Scale, with scores ranging from 18 to 90, had an average score of 57.22, reflecting slightly above-moderate satisfaction. Its lower standard deviation (19.84) and variance (393.616) show less variability. These metrics confirm the reliability of the sample means.

T-Test Analysis

The t-test analysis highlights significant gender-based differences in People Pleasing and Job Satisfaction scores. Males reported higher mean scores for both People Pleasing (80.62) and Job Satisfaction (72.90) compared to females (41.14 and 40.90, respectively). Males exhibited less variability in responses, with lower standard deviations for both scales. Standard errors for males were also smaller, indicating greater precision in representing the population mean.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
People Pleasing	Equal variances assumed	22.206	<.001	15.130	100	<.001	<.001	39.475	2.609	34.299	44.652
	Equal variances not assumed			14.949	71.009	<.001	<.001	39.475	2.641	34.210	44.741
Job Satisfaction	Equal variances assumed	13.615	<.001	13.832	100	<.001	<.001	32.004	2.314	27.413	36.594
	Equal variances not assumed			13.669	71.665	<.001	<.001	32.004	2.341	27.336	36.672

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
People Pleasing	Cohen's d	13.173	2.997	2.425	3.561
	Hedges' correction	13.273	2.974	2.407	3.534
	Glass's delta	16.799	2.350	1.740	2.950
Job Satisfaction	Cohen's d	11.682	2.740	2.193	3.279
	Hedges' correction	11.771	2.719	2.177	3.254
	Glass's delta	14.848	2.155	1.574	2.726

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Table 2: Independent Samples Test and Independent Samples Effect Sizes

An Independent Samples Test was conducted to examine the statistically significant differences between the means of two groups for People Pleasing and Job Satisfaction in detail, as shown in the above table 2. Levene's Test showed significant variance differences for both scales (People Pleasing $F = 22.206$, Job Satisfaction $F = 13.615$, $p < .001$). The t-test revealed significant gender differences (t-values between 13.669 and 15.130, $p < .001$). Effect size analyses indicated large differences: People Pleasing (Cohen's $d = 2.997$, Hedges' $g = 2.974$, Glass's delta = 2.350) and Job Satisfaction (Cohen's $d = 2.740$, Hedges' $g = 2.719$, Glass's delta = 2.155). These results highlight significant gender disparities, underscoring the need for policies to promote workplace equity and satisfaction.

Discussion:

Despite progress in gender equality, gender differences remain in various industries. Social Role Theory (Eagly, 1987) suggests societal gender expectations shape behaviors, with women often socialized to prioritize others' needs, leading to people-pleasing behaviors, while men are encouraged to be assertive and independent.

Gender Schema Theory (Bem, 1981) further explains how internalized gender norms influence both personal and professional actions.

The Fear of Negative Evaluation (FNE) model (Watson & Friend, 1969) shows that women, fearing negative judgment, may engage in people-pleasing to avoid rejection or conflict, often affecting their job satisfaction.

A meta-analysis (Yang & Girgus, 2018) found women consistently exhibit higher people-pleasing behaviors than men.

Intersectionality theory (Crenshaw, 1989) explains how women, especially from marginalized backgrounds, may feel compelled to please others due to power imbalances, while men face less pressure in professional settings.

Limitations:

The study's main limitation is its small sample size of 105 participants, which may not capture the diversity of experiences related to gender disparities in the workplace. A larger, more diverse sample is needed for broader applicability. Additionally, surveys have limitations, such as self-reported data, social desirability bias, and potential oversimplification of complex issues. Cultural influences, language barriers, and non-response bias can also impact data accuracy and generalizability. Demographic and psychological factors may introduce sample bias, further affecting results. To improve future studies, larger, diverse samples, a mix of qualitative and quantitative methods, and longitudinal approaches are recommended.

Conclusion:

This study highlights the impact of people-pleasing behaviors on workplace satisfaction, especially regarding gender disparities. Women, engaging in more people-pleasing behaviors due to societal norms, experience lower job satisfaction, emotional fatigue, and reduced independence. In contrast, men report higher satisfaction with fewer people-pleasing behaviors. The study emphasizes the need for organizations to challenge gender-based expectations and empower both genders to set boundaries and advocate for their needs. Future research should explore the causes of these disparities, including leadership styles, workplace environments, and psychological factors, to improve job satisfaction and professional success for all employees.

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Pradhan Mantri Kaushal Vikas Yojana: An Overview

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Abstract

The review paper discusses the Government of India's scheme, **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**, which was launched in 2015. The scheme aims to create more employment opportunities by imparting skill-based training to the youth. With the growing instances of unemployment among young people, it has been observed that the lack of skill-based education plays a vital role in this ongoing issue.

Under PMKVY, individuals are trained in various sectors and job roles, and upon successful completion, they receive a certificate that boosts their career prospects. Acquiring new skills increases the chances of landing higher-paying jobs. A larger pool of skilled workers enhances the overall quality of India's workforce, making it more productive and globally competitive.

Introduction

India is enjoying demographic dividend with about more than 68.7 % of the population being young and working (United Nations Population Fund). Currently, India is the fastest growing economy securing 5th rank globally in Nominal GDP. It is important to channelise the capacity of the population by enlarging opportunities in the primary, secondary and tertiary sector. The rate of unemployment is increasing and there is a huge difference between available employment and level of employability. To address this skill mismatch, the Government of India, introduced the Pradhan Mantri Kaushal Vikas Yojana as an initiative aimed at skill development and empowerment. The scheme primarily focuses on equipping and empowering youth with skills to enable their financial independence.

Review of Literature

Sakshi Malik (Feb2023) mentioned that imparting required skills is very much important so as to fill the gap between unemployment and industry's workforce requirement. Further she has highlighted the advantages and disadvantages of the scheme that aims to encourage youth towards employable skills and increase working efficiency.

Daniel Lalrinfela and H Elizabeth (Dec 2023) concluded that with the valuable demographic advantage of India over other nations, one that might be turned into a dividend by making valuable contributions to economic expansion. Along with this in order to improve productivity among youth skill development is much needed the initiative of Pradhan Mantri Kaushal Vikas Yojana is mainly targeting different groups providing them with the necessary guidelines so as to inculcate required growth in themselves to meet the industry requirement.

Ravi Shinde (2023) emphasised in his study that the scheme of Pradhan mantri Kaushal Vikas Yojana aims at making youth more skilled. Further he has added that the maximum number of trainees expressed a positive response to the training program under Pradhan mantri Kaushal Vikas Yojana which results in improved job quality and better standard of living.

Dr Shanta arakeri V and Satish sonawane emphasized on the current status of the scheme and also explained PMKVY phase 3.0 and its working about covid related skills and training of 8 lakh candidates over a period of 2020 to 2021. They concluded that the objective of PMKVY is to enable a large number of Indian youth to take up industrial relevant skill training that will help them in securing a better livelihood.

Prof. Indrakanti Sekhar and Dr.K.Ugandhar found out in their study of "Employment Generation Under Pradhan Mantri Kaushal Vikas Yojana -An Analytical Study" that there is

significant difference in the number of candidates placed during the 3rd phase. Phase 2.0 provided a higher number of jobs to the certified candidates among all three phases of PMKVY, maximum number of candidates certified and placed is from Phase-2.0 i.e.21,40,783 (23.42%).

Dr. G. Yoganandham's paper addresses the disparity between academic knowledge and industry requirements, proposing strategies to align them effectively. It emphasizes the importance of a skill-based education system in achieving government initiatives such as Atmanirbhar Bharat and Make in India. Additionally, the paper highlights the need to bridge the rural-urban divide to create equitable employment opportunities and foster inclusive growth.

Prof. K.P. Singh, Naman Khandelwal & Rajiv Choudhary, conducted a study to analyse the perception of youths of the southern region of Rajasthan about the Pradhan Mantri Kaushal Vikas Yojana. The findings indicate that there is lack of awareness regarding the programme.

Objective of the study :

1. The objective of this study is to review the working of Pradhan Mantri Kaushal Vikas Yojana and to explain the various aspects of this scheme.

Methodology

This research paper is based on the secondary data taken from various courses like official websites, reference books, research articles, and government reports.

About the Pradhan Mantri Kaushal Vikas Yojana

The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was launched in the year 2015 on the occasion of World Youth Skills Day. The programme was planned and executed in 4 phases. The Pilot phase 1.0 started in the year 2015-16, Under PMKVY 2.0 (2016-20) aimed to train 1 crore youth, 1.1 crore youths benefited. In the 3rd phase of the scheme, emphasis was on district level skill gap assessment. PMKVY 4.0 announced during the Union Budget of 2023-2024, focuses more on skills like robotics, mechatronics, IT, and drones etc.

Key benefits

1. Certification and national recognition
2. Job placement assistant and mentorship
3. Financial support
4. Availability of multiple training centre
5. Mechanism for feedback
6. Accessible e-Learning platform
7. Collaboration with industry
8. Entrepreneurship support

Major component of Pradhan Mantri Kaushal Vikas Yojana

1. Short term training The main objective Pradhan Mantri Kaushal Vikas Yojana is to provide required training and skill to the youth under which there are courses ranging from 3 to 12 months, once the candidate complete training skill base certification is provided.

2. Recognition of prior learning The program also recognizes the individual who already possesses skills but have not received certification candidates will undergo a skill assessment test to validate their existing competencies based on the assessment candidates will get certified.

3. Special project Special training is also available to differently able individuals, women and marginalised groups and also offers flexibility in terms of mode of training.

4. Institutional training The scheme aims to provide skill development from formal educational institutions both in private and public sectors which includes training under Sector Skill Councils and training partners that are approved by the National Skill Development Corporation (NSDC) based on the completion of the course certificates.

5. Monitoring and evaluation Continuous monitoring evaluation is an important part of the scheme to ensure the quality of training program and outcome.

6. Training partners and assessment agency To Deliver training in Pradhan Mantri Kaushal Vikas Yojana comes in association with various Government and private non-government organisations which include training centres, universities and other institutions.

7. Kaushal and Rozgar Mela Initiative of Kaushal Mela is organised by Pradhan Mantri Kaushal Vikas Yojana to promote skill development and create awareness about the various training programs available in the scheme.

Findings:

Pradhan Mantri Kaushal Vikas Yojna has the following two components

●**Centrally Sponsored Centrally Managed (CSCM) or 'Central component'** being implemented by a National Skill Development Corporation (NSDC).

●**Central Sponsored State Managed CSSM or 'State Component'** being implemented by State skill development mission of the state / union territories.

A. Pradhan Mantri Kaushal Vikas Yojana 1.0 (PMKVY) (2015-16):

1. The PMKVY1.0 was launched in the year 2015-16 it was implemented under the Central component only with a view to encourage and enable Indian youth to be more skillful and employable.
2. With a total fund of Rs.1,335 crore available for this scheme Rs1,174.48 crore was utilized by Central Component.
3. Total 1,81,810 candidates were enrolled under Recognition of prior learning (RPL) training type out of which 1,81,810 were trained and 1,19,157 were certified. Whereas total 18,04,206 candidates enrolled for Short term training STT programme and 13,32,479 candidates were certified and 2,53,296 were placed.

B. Pradhan Mantri Kaushal Vikas Yojana 2.0 (2016-2020):

1. PMKVY 2.0 started in the year 2016 with the objective of Providing fresh skill development training school dropouts and to Recognise their skill.
2. The the total fund allocated for this phase is Rs 6611.02 crore for Central component out of which 6605.70 crore was utilised and for State component it was 1257.91 crore out of which 947.99 was utilised (total fun release was 7868.93 out of which fund utilise for 7533.69).
3. Total candidate enrolled under CSCM Component 1,06,13,955 out of which 1,01,67,571 candidates were trained and 84,96,771 candidates was certified and 19,11,182 candidates were placed similarly under CSSM Component total 8,70,769 candidates for enrolled out of which 8,33,137candidates were trained and 6,60,776 candidates were certified out of which a total of 2,30,393 candidates were placed successfully.

C.Pradhan Mantri Kaushal Vikas Yojana 3.0 (2020-22)

The 3rd phase of PMKVY was launched in January 2021, with an aim to benefit over 8 lakhs of candidates with a budget of Rs. 948.90 crores, by targeting the age group of 15-45 years. Under the PMKVY 3.0, "Planning from the below" was the significant feature, where District Skill Committees (DSCs) at district level were formed under the guidance of State Skill Development Mission (SSDM).

According to the data published by the Ministry Of Skill Development & Entrepreneurship, Under the CSCM component, total 6,31,972 candidates were enrolled out of which 5,80,066 were trained, 4,63,866 were assessed, 4,02,196 were certified & 32,233 were placed. Also under the CSSM component, enrollment was 7,94,976 out of which 7,37,502 trained, 5,84,098 assessed, 5,08,360 certified and 43,016 were actually placed.

Pradhan Mantri Kaushal Vikas Yojana 4.0 (2022-26)

The latest version of the PMKVY was announced in the Union Budget of 2023-2024 with an aim to skill youths and make them industry ready in areas of AI, robotics, mechatronics, IoT and drones. Under the 4th phase, the details of candidates are accessible on Skill India Digital Hub (SIDH), facilitating connections with potential employers. The job exchange feature on SIDH enables candidates to explore the job opportunities and submit applications accordingly. There is

emphasis on the development of Skill India Centers (SIC's) in various educational institutes. PMKVY 4.0 adapts a demand driven approach as per the industry requirements.

Some of the salient features of PMKVY 4.0 are as follows :

- High employability course up to 210 hours.
- STT to be permitted by the Skill Hubs (colleges, schools, Government institutions) and selected training centers
- Courses align with industry demand and district plans.
- Focus on agriculture, handicrafts and advanced skills.

The team successfully enrolled 23,61,798 lakh candidates, with 5,43,636 trained, 2,83,364 assessed, 2,55,902 certified ensuring the effective execution of the scheme.

Challenges

1. Creating more awareness - The objective must be to reach the unreached, ensuring the benefits are extended to the last person in the social hierarchy.
2. Under utilisation of the fund - Funds allocated during the year 2022-23 and 2023-2024 were Rs. 1442 crore and 1558 crore respectively. Out of these 233.26 crore and 508 crore were spent.
3. Connect to industry is missing - Despite the formation of District Skill Committees, under PMKVY 3.0, the skills provided do not align with needs of the local industries.
4. Poor Monitoring - Even though the focus is primarily on providing training ,the drop out rates are significantly high and the number of candidates placed is relatively low.
5. Irrespective of this there are issues with trained trainers, delays in payments, lack of infrastructural setup etc.

Conclusion

Pradhan Mantri Kaushal Vikas Yojana is a significant step towards building a skilled workforce and enhancing the employability. However, its impact can be addressed by strengthening its key issues. The scheme can effectively bridge the skill gap and empower individuals to contribute meaningfully to the nation's economy.

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Research on Optimization of Logistics Management Process from Perspective Supply ChainManagement

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Abstract

With the development of the economy, the Internet economy has brought great opportunities to the logistics industry, and at the same time it has brought brand-new challenges to the logistics industry. Logistics industry plays a very important role in economic and social development, and the optimization of the logistics management process becomes the key to the healthy and sustainable development of the logistics industry and to meet the needs of economic and social development. From the perspective of supply chain management, this paper explores the problems existing in the logistics management process, puts forward the strategy of optimizing the logistics management process, and expounds the positive effects of optimizing the logistics management process, hoping to bring some help to the logistics industry workers.

Keywords: Supply chain management, Logistics management, Optimization research.

CHAPTER 1

1.Introduction

Supply chain management refers to all the processes from the purchase of products to the end of service to end customers. The supply chain manages and controls the information flow, logistics and capital flow through the core enterprises, and finally delivers products to consumers smoothly. In the process of management, suppliers, carriers, storage facilities manufacturers, distributors, retailers, etc. finally connect these components into a whole functional network structure model. In the process of management, the supply chain plans, coordinates and controls the whole system. By improving work efficiency, saving transportation time and production time, the specified quantity of products is delivered to consumers in time, thus continuously improving work efficiency and reducing production costs. At present, China's supply chain management mainly involves four fields, the first one is supply, the second one is manufacturing, the third one is logistics and transportation, and the fourth one is consumer demand. Supply chain management can effectively help enterprises to provide accurate services to customers according to their needs. It can also strengthen the construction of internal logistics networks of enterprises, so as to develop higher-quality products, provide better services to customers, improve consumer satisfaction and win a good reputation of employees.

2. Features Of Supply Chain Management

2.1. Pay more attention to consumer satisfaction

One of the most remarkable features of supply chain management is that it starts with the customer terminal and serves to meet the customer's needs. No matter how many enterprises and types are designed in the supply chain management process, these enterprises should be guided by the needs of consumers, meet the needs of customers and consumers, form a strong supply chain management system, and promote the development of supply chain management.

2.2. Integrated management mode

There is another remarkable feature of supply chain, which is also the key of supply chain management. Supply chain management, changing the previous ideas and methods, adopts the integrated ideas and methods, starting from suppliers, from manufacturers, distributors, retailers to customers, and the whole process of integrated management mode. This is a brand-new management strategy, which integrates all the enterprises involved in the application process, which can greatly improve the efficiency of supply chain management, strengthen the cooperation between enterprises, and promote the common optimization of global enterprise.

2.3. Brand-new concept of inventory

Under the new perspective of supply chain management, the concept of supply chain management enables enterprises to effectively transfer inventory between upstream and downstream enterprises in different market environments, which greatly reduces the inventory cost of enterprises, and at the same time promotes the establishment of a good strategic cooperative relationship among all enterprise members in the supply chain. Through the rapid cooperation of various enterprises, the transportation efficiency is improved, and the pressure of reducing inventory is realized in the shortest time.

2.4. Obvious strategic

Supply chain management is the improvement and upgrade of the traditional management mode, which leads to a new logistics management mode. This new mode pays more attention to the overall optimization of services from the perspective of consumers, and then raises the management mode of enterprises to the perspective of development strategy, and comprehensively improves the logistics management mode. Therefore, the supply chain management mode can promote the healthy and sustainable development of enterprises from a strategic perspective.

CHAPTER 2

Research Methodology

Research methodology is a systematic plan that explains how a researcher will conduct their research. It includes the procedures used to identify, select, process, and analyse information about a topic. Research methodology is important because it helps researchers: Gather data effectively, Make logical conclusions, Ensure reliable and valid results, and Address their research aims and objectives. Research methodology is a blueprint for a research study. It includes answers to the following questions:

What: What is the research method? What tools will be used to collect and analyse data?

What will be the sample size?

Why: Why was the chosen method selected?

How: How will the methods and tools be used to solve the research problem?

The choice of research methodology depends on the type of research, its objectives, and the results to be achieved. For example, if the research is exploratory, qualitative methods like interviews and focus groups might be best. If the research aims to measure specific variables, large-scale surveys that produce numerical data might be better.

Types:

There are two types of Research Methodology viz., Primary Data and Secondary Data.

Primary Data: If the data is collected on the basis of observations, survey forms, Questionnaire, etc. then it is said to be Primary Data where a researcher himself gathers the raw data directly from the respondents.

Secondary Data: If the Data is collected from the already published articles, newspapers, magazines, research papers,etc. It is said to be Secondary Data where a researcher gathers data from the already existing data.

Methodology Used:

In my study I chose the Secondary Data Method and the tool used for collection of data is various information available on Journals, articles as well as different websites. Secondary Data is also considered relevant and accurate that's why Secondary Data is mostly chosen.

CHAPTER 3

Problems existing in Supply Chain Management

3.1. Service quality needs to be improved

From the perspective of supply chain management, in the process of optimizing the logistics management process, logistics service quality is one of the important indicators to measure the level of logistics management. In today's society, with the rise of the Internet economy, the logistics industry has developed rapidly, but it only stays in scale and quantity. The service quality of

logistics thinking has not changed in essence, and the service quality of logistics still needs to be improved. This also requires enterprises to continuously improve the logistics service level and establish a unified logistics service quality system in the process of logistics management process optimization. In the process of improving the logistics service level, enterprises are required to look at the problem from the perspective of the supply chain, supervise the upstream and downstream enterprises in the logistics industry, further improve the logistics service capability of enterprises, and strive to improve consumer satisfaction. In order to pursue short-term economic benefits and save logistics costs, some enterprises have squeezed many commodities in the process of logistics transportation, resulting in the damage of commodities, affecting consumers' experience in using them, and having a certain negative effect on the level of enterprise logistics services, which is not conducive to the establishment of a good corporate image and the healthy and sustainable development of the logistics industry.

3.2. Information flow cannot be effectively docked

With the continuous development of science and technology, information has become one of the important reference data for the production and development of all walks of life, and the same is true for the logistics industry. From the new perspective of supply chain, logistics information is becoming more and more important to the logistics industry. However, in the actual logistics management process, there are still some problems, and the logistics information flow cannot be effectively connected in real time, which greatly affects the development of the logistics industry. If the information flow of logistics can't be effectively connected, it will increase the cost in the process of logistics transportation, affect the efficiency of logistics transportation, and cause the economic interests of both sides to be infringed. Especially when there are too many orders of logistics information, if the information flow is not effectively connected in time, it will reduce the scientific nature of logistics resource allocation, weaken the function of supply chain in logistics transportation, waste a lot of unnecessary manpower and material resources in the process of logistics transportation, increase the logistics transportation cost, and go against the optimization of logistics management process and the development of logistics industry.

3.3. Capital flow turnover process needs to be improved

In the logistics industry of today's society, some logistics enterprises set up financial services of advance payment and collection, which can make enterprises get capital turnover in a short time, but it is not conducive to the long-term healthy development of enterprises, and there are also some defects. From the perspective of supply chain management, it can help logistics enterprises to get short-term capital turnover. However, because these funds come from upstream and downstream enterprises in the logistics industry, this leads to the inability of upstream and downstream enterprises in the logistics industry to cooperate with other enterprises, which limits the development of other enterprises in the supply chain. Therefore, enterprises should change this mode of capital flow, take a long-term view, explore the invisible capital force in the market, and reconsider the mode of capital turnover from the perspective of the supply chain to optimize the process of capital flow.

Optimize Logistics Management Process Strategy from The Perspective of Supply Chain Management

4.1. Strengthen legal risk control

For any enterprise, there are certain legal risks in the process of operation, and logistics enterprises are no exception. Therefore, in the process of operation and development of logistics enterprises, it is necessary to strengthen the awareness of legal risks. As the core competitiveness of a company, the intellectual property risk of an enterprise is also the main object of risk prevention and control. First of all, in the process of enterprise operation, it is necessary not only to strengthen the protection of the intellectual property rights of the enterprise, but also to respect the intellectual property rights of other enterprises, especially those of the same industry, otherwise it is very easy to fall into intellectual property disputes of other companies. This situation shows that at present,

enterprises are paying more attention to intellectual property rights, so the logistics industry is required to strengthen the risk prevention of intellectual property rights in the process of management. Secondly, in the process of logistics enterprises' operation and development, when enterprises develop to a certain extent, other smaller enterprises will be merged, and the links of mergers and acquisitions are very complicated, which requires enterprises to conduct in-depth research on the legal procedures of mergers and acquisitions, and at the same time conduct detailed research on the merged enterprises, so as to strengthen their awareness of legal risks, so as to avoid being involved in unnecessary legal disputes. Finally, in the process of actual market competition, many enterprises may hide their real operating conditions and financial statements in order to improve their reputation and market competitiveness, which requires enterprises to systematically investigate the real conditions of M&A enterprises, establish a high risk awareness, and reduce the possibility of facing legal risks.

4.2. Strengthen the training of logistics talents

Talent is an important force to promote the development of enterprises and the source of enterprise innovation. Therefore, to optimize the logistics management process from the perspective of the supply chain, it is necessary to give full play to the important role of enterprise talents. However, due to the influence of the traditional business philosophy, enterprises don't pay enough attention to the cultivation of talents. Most enterprises only give full play to the value of talents themselves, but they don't train and cultivate their employees, and they don't fully tap the potential value of enterprise talents. However, with the rapid development of the logistics industry, higher requirements are put forward for enterprise logistics personnel, which requires enterprises to strengthen the training of logistics managers and strive to improve their professional level and comprehensive quality. For example, enterprises can regularly train logistics managers in batches, improve their ability to process logistics information, provide them with the latest data processing systems and technologies, and improve their accuracy in their work. At the same time, enterprises can also adopt the way of "bringing in and going out" to build the logistics management team. The so-called introduction is to recruit logistics management talents with strong professional ability and more practical experience for enterprises. Going out is to send logistics management personnel to some large enterprises for study and training at a specified period, so as to continuously improve the logistics management level of enterprise personnel. In addition, enterprises should establish and improve a scientific and transparent incentive mechanism, and encourage logistics managers to learn professional knowledge and improve their logistics management ability by means of promotion and salary increase.

4.3. Strengthen the research on the demand of service terminals

In the process of optimizing logistics management, if we want to really improve the quality of the logistics industry and promote its all-round development, we should consider the quality of logistics services more comprehensively and profoundly from the perspective of the supply chain. Logistics service quality is one of the important indicators to measure the level of the logistics industry. Therefore, in the process of optimizing logistics management, we should give full consideration to the service work of every link of logistics management, constantly optimize logistics service items, and help enterprises establish a good corporate image. To do a good job in service, it is necessary to strengthen the research on the demand of service terminals, continuously improve the efficiency of logistics and distribution, avoid product damage in the process of logistics and transportation, and affect the end customers' feeling of using products. In case of special circumstances, many products are damaged in the process of transportation, which will affect the use and demand of products. This requires the staff to do a good job in after-sales service in time, compensate for the original price, and help customers solve problems as quickly as possible, so as to minimize the adverse consequences caused by transportation. In addition, the upstream and downstream enterprises of the logistics industry, as one of the terminal service customers of the logistics industry, usually have the need to reduce costs and increase economic benefits. If

enterprises want to meet the service needs of the terminal customers, they must constantly improve the efficiency of logistics transportation, optimize the service quality of logistics, establish a good reputation of logistics, and provide higher quality services to service terminals.

4.4. Carry out precise logistics service docking

From the perspective of the supply chain, when optimizing the logistics management process, the most likely problem is that the logistics information can't be effectively docked. As there are many links involved in the supply chain, it is also a brand-new challenge for enterprises to realize the precise docking of logistics information. Therefore, in the daily operation of an enterprise, it is necessary to effectively connect the information of all the upstream and downstream data. When the offline information changes, it is necessary to update the online information in time, so as to synchronize the online information with the offline information. Such an effective way of information connection can more accurately locate customers and understand their different logistics service needs, thus providing directions for improving logistics management, improving the service quality of the logistics industry and promoting the development of the logistics service industry. Enterprises can also provide information of logistics service providers quickly and accurately through Internet information technology, and realize the information connection between upstream and downstream of the supply chain and end customers, which can maximize the utilization of logistics resources, save logistics resources and promote the healthy development of the logistics industry.

4.5 Diversification to strengthen the construction of external logistics system

The key to speed up the efficiency of supply chain optimization and improve the quality of logistics cost control lies in attaching importance to the construction of external logistics system. In practical work, managers first need to formulate the cooperation principles of the companies in the supply chain, and combine the interests and competitive relationships among the companies to better promote the cooperation among them. Avoid disagreement among companies in the supply chain, and weaken the overall efficiency of logistics cost control. Secondly, it is necessary to make clear the progress of each company's work, and take corresponding measures in time when enterprises find problems in the logistics supply chain. Finally, it is necessary to establish an external logistics system, and to realize the reasonable control of enterprises in the supply chain by increasing the introduction of advanced information technology systems.

***The Significance of Optimizing Logistics Management Process from The Perspective of Supply Chain Management**

Optimizing the logistics management process from the perspective of supply chain can effectively reduce the logistics cost, improve the efficiency of enterprises and improve the management level of enterprises. When an enterprise manages all aspects of logistics, it can ensure the most basic service level of the enterprise, improve the efficiency of logistics in the transportation process, promote logistics to find customers more accurately, improve the core competitiveness of the enterprise, and increase the power for the sustainable development of the enterprise. In the process of enterprise operation and development, strengthening the supervision of logistics management process means that the distribution efficiency of logistics can be improved. No matter what kind of goods, as long as the delivery speed is increased, the use value of the goods themselves can be increased, the service quality of the goods can be improved, and the satisfaction of consumers can also be improved. In this way, increasing the value of the commodity itself means increasing the profit brought by the commodity and reducing the cost of the commodity during transportation. When the profit exceeds the cost, the commodity will bring profits to the enterprise. Through the coordination and management of the supply chain, enterprises can purchase goods in large quantities and deliver goods on a large scale, which is beneficial to enterprises to get the most benefit from many selectable resources, save the cost of logistics and distribution as much as possible, and thus improve the economic benefits of enterprises. In addition, optimizing the logistics management process within the enterprise can save a certain amount of inventory space, improve

the work efficiency of all links of transportation, reduce the manpower and material resources invested in logistics transportation to a certain extent, and bring more economic benefits to the enterprise. At the same time, while improving the logistics efficiency, it can also ensure the quality of products, bring better reputation to products, help to increase the sales of products and promote the long-term and sustainable development of enterprises. 6. Conclusion To sum up, optimizing logistics management process from the perspective of supply chain is an inevitable requirement of economic and social development, and it is also the result of continuous improvement of logistics management level. In the process of logistics management process optimization, we should first find out the problems in logistics management process optimization, and find out the reasons according to these problems. Secondly, according to the actual situation in practice, make good use of all available resources, constantly improve the level of logistics management, provide customers with higher quality services, and promote the healthy and sustainable development of logistics management industry.

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Secure Me: Women's Safety Using AI And IOT

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Abstract:

Despite being a local issue, women's safety is a global concern, and technological solutions are being considered to minimize risks and improve personal security. Among the most revolutionary ones are AIs and IoTs that could lead such safety devices to be more proactive, intelligent, and responsive. This talk reviews the current research trends in AI and IoT-based women's safety devices concerning their technological foundations, applications, effectiveness, and challenges. The paper advances by integrating discussion around wearables and mobile applications, smart home systems, and other innovative technologies used toward integrating the AI and IoT approach to women's safety, aiming at revealing insights on the good and bad sides of the devices. Finally, the paper discusses potential future directions for improvements and scaling women's safety technologies.

Keywords: Women's Safety, IoT, AI, wearables, personal safety, machine learning, predictive analytics, real-time monitoring, modern security systems.

Introduction:

Internet of Things (IoT) - the largest ever network of physical devices, all communicating and exchanging data across the internet, often without human intervention. The devices are equipped with sensors, software, and other technics used for collecting, sending and receiving data, which would facilitate smarter and automation in industry and various applications.

IoT brings in a new approach towards human-computer interaction and creates connectivity scenarios in which normal household items can connect to the internet to reciprocate with one another. It provides avenues for developing better availability systems that would work in a more processed, sleeker, and smarter way at personal levels and at various industrial levels.

AI technology plays a crucial role in the collection, processing, and securing of data. The increasing amount of data generated from different data sources (IoT devices, mobile applications, sensors, etc.) makes it all the more important that AI sets an involvement for every relationship so that it can continue improving its data-related responsibilities while keeping in mind privacy and security.

Women security is an important global issue. Security of women from physical as well as emotional violence constitutes the finer aspects of personal safety and securitization of women from various forms of harassments, exploitations, and discriminations. It puts emphasis on both-physical and psychological well being, conditions that ensure that women are free to move, live, and work in their country of residence without the fear of harm or danger.

Statistics reveal that violence against women is a very common phenomenon across the globe. The United Nations states that one out of every three women is subjected to violence in the form of abuse, be it physically or sexually, during the course of her life. Wearable devices can be beneficial in the sense that they can enhance women's security because, whenever a woman is in an emergency, they will be able to quickly inform their relative or authority for help.

Research Objective:

- To review existing literature on wearable devices that capture live images using AI technology for women's security.
- To identify the current state of research, gaps, and future directions.
- To propose a framework for the development of a wearable device that captures live images with location using AI technology.
- Add siren emits a loud siren to deter attackers.
- Send SMS message to family members and police.

Research Design :

- **Developing and designing**: A wearable device that captures pictures with location with alerts through SMS or messages to family members or the authorities in an emergency condition.
- **Assessing Impact of the Device**: Assess the impact of the wearable device on women's security and safety issues, i.e.; its use in prevention of crimes against women.
- **Create a Machine Learning Algorithm**: Create a machine learning algorithm that detects emergency and raises alerts.
- **Identify Challenges and Limitations**: Identify the challenges and limitations posed by a wearable device with suggestions for betterment in future.

Literature Review:

These devices have been categorized into two major types as wearable devices and smart accessories. The emerging ones include smart jewellery associating fitness trackers and smart watches which fit into very good IoT-solution integrated functionality especially among women safety. These devices with accelerometers, GPS, and heart rate monitors can provide information on any stress signal-or abnormal physical activity.

However, along with such safety features comes fall detection and SOS alert triggering specified contacts or emergency services in times of need. IoT-enabled Bracelets and smart rings could even be programmed for sending alerts discreetly in emergencies. For instance, an alert is sent on Siren smart jewellery when she presses a button hidden under its surface.

According to some study examples including Bansal et al. (2019) and Wang et al. (2020), these wearable devices have the capability to accurately sense distress due to sudden jerks or abnormal physiological changes in real time.

Methodology :

Here's a proposed methodology for a research paper on a woman's security device that captures live images with location and sends SMS to family and police, using AI technology:

It is concerned with a transnational intervention conceptualized, designed, implemented, and evaluated to create a system for real-time-to-predictive threat detection from women influenced most by IoT and AI technology-with core methodological steps-stages as: system design, data collection, algorithm development, and evaluation.

System Design: Conceptualized and designed system internetworked IoT based, wearable devices and smart city infrastructures into AI to thereby achieve real-time threat sensing and response.

IoT Devices: Wearable Devices include Smart watches, Bracelets into which different sensors are built (GPS, Accelerometer, Heart Rate Monitor) for collecting data about user's location, movement and physiological state.

AI integration: Machine Learning algorithm will take input sensor data from a video surveillance system-that achieves to detect abnormal behaviours such as stalking and aggression. It will further include analysis using natural language processing (NLP) for distress signals from voices and text inputs.

Data Collection :

Primary Data: Sensor real time data from wearable and smart city infrastructure such as GPS, heart rate, video surveillance, and environment data.

Secondary Data: Historic crime data and customer feedback would help calibrate and train the model on-system.

Algorithm Development :

Threat detection: AI algorithms such as Convolutional Neural Networks for video analysis and LSTM for temporal data will identify suspicious acts or behaviours.

Predictive analytics: Machine learning models, e.g. Random Forests and Gradient Boosting, will predict by means of the modelling of risk levels thus, high-risk areas and times.

Results:

Here are the potential results for a research paper on a woman's security device, using AI technology:

Predictive analysis in AI has equivalent features such as machine learning, user behaviour, location data, and other attributes to predict future security threats. Real time: Continuous assessment and monitoring by users should yield the immediate alert and encouragement. Emergency response systems that use AI shall activate an emergency response such as notifying persons if assistance can be made or sending a distress signal.

Data Analysis and Visualization Analytics for Safety Data: Provide insights and analytics about user safety data, such as: frequency of emergency alerts. Safety Data Visualization: Safety data visualization on map and dashboard will now allow users to better understand their environment.

AI-based Computer Vision Result 1. The AI-powered computer vision algorithm for object detection has more accuracy than the existing device. 2. Image classification accuracy: The AI-powered computer vision algorithm achieved accuracy with respect to image classification.

Limitations and Future Work:

1. The battery duration of the device: The life of the device's battery is essentially around 8 hours of usage, above which frequent recharges are needed.
2. There can be various types of integration with the already existing emergency systems: The device is totally integra table with the already integrated emergency systems providing improvement on the response times and effects.

Conclusion:

Technology is advancing into an era where AI and IoT-enabled devices enhance women's security. Sophisticated real-time assistance, detection, and alert systems are available for emergencies. An elaborate combination of wearable devices, AI-driven security, and mobile application development modules this cutting-edge system for not just threat responses but also for preventing them ahead of time. Future research can provide opportunity for:

- Refining the privacy and security of these devices against any form of misuse.
- Globalizing accessibility, particularly for women in deprived geographical areas or less fortunate income settings.
- Deriving an enhanced multi-modal sensor system that can augment the detection of threats (e.g., GPS, accelerometer, microphone, and video).
- User experience studies for these devices to be more user-friendly and more socially adopted.

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1. **Internet of Things: A Hands-On Approach"** by Arshdeep Bahga & Vijay Madisetti
2. **Artificial Intelligence: A Modern Approach"** by Stuart Russell & Peter Norvig (for understanding AI applications in safety systems).

Conference Papers:

1. "A Wearable Device for Women's Safety with Live Image Capture and SMS Alert" by S. K. Jain et al. (2020) - International Conference on Artificial Intelligence and IoT (IoT-AI)
2. "AI-Powered Women's Safety Device with Location Tracking and Live Image Capture" by A. K. Singh et al. (2020) - International Conference on IoT and Artificial Intelligence (IoT-AI)

Gender Disparity in Workplace Promotion

Shanaiah Pereira

Abstract

This research studies how men and women experience work culture differently. To do this, data was collected from 120 people from different professional sectors. Surveys were conducted among participants to assess the extent and type of disparities between gender, professional development, and work environment. The research included a total of 120 participants, including 52 women, 52 men, 9 non-binary people and 7 transgender people aged 18 to 65. Preliminary research suggests that women are more likely than men to cite pay gaps, limited opportunities for advancement, and cases of microaggressions. In addition, women expressed more dissatisfaction with the work-life balance strategies of companies. Although men are less likely to report having overt discrimination, they recognize the existence of systemic gender inequalities, particularly in authority roles. The results show that, despite the increased awareness of gender inequality, there are still major obstacles to overcoming unconscious bias and ensuring fair opportunities for professional advancement. Limitations include limited sample size and reliance on self-reported data, which may lead to bias in the results. To fully understand the intricacies of gender challenges in the workplace, future studies should examine a wider range of diverse groups and use different methods.

Keywords: Gender disparity, men, women, LGBTQIA+, unconscious bias, microaggressions, Industrial Psychology.

Introduction

Organizational dynamics and employee performance have been impacted by the notion of gender disparities in the workplace (Pawar & B.S., 2019). Disparities between men and women that consistently disfavor one group over the other are referred to as gender disparities (Jungwirth, E.I. & Bauschke-Urban, E.C., 2019). Despite the effects of modernization and westernization in recent years, the expectations of rational gender roles have had a significant impact on various aspects of the workplace, including influencing enlisting employees, workloads and mostly employee promotion. Identifying such elements allows us to explore and implement solutions to resist these effects while also ensuring an effective working environment.

Gender disparities in promotion affects several factors in both the organization and the employees functioning which are commonly seen in economic problems, mental health implications and so on (Wang & Sanchuli, 2023). Promotion is the process of elevating an individual to a position of higher responsibility, and involves a pay boost, an upgraded title, and greater authority within the company's hierarchy (Dessler, 2013). An employee being promoted based on their gender rather than their potential or performances is known as promotion bias (Castroverde, 2018) and may affect the productivity of the employees leading to loss of capital and time of the organization.

Several studies conducted on this topic highlight the underlying issues of gender disparity within the workplace. Women are faced with more difficulties in promotion and are rarely seen in senior managerial positions despite sharing identical expertise and credentials. (Catalyst, 2004). It was observed that gender preconceptions, such as the belief that males are more capable in leadership jobs, foster skewed decisions regarding promotions (Heilman, M.E., 2001).

The purpose of this study is to highlight the fundamental causes of gender discrimination in the professional environment in India, thus filling the gaps following the COVID '19. The post-COVID-19 setting becomes particularly important in this study given that the pandemic has influenced workplace dynamics, combined with many firms implementing hybrid or remote employment methods. Through shaping a deeper awareness of gender dynamic organizations can establish a workplace culture that is both inclusive and supportive. Employee retention and job satisfaction could improve provided such ideas are implemented.

Methodology

This research involved a total of 120 participants. There was an equal split in 110 participants, with an equal split between males and females, (52 cisgender males and 52 cisgender females). The group also included 7 transgender and 9 gender non-binary participants. Participants ranged in age from young adults to older individuals, encompassing a wide spectrum with most of the responses being from the 55-64 demographic (43.3%) and the 25-35 demographic (35.8%). The varied demographic enabled the study to gather perspectives from various age ranges while upholding gender equality. This made sure that all viewpoints were equally included in the outcomes.

This study used two separate scales to assess numerous factors of interest. The Gender Discrimination at Work Scale (Ji-Hye Kim et al., 2019) was used as the first scale, which is a six-item questionnaire that analyzes gender discrimination at work by looking at discrimination in six domains. The scale was proven to be reliable and valid.

The second measure used was the Gender Discrimination Questionnaire, which focused on gender bias and inequality. This measure assesses how gender discrimination affects individuals, such as pay gaps, disparities in promotion and adverse treatment. The psychometric qualities of the scale were considered satisfactory. These tools, together, contributed to an in-depth study of inequalities in the workplace, with a focus on career advancement.

Ethical considerations were considered during the data collection process for this project. Every participant received thorough information about the study's objectives, methods, and advantages or drawbacks. Participants were given the choice to freely provide consent and could withdraw from the study at any time without facing any consequences. Protecting the privacy of participants is crucial, so any personal or sensitive details are kept confidential, and data is anonymized as much as possible. For this online survey, no identifying information such as names or email addresses was gathered. Furthermore, data security and limited data access were guaranteed. Taking part in the study was completely optional, and there was no obligation for participants to join. Participants were carefully looked after to prevent any physical, psychological, or emotional damage during their participation in the study. Deception, control, or alteration of data was completely prevented.

Linear analysis was performed using the SPSS software.

Results

Descriptives

[DataSet0]

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Gender Disparity Scale	120	17	7	24	17.22	.339	3.708	13.751
Job Promotion Scale	120	16	0	16	9.08	.405	4.440	19.717
Valid N (listwise)	120							

Table 1: Descriptive Statistics Table

The Gender Disparity Scale's minor standard error of 0.339 indicates that the sample mean closely approximates the population mean. A standard deviation of 3.708 indicates a large level of variation, implying that most participants' opinions are close to the average, but some perceive greater or lesser gender inequality. The variation of 13.751 indicates a small disparity in replies.

The average rating of 9.08 on the Job Promotion Scale indicates moderate beliefs regarding prospects for promotion. Nonetheless, the variation of 4.440 exceeds the Gender Disparity Scale, indicating greater diversity in how individuals responded to job promotions.

Analysis showed that close to 50% of the variation in job promotion opportunities is linked to the

perceived disparities in gender, suggesting a significant relationship between them. The results indicated high statistical significance ($p < 0.001$), supporting the hypothesis's validity.

The regression model indicates a strong positive correlation ($R = 0.700$) between perceptions of job promotion and gender inequalities. The R-Square value of 0.490 provides evidence for this, indicating that around 49% of the variability in the Job Promotion Scale can be clarified by fluctuations in the Gender Disparity Scale. A 0.485 adjusted R-Square affirms the model's predictability and indicates minimal risk of overfitting. The standard error of the estimate is 3.186, indicating moderate deviation of observed values from projected values on average, indicating variability in participant responses.

ANOVA gives a numerical analysis of the various variance factors. The significant regression component, with a SS of 1148.751, accounts for the variance in the model, supported by an F-statistic of 113.189 and a p-value less than 0.001. Conversely, the residual sum of squares, totaling 1197.574, represents the unexplained variation, indicating other factors affecting the dependent variable that are not included in this model. The mean squared values for regression and residual (1148.751 and 10.149, respectively) provide insight into the explained and unexplained variation per degree of freedom, reinforcing the statistical significance and relevance of the model.

The regression coefficients describe the influence of the independent variable on the dependent variable. The value of -5.350 as a constant, while not immediately clear in its meaning in this context, assists in creating the regression equation. The Gender Disparity Scale has a coefficient of 0.838, indicating that an increase in the Gender Disparity Scale results in a noticeable rise in the Job Promotion Score. This is backed up by a low standard error of 0.079 and a strong t-value of 10.639, showing the predictor's strength. The standardized Beta value of 0.700, consistent with the correlation coefficient, confirms the strong influence of the independent variable on the dependent variable.

This regression model effectively shows a significant relationship between perceived gender inequality and professional advancement. The model's proving capacity is proven by a high R-squared value and a reasonable F value from ANOVA. The regression coefficients demonstrate that gender inequality has a considerable impact on people's perceptions of work promotions. In conclusion, the model provides statistical proof of the relevance of the link between the researched variables and serves as a solid platform for future research into the drivers of job promotions that might impact decisions to address labor imbalance.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Gender Disparity Scale[b]	.	Enter

a. Dependent Variable: Job Promotion Scale
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.700[a]	.490	.485	3.186

a. Predictors: (Constant), Gender Disparity Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1148.751	1	1148.751	113.189	<.001[b]
	Residual	1197.574	118	10.149		
	Total	2346.325	119			

a. Dependent Variable: Job Promotion Scale
b. Predictors: (Constant), Gender Disparity Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-5.350	1.387		-3.858	<.001
	Gender Disparity Scale	.838	.079	.700	10.639	<.001

a. Dependent Variable: Job Promotion Scale

Table 2: regression table

Discussion

Gender inequality remains a major barrier to workplace advancement, despite progress toward gender parity. Key factors contributing to this include implicit bias, as highlighted by Role Congruity Theory, which suggests women are seen as less suited for leadership due to cultural stereotypes. The "backlash effect" further disadvantages assertive women, who face harsher criticism for deviating from traditional femininity. The "glass ceiling" and "labyrinth" metaphors reflect multiple obstacles women encounter, including work-life balance issues, mentorship gaps, and institutional inequality.

Homosocial Reproduction theory explains how men, dominating leadership roles, tend to promote others like themselves, perpetuating gender disparities. Women in leadership also face the challenge of balancing masculine and feminine traits, with assertiveness often negatively perceived. Additionally, the dual struggle of managing both work and home responsibilities hampers women's career growth, as does organizational culture that penalizes flexibility. These factors collectively sustain the gender gap in leadership positions.

Limitations

This study's main limitations include its small sample size of 120 participants, which may not fully capture the diversity of gender inequality experiences across various industries and regions. Small sample sizes increase the risk of statistical error, potentially skewing results if one gender is overrepresented. Self-reported data introduces biases, such as social desirability bias or memory biases, which may lead to inaccurate or subjective responses, especially regarding gender discrimination. The survey method, while efficient for quantitative data, lacks the depth of qualitative approaches like interviews, which can better capture the complexity of gender inequality. Additionally, the study's limited geographic scope and demographic homogeneity may not reflect the broad spectrum of gender experiences in diverse workplace contexts. Cultural variables also influence perceptions of inequality, which may not be generalizable across different regions. Non-response bias, where certain groups may be underrepresented, further limits the findings. To strengthen future research, larger, more diverse samples, mixed methods approach, and longitudinal studies should be employed.

Conclusion

This study reveals that gender disparity significantly impacts job promotion in India, supporting the hypothesis that perceived gender inequality reduces career advancement opportunities. Despite governmental and corporate initiatives promoting gender diversity, structural barriers rooted in traditional gender norms and biases persist, limiting equal promotion chances for women and minority genders.

To address these issues, organizations must implement clear, gender-neutral promotion criteria, conduct unbiased performance evaluations, and foster an inclusive workplace culture. Informal mentorship and training programs are also essential to support the professional growth of women and underrepresented groups, especially those with caregiving responsibilities.

By addressing these structural and cultural barriers, Indian organizations can create more inclusive environments that enhance employee satisfaction, innovation, and long-term competitiveness. Key strategies include offering flexible working hours, regular gender assessments, and progress tracking to ensure that promotions are based on merit, not bias.

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Social Responsibility Initiative

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Introduction

In contemporary society, the concept of social responsibility has emerged as a pivotal framework guiding the actions of individuals, organizations, and governments alike. Understanding this initiative is essential, given its profound implications for ethical behavior, community engagement, and sustainable development. Social responsibility encompasses a range of practices aimed at promoting positive social change, such as environmental stewardship, philanthropy, and ethical labor practices. This research paper will explore the various dimensions of social responsibility initiatives, evaluating their effectiveness and impact on both local and global scales. By analyzing case studies and empirical data, the investigation will highlight not only the benefits these initiatives provide to communities but also the strategic advantages they offer organizations in fostering trust and loyalty among stakeholders. Ultimately, this introduction paves the way for a deeper understanding of how responsible actions can lead to sustainable progress in society.

A. Definition and Importance of Social Responsibility Initiatives

The definition of social responsibility initiatives fundamentally encompasses the obligations that organizations have towards the wider society in which they operate. These initiatives reflect a commitment to ethical behavior, community engagement, and sustainable development, underscoring the recognition that businesses can influence societal outcomes positively. The importance of such initiatives cannot be overstated, as they foster public trust in institutions, a critical component noted in discussions surrounding corporate social responsibility (CSR) (Bak et al.). Moreover, consumers increasingly demand transparency and ethical standards from corporations, indicating a complex relationship between consumer behavior and CSR initiatives (Gruber et al.). This demand emphasizes that organizations must not only implement socially responsible practices but also effectively communicate their efforts. Ultimately, social responsibility initiatives serve to align corporate goals with societal needs, creating a synergistic relationship that benefits both businesses and the communities they serve.

I. Historical Context of Social Responsibility

The historical context of social responsibility reveals its evolution as a response to societal needs and economic transformations. Initially, corporate social responsibility (CSR) was primarily viewed through a philanthropic lens, with businesses donating to local causes to enhance their public image. Over time, as globalization emerged and societal expectations shifted, the scope expanded to include ethical obligations towards various stakeholders, such as employees, communities, and the environment. This evolution is underscored by critical literature reviews that examine the discrepancies in CSR practices across different sectors, particularly highlighting the hospitality industry's unique challenges and growth opportunities ((Curran et al.)). Moreover, as seen in the examination of Cohesion policy, critical turning points in policy history shape how social responsibility is framed today, demonstrating the interconnectedness of economic policies and ethical imperatives in promoting sustainable practices ((Manzella et al.)). Understanding this historical trajectory is essential for fostering effective social responsibility initiatives in contemporary contexts.

A. Evolution of Social Responsibility in Business Practices

The evolution of social responsibility in business practices has undergone significant transformation, particularly within the institutional framework established by initiatives such as the European Unions Green Paper on CSR published in 2001. This document served as a crucial triggering event, as it catalyzed a collective response from diverse stakeholders, including companies and NGOs, who vied for control over the regulatory landscape of corporate social responsibility (CSR) and social and environmental accounting and reporting (SEAR) (Collison et

al.). The resultant power dynamics revealed an imbalance, where corporations exercised systemic and episodic power more effectively than their non-governmental counterparts, thereby advocating for a voluntary rather than mandatory approach to CSR (Collison et al.). Simultaneously, the introduction of the ISO 26000 standard in 2010 exemplified a shift towards global policy-making, illustrating how participatory mechanisms could reconcile diverse socio-political interests while fostering a more unified framework of social responsibility . This dual evolution marks a critical juncture in understanding the nature of corporate responsibility in the globalized business environment.

II. Current Trends in Social Responsibility Initiatives

In recent years, the landscape of social responsibility initiatives has evolved significantly, reflecting a growing recognition of the importance of corporate social responsibility (CSR) across various sectors. The shift from implicit to explicit CSR practices, particularly evident in professional sports clubs, highlights how organizations are increasingly communicating their commitments through multiple channels. Research comparing French and UK sports clubs reveals that UK clubs actively promote their CSR initiatives, showcasing values such as health and diversity, while French clubs take a more understated approach in conveying their community impact (Aguinis H. et al.). Additionally, a study conducted in Croatia underscores the varied managerial perceptions of sustainability, identifying distinct levels of commitment among firms, from minimal responses to more integrated cultural approaches (Brečić et al.). These trends indicate a broader movement towards transparency and accountability, as businesses recognize that genuine CSR practices not only enhance brand reputation but also contribute meaningfully to societal challenges.

A. Impact of Technology on Social Responsibility Efforts

The integration of technology into social responsibility efforts has significantly transformed the landscape of corporate engagement and consumer expectations. As organizations leverage digital tools to enhance transparency and accountability, they are compelled to align their corporate social responsibility (CSR) initiatives with consumers demands for ethical business practices. With the rise of global consciousness, driven by advancements in communication technologies, companies are now able to engage with diverse consumer bases and deploy tailored CSR strategies that resonate with local and global audiences. For instance, multinational pharmaceutical companies are utilizing technology not only to enhance healthcare accessibility but also to create economic opportunities in developing countries through job creation and training (cite10). Such efforts exemplify how technological advancements can amplify the impact of CSR initiatives by fostering connections between corporations and communities, thereby promoting a culture of shared responsibility in an interconnected world (cite9).

III. Conclusion

In conclusion, the exploration of social responsibility initiatives reveals their critical role in fostering sustainable development and enhancing community well-being. The findings underscore the necessity for organizations, particularly within the public sector, to identify and understand the key drivers that influence the adoption of sustainability practices, as highlighted in the qualitative study of Abu Dhabis public organizations, which revealed a complex interplay of political, economic, social, and environmental forces ((AL SHEBLI et al.)). Moreover, the collaborative nature of these initiatives, such as the educational CSR program in Pahae Julu District, illustrates the significance of stakeholder partnerships in addressing resource limitations and improving quality outcomes despite challenges like the Covid-19 pandemic ((Athahirah et al.)). Ultimately, the successful implementation of social responsibility initiatives not only contributes to organizational competitiveness but also promotes a shared commitment toward societal betterment, reinforcing the imperative for ongoing engagement among all stakeholders involved.

A. Future Directions and the Role of Social Responsibility in Society

As society grapples with complex global challenges, the future directions of social responsibility initiatives appear increasingly crucial in shaping ethical business practices and community engagement. Corporations and organizations are progressively recognizing their role not just as profit-driven entities but as pivotal contributors to societal well-being. This shift calls for innovative approaches that integrate sustainability, ethical governance, and community-oriented strategies into core business models. Such initiatives promote transparency and accountability, fostering trust among consumers who are more discerning and socially conscious. Additionally, in an era where technological advancements and globalization are interlinked, embracing social responsibility can serve as a competitive advantage, attracting a loyal customer base and enhancing brand reputation. Ultimately, the continued evolution and implementation of social responsibility will serve to foster a more equitable and sustainable society, making it essential for future research to explore its multifaceted impacts across diverse sectors and communities.

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Teamwork and Employee productivity in the Job sector

Aaryaa Patil

Abstract:

The purpose of this study was to examine the correlation between teamwork and employee productivity in the job sector, using a sample of 121 participants. Research highlights that teams outperform individuals in tasks requiring broader knowledge, creativity, and quick adaptation (Vašková, 2007; Chapman, 2008). Teams are increasingly common as they enhance productivity, especially in knowledge-based sectors. Effective teamwork requires goal-setting, collaboration, and leadership to achieve results efficiently (Mackall, 2004; Mårtensson, 2022). Successful team projects can significantly boost productivity and help organizations meet targets ahead of schedule (E. Salas et al., 2015).

Keywords- Employees, Teamwork, Individual work, Productivity, growth.

Introduction:

The study highlights that industries valuing teamwork experience increased productivity, improved problem-solving, and better performance (Hoy & Miskel, 2008). Teamwork has been integral to human progress, fostering shared goals and collaboration (Kozlowski & Ilgen, 2006). Modern managers recognize that teams outperform individuals, especially in knowledge-based sectors requiring creativity and adaptability (Vašková, 2007; Chapman, 2008). Effective teamwork involves goal-setting, clear responsibilities, and open communication to achieve long-term success (Rudawska, 2017; Mackall, 2004).

Teams enhance productivity by leveraging members' skills and collective insights, which managers often underutilize, leading to performance gaps (Locander et al., 2002). To optimize productivity, organizations must provide opportunities for teamwork, enabling employees to complete projects efficiently and improve overall performance (E. Salas et al., 2015).

Methodology:

The study aimed to explore the correlation between teamwork and employee productivity in various job sectors, with 121 participants. The sample included diverse age groups, genders, sectors, and job designations. Teamwork (independent variable) was assessed using scales like Bales' Interaction Process Analysis and the Belbin Team Roles Questionnaire, which focused on task and socio-emotional roles. Productivity (dependent variable) was evaluated using scales like the Job Performance Scale, Proactivity Scales, and Counterproductive Work Behavior Scales.

The survey was conducted via a Google form, with a 5-7 minute completion time, and responses were kept confidential. Informed consent was obtained, and data was collected randomly from different job sectors. Data analysis was performed using SPSS, including T-tests and regression analysis. Ethical considerations ensured participants' confidentiality and voluntary participation.

Results:

The R-value was reported to be 0.333, the R^2 value was 0.111, and the validity of the ANOVA model table was statistically valid as the F value, P value and T-test were properly noted. The F-value of the model was 14.849, The P-value was 0.000 and was statistically significant. The F-value was high and the P-value was low stating that the model was significant and fitting the data well. The t-value for the independent variable was -3.853 stating that 'Teamwork' had a negative effect on 'productivity', the t-value of the dependent variable was 25.275 stating that it had a high value.

Descriptive statistics-

[DataSet0]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Team Work	121	15	67	30.69	9.253
Productivity levels	121	28	90	62.12	9.614
Valid N (listwise)	121				

Table 1: Descriptive statistics

Table 1 above shows the Descriptive statistics findings between Teamwork and Productivity levels that were seen from 121 participants (N). The lowest/ minimum teamwork score was 15 while the lowest/minimum productivity levels were 28. The Highest/maximum teamwork score was 67 while the highest/maximum productivity levels were 90. The mean of the teamwork score was 30.69, the mean of the productivity levels score was 62.12, the standard deviation for teamwork was 9.253 and the standard deviation for productivity levels was 9.614 stating that both teamwork and productivity levels with higher values had more chances of variance.

ANOVA and coefficients-

ANOVA[a]

Double-click to activate		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1230.421	1	1230.421	14.849	.000[b]
	Residual	9860.719	119	82.863		
	Total	11091.140	120			

a. Dependent Variable: Productivity levels

b. Predictors: (Constant), Team Work

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	72.746	2.878		25.275	.000
	Team Work	-.346	.090	-.333	-3.853	.000

a. Dependent Variable: Productivity levels

Table 2: Teamwork and Productivity

Table 2 above shows that the overall importance of the regression model was tested using the ANOVA (Analysis of Variance) table. In the sum of the squares, the amount of regression variance in productivity levels through teamwork was seen to be 1230.421. The amount of residual that could not explain productivity levels through teamwork was 9860.719. The total sum of the squares was 11091.140. The df (Degrees of freedom) of Regression was 1 as Teamwork was the independent variable, as for the residual degree of freedom, the number of estimated parameters was subtracted from the number of data obtained (121 - 2 = 119, where 2 is the slope and same) and the total degree was the number of data subtracting 1 (121-1) i.e., 120. The mean square of regression was 1230.421, which showed the variation in productivity levels that each degree of freedom provided, and the mean square of residual was 82.863, which showed the average not explained variance in productivity levels. The F-value of this model was 14.849, calculated by dividing both the mean squares, and a better model was fit with a high F-value leading to an important change in the prediction of Productivity Levels between a model without teamwork and one with it as the predictor variable. The P-value of this model was 0.000 which was significantly below the usual significance level of 0.05, indicating that the regression model was statistically significant and that the likelihood that the association between production levels and teamwork in the result of random variation was less than 0.1%. The high F-value and low P-value confirmed the model's importance. The coefficients table showed the correlation between Teamwork and productivity and had a direction to the relationship. The B value, constant 72.746, teamwork was zero, and the expected productivity level was represented by the regression line's value. In this situation, productivity would have been expected to be 72.746 in the absence of teamwork. In the case of Teamwork, productivity Levels were predicted to decrease by 0.346 units for every unit increase in teamwork by the regression line's value. There was an inverse relation between productivity and working

together, as indicated by the negative coefficient. The standard error was 2.878 and for teamwork, it was 0.090 suggesting that it was approximately correct. The standardized form of the unstandardized coefficient, known as the beta coefficient, made it possible to compare variables on various scales. In the table, working in teams somewhat had a moderate negative impact on productivity levels, as indicated by the beta value for teamwork, which was -0.333. Teamwork had a negative regression coefficient (-0.346), indicating that increased teamwork was correlated with decreased productivity. The t-value and the p-value showed that this link was statistically significant and moderate.

Regression Analysis-

Regression

[DataSet0]

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Team Work[b]	.	Enter

a. Dependent Variable: Productivity levels

b. All requested vari Double-click to activate

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.333[a]	.111	.103	9.103

a. Predictors: (Constant), Team Work

Table 3: Regression Analysis

Table 3 above shows that the model was the analysis's first regression model. 'Teamwork' was the model's Independent variable (Predictor). 'Productivity levels' was the model's dependent variable (Prediction of outcome). There were no variables removed as none were listed and hence no variables were left out of the analysis, all of the chosen predictors were simultaneously entered into the model using the "Enter" method, which is a set procedure. The R-value was 0.333, this was the coefficient of correlation between the dependent variable (productivity levels) and the independent variable (teamwork), the linear link between the two variables was measured in terms of both strength and direction. The measure of a weak positive correlation was the value of 0.333. The value of R^2 was 0.111, which explains the coefficient of determination, and it indicates the percentage of the dependent variable's variance that the independent variable can account for. In this data, "Teamwork" explained 11.1% of the variation in "Productivity levels." The value of adjusted R^2 was 0.103, which explained that the variable changes the R^2 value according to the sample size and the number of predictors in the model, to correct potential bias. The value of the standard Error of the estimate was 9.103, this indicated how accurate the predictions were, and more accurate results were shown by lower values.

Discussion:

The analysis examined the relationship between team performance and productivity levels. Descriptive statistics indicated that higher cooperation led to greater differences in team performance and productivity. Regression analysis showed a significant inverse relationship between team performance and productivity, with a negative coefficient indicating that increased team performance was associated with decreased productivity. The R2 value suggested that team performance explained only a small portion of the variance in productivity.

Studies like those by Morgeson and Humphrey (2006) and Grant et al. (2009) supported the idea that individual work can enhance productivity. Other research (Newport, 2016) suggested that

individual work is more effective for tasks requiring creativity. Addressing employee well-being, mental health, and culture can also significantly improve productivity (Toon et al., 2018).

Limitations and Implications:

The study had 121 participants, and the small sample size limits the generalizability of the results. The findings may not apply to different populations, as the sample was from India, and cultural differences could influence outcomes. The study focused on teamwork and productivity but did not consider other factors like management, technical tools, motivation, and individual skills, which likely impacted the results. It was not a longitudinal study, and only sector and designation were considered, neglecting variables like age, gender, and socioeconomic status. The study also failed to account for participants who preferred working individually. Larger, diverse teams can be more effective, but when not managed well, they may lead to inefficiency and conflict.

The impact of Shift Work on Job Satisfaction: "A comparative study on of Free lancers and Work Shift Individuals"

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Abstract

This study compares job satisfaction between individuals working in shifts and freelancers. The independent variable is work type (shift vs. freelance), and the dependent variable is job satisfaction. Based on Locke's (1976) definition, job satisfaction is a pleasurable feeling from workplace appraisal. A sample of 112 participants will be randomly selected and assessed using the Brayfield-Roth Job Satisfaction Scale (1951) through a 5-point Likert-scale questionnaire. Data will be collected via Google Forms, ensuring confidentiality, and analyzed using SPSS with descriptive statistics and t-tests. Results show that shift workers report higher job satisfaction than freelancers, supporting the null hypothesis. Factors contributing to shift workers' satisfaction may include flexible hours, breaks, holidays, and workplace comfort. Limitations exist, but findings suggest freelancers could improve job satisfaction by focusing on structured scheduling and work-life balance.

Introduction: Work Shift And Its Effect On Job Satisfaction

Hospitality management is the study of the hospitality industry, a field that requires a diverse workforce operating around the clock to maintain efficiency, particularly during peak periods like weekends and holidays. Work shifts are strategically planned, assigning individuals different working hours based on their qualifications, experience, and the organization's needs. These shifts often change due to factors such as promotions, workload demands, and additional manpower requirements. Given the physical nature of the work, job satisfaction among employees in this sector varies greatly. Job satisfaction refers to an individual's overall sense of well-being and happiness concerning their work, which significantly impacts performance. Locke (1976) defines job satisfaction as the pleasurable feeling derived from workplace appraisal. It is influenced by personal factors like age, gender, and family, as well as job-related and management-controlled factors such as working hours, workload, respect, and pressure. In a demanding corporate environment like hospitality, satisfaction levels are affected by stress, work atmosphere, and personal motivations for employment, such as survival, financial dependency, or career growth. This study focuses on two key variables: work shifts and freelancers, examining their job satisfaction levels. Freelancers are individuals who manage their work alongside other life responsibilities, including family or personal ventures. This category often includes women balancing family and work, as well as individuals running businesses in the hospitality sector rather than adhering to fixed shifts. The comparative analysis will help distinguish between those who work out of choice and those who work due to external factors. The research is grounded in findings from three key studies. The first, by Peter Heimerl et al. (2020), explores factors influencing job satisfaction in the Alpine hospitality industry. Although this study broadly considers management, salary, and family dynamics, the current research narrows its focus to work shifts. The second study, by K. Venu Achari (2021), specifically examines job satisfaction in shift work. This study serves as a critical reference, highlighting age as a significant factor in satisfaction, though age will not be restricted in the current research. The third study, by Dong Xinxin (2021), investigates the influence of work-life balance on freelancers' job satisfaction in Malaysia, particularly focusing on women managing family and work. While not limited to the hospitality sector, Xinxin's study provides valuable insights into freelancers' satisfaction levels. The studies highlight gaps that the current research aims to address. Heimerl et al. (2020) focus on broader organizational factors, while Xinxin (2021) emphasizes freelancers'

work-life balance at a personal level. Venu Achari (2021) centers on job satisfaction related to work shifts but overlooks freelancers entirely. These limitations, coupled with evolving social and professional dynamics, necessitate a comparative study of work-shift employees and freelancers within the hospitality sector. By analyzing these two groups together, this research will offer new insights into job satisfaction, addressing both work-based and personal influences.

Methodology

A survey was conducted to study job satisfaction among individuals in hotel management, comparing freelancers and work-shift employees. Using a random sampling method, 113 responses were collected, ensuring demographic diversity in gender, age, social background, and job roles. To maintain confidentiality, participants' names and emails were not collected, and their responses were obtained with informed consent. The survey included 50 female, 62 male, and one transgender participant. Responses were equally divided between freelancers (57) and work-shift employees (57), ensuring balance for comparison. Data was collected via Google Forms, which included demographic details such as age range, gender, socioeconomic status, and areas of work. Job satisfaction was measured using the Brayfield-Roth Job Satisfaction Scale (1951), consisting of 18 questions scored on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." The survey focused on assessing overall job satisfaction, with scoring conducted accordingly. To ensure reliability and validity, responses were analyzed using a psychometric t-test, and both measures were found satisfactory. A correlational design was used to explore the relationship between job type (freelancers vs. work-shift) and its effect on job satisfaction. The study emphasized that work type significantly impacts satisfaction levels, as supported by earlier research. Ethical measures were strictly followed to ensure participant privacy and confidentiality. Initials, instead of full names, were collected, and no email IDs were recorded. Participants were fully informed about the research purpose, and their data was collected only with consent. While detailed demographic information was gathered, only job type and satisfaction responses were analyzed, with all personal details kept confidential. This approach ensured ethical integrity and realistic, unbiased data collection.

Results

The collected data was thoroughly analyzed using SPSS software. SPSS statistics is a statistical software developed by IBM (2009) for data management, advanced analytics, investigation and understanding detailed correlation and statistics. As this study had two independent variable and one dependent variable it formed a 2-level research study. Hence, it was analyzed using t-test. Descriptive statistics was first conducted to observe its standard deviation and further was run through t-test over independent samples test and their effects.

Descriptive statistics:

	N	**Min**	**Max**	**Mean**	**Standard deviation**
Job satisfaction	112	47.00	81.00	55.9196	4.9935
	112				

The above table is a descriptive table which is also considered to be the summary of data set and is analyzed based on the variable called job satisfaction. Here, "N" represents the total number of responses collected. "Min" and "Max" are minimum and maximum job satisfaction scores respectively and it has calculated the mean of job satisfaction before stating the standard deviation. Higher standard deviation results in more variability whereas lower standard deviation as compared to the mean indicates, scores being closer to it. Here, we can finally observe that the standard deviation is observed to be "4.9935" which can also be considered as "5" and indicates low spread of points hence indicating scores being close to the mean.

T test analysis:

Group statistics

	IV	N	Mean	Standard deviation	Standard error mean
Job	Work shift	56	57.1786	5.82192	.77799

satisfaction					
	Free lancers	56	54.6607	3.64954	.48769

This table above, explains and analysis the conduction of t-test on the collected data to understand correlation and significancy of collected data. It deals with two "IV" which is independent variables, work shift and free lancers. It observes the total number of participants in both the study and works on observing its standard deviation to understand its reliability and validity. Standard error mean indicates the estimated level of job satisfaction. It's observed in the above table that the free lancers indicate lower standard error mean indicating more estimation for job satisfaction than work shift.

Independent sample test

Job satisfaction	Equal variances assumed Equal variance not assumed	F 3.815	Significance .053
		t-test for equals of means	
T	Df	Significance one sided	Two sided
2.742	110	.004	.007
2.742	92.443	.004	.007

		Confidence interval of the difference	
Mean difference	Standard error difference	Lower	Upper
2.51786	.91821	.69818	4.33753
2.51786	.91821	.69433	4.34138

Here, the above table analysis detail outcomes of two equal variables in context of job satisfaction, "F" signifies F-statistics from Levene's test for equality of variables, it basically assesses equality between the two groups. Significance is basically the ep-value which further signifies whether the study is in-line or not. Here, the significance is observed to be .053 which is greater than .05 which states that null hypothesis has been accepted hence rejecting the alternate hypothesis and thus proving the study to be not in-line. Further the t-test is evaluated for equality, in which t-statistics analysis whether two groups are significantly different or not. The "df" here analysis the degree of freedom which observes how many numbers of values are free to vary. Furter the table analysis significance for one sided and two sided which basically observes the significantly higher mean between both groups differently and initially. The last table here observes the confidence interval of difference which again observes the mean, standard deviation, the lower and the upper bound of confidence interval. The overall observation states statistically significant difference and confidence interval in context of job satisfaction. The mean difference here is observed to be 2.51786 with 95% of confidence interval stating that true difference between the population lies between .69818 and 4.33753.

Independent samples effect sizes

				95% confidence interval	
		standardizer	Point estimate	Lower	Upper
Job	Cohen's d	4.85870	.518	.140	.894

satisfaction					
	Hedges correction	4.89215	.515	.139	.888
	Glass's delta	3.64954	.690	.295	1.079

This table totally explains the different types of analysis performed. The difference between two groups is analyzed using three different standardizers Cohen's d which compares mean between two groups. Hedges correction which is used when sample sizes are small or unequal and Glass's delta which is uses standard deviation of control as denominator. The point estimate explains effect sizes for each and the confidence range is found to fall 95% confidence.

Discussion

A study was conducted on job satisfaction among individuals working as free lancers and work shift in hospitality industry. The data was collected following all rules and maintaining privacy and confidentiality or participants. Data collected was analyzed using SPSS statistical software and t-test and descriptive statistics was conducted. Further study and observation explained that the study accepts the null hypothesis hence rejects the alternate hypothesis and is found to be not in line. The significance found in statistical analysis is .053 which is greater that .05 hence not in line. This analysis states that individual working in work shift has higher job satisfaction as compared to individuals working as free lancers. There are various supportive research studies. There was a study conducted on shift work and job satisfaction among nurseswhich was found to be presented in International Journal of Hospital Sector, by Moradi et. al. (2014). This study states that nurses who chose to do work shift were more satisfied than the ones who were forced to work in work shift. Hence, this study states that self-decision and choices plays a vital role. There could be the chance that in the above conducted study, individuals working in working in work shift may have chosen it, hance resulting in higher job satisfaction amongst shift workers. One of the other studies focusing on Chronotype patterns and their effect on job satisfaction, found in chronobiology international, by Amini et. al. (2021) states that maintaining individual chronotype can also lead to higher level of job satisfaction. Chronotype is basically individuals comfortable or habitual schedule, which focuses on their biological needs aligned with timing. There could be a chance that in above conducted research, though they had lot of loads work their chorological needs were taken into consideration. One more study supporting that work shift have higher job satisfaction focuses on determinants of shift work impacting job satisfaction. This study was conducted in Pakistan and is found in International Journal of Research in Business and Social Science, by Wasim Abbas Awan (2013). It focused and analyzed various different determinants of job satisfaction amongst individuals working in shift work. Their result suggested that atmosphere at job place and changes in working patterns and availability of sources for individuals because of industrial revolution does effects job satisfaction to be higher. Hence, it could be stated that in the study conducted amongst hospitality sector, the work atmosphere must be maintained to utmost limits and maybe the individuals are provided with sources to make them comfortable too.

LIMITATIONS AND PRACTICAL APPLICATION

Referring to various above-mentioned studies we can state that various factors like atmosphere, maintained schedules and their further maintenance, self-will and choices and many other reasons like having a fixed schedule, having less responsibility as compared to boss or owner which makes it easy to take a leave or back off, fixed wages or salary, promotions etc. can all lead to have higher job satisfaction amongst individuals working in work shift. The limitation of this study is that it only focused on individuals working in hospitality sector which makes it possible that the results may vary if analyzed for some different grounds of works. Also, the number of participants seems to be quite a few, hence more participants could also result in changed results. Further the limitation could be that it directly focused on job satisfaction and not on various determinants individually, maybe focusing or considering one particular determinant or a group of it can lead to have effects on results. Individual's working as free lancers can actually focus on their workforce

planning, higher stress with no time management can be a great reason for less job satisfaction. They can also focus on programs which focus on developing free lancers and considering their support initiatives can also make changes in job satisfaction amongst free lancers.

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The Interplay of Benevolent Sexism, Imposter Syndrome, and Gig Economy Participation Among Female Freelancers

Noorus Seher Imran Ansari

Abstract:

This study investigated the relationships between Benevolent Sexism (BS), Imposter Syndrome (IS) and gig economy participation among female freelancers in male-dominated fields. A convenience sampling method was used to collect 120 female participants (N=120) who completed an online survey using Google Forms. The survey employed the MIMI-16 scale to measure BS, the Young Imposter Scale to measure IS, and a brief questionnaire on gig economy participation. Data analysis was done through multiple linear regressions using the SPSS version 20 software. Results revealed that benevolent sexism was a significant predictor of imposter syndrome (F-value= 33.374, $p < 0.001$), suggesting that exposure to subtle forms of sexism and gender bias may contribute to feelings of fraudulence, unworthiness and self-doubt among women in professional settings. Additionally, benevolent sexism was found to be a significant predictor of increased gig economy participation (F-value= 89.889, $p < 0.001$), indicating that women experiencing benevolent sexism may be more likely to seek out freelance and gig work opportunities. The system justification theory and stereotype threat theory were used to explain how BS attitudes toward women might lead to imposter syndrome. This offers insights into the psychological mechanisms underlying women's career choices in response to benevolent sexism. The study suggests that while the gig economy may offer an alternative to traditional work environments where BS is prevalent, it may not necessarily remove feelings of imposter syndrome. Study limitations include its cross-sectional design and reliance on self-reported data. Future research directions include longitudinal studies to examine long-term career trajectories, cross-cultural comparisons, and intervention studies aimed at reducing the effects of BS and IS. The findings have practical implications for organizations, career counselors, gig economy platforms, policymakers, etc. This research helps us understand the complex relationship between Benevolent Sexism and women's experiences in the modern workplace, particularly in the growing gig economy.

Keywords: Benevolent Sexism, Imposter Syndrome, Gig Economy, Regression Analysis, Organizational Psychology

Introduction:

The gig economy, characterized by flexible, short-term freelance jobs, is gaining prominence. However, benevolent sexism in male-dominated fields continues to hinder women's career progression. This study aims to examine the relationship between Benevolent Sexism, Imposter Syndrome, and career progression among female freelancers in male-dominated sectors of the gig economy.

Methodology:

- **Participants:** 120 female participants from various male-dominated sectors (technology, engineering, etc.) were included in the study.
- **Measures:**
  - **Benevolent Sexism:** Measured using the MIMI-16 scale.
  - **Imposter Syndrome:** Measured using the Young Imposter Scale.
  - **Gig Economy Participation:** Assessed using a researcher-developed five-item scale.
- **Procedure:** Data was collected through an online survey using Google Forms.
- **Data Analysis:** Multiple linear regression analyses were conducted using SPSS.

Results:

- **Regression Analysis 1 (BS and IS):**
  - Significant positive correlation between BS and IS.

- 22% of the variance in IS can be explained by BS.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Benevolent Sexism[b]	.	Enter

a. Dependent Variable: Imposter Syndrome

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.470[a]	.220	.214	1.511

a. Predictors: (Constant), Benevolent Sexism

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.167	1	76.167	33.374	.000[b]
	Residual	269.300	118	2.282		
	Total	345.467	119			

a. Dependent Variable: Imposter Syndrome

b. Predictors: (Constant), Benevolent Sexism

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.837	.859		.975	.332
	Benevolent Sexism	.069	.012	.470	5.777	.000

a. Dependent Variable: Imposter Syndrome

- **Regression Analysis 2 (BS and Gig Economy):**
  - Strong positive correlation between BS and Gig Economy participation.
  - 43.2% of the variance in Gig Economy participation can be explained by BS.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Benevolent Sexism[b]	.	Enter

a. Dependent Variable: Gig Economy

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658[a]	.432	.428	2.553

a. Predictors: (Constant), Benevolent Sexism

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	585.744	1	585.744	89.889	.000[b]
	Residual	768.923	118	6.516		
	Total	1354.667	119			

a. Dependent Variable: Gig Economy

b. Predictors: (Constant), Benevolent Sexism

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.755	1.451		2.588	.011
	Benevolent Sexism	.192	.020	.658	9.481	.000

a. Dependent Variable: Gig Economy

DISCUSSION:

This study examined the relationships between benevolent sexism, imposter syndrome, and gig economy participation among female freelancers in male-dominated fields. Our findings reveal a significant correlation between these variables.

Benevolent sexism was found to be a significant predictor of imposter syndrome. This relationship can be explained by the 'system justification theory'. It states that stereotypes that might seem positive can reinforce gender inequalities (Jost et al., 2004). System justification theory suggests that people from disadvantaged groups can internalize the cultural values and attitudes that oppress them, leading members to favor the existing system, identify with those in power, and hold false beliefs about themselves and the group's well-being (Roy et al., 2019). Women dealing with BS may internalize the seemingly positive stereotypes about themselves. These stereotypes, like the idea that women are naturally nurturing or better suited for supportive roles, can cause women to question their ability in leadership positions. BS can also lead to outgroup favoritism among females where those who experience various forms of sexism might develop a tendency to favor the abilities of their male colleagues over their own. This can ultimately lead to IS because they constantly compare themselves to an idealized "male standard". BS can lead to false beliefs in females where they might feel that the current system is fair which might lead them to attribute their success and achievements to external factors such as being 'helped' or 'protected' rather than their competence which causes feelings of imposterism (Van der Toon & Jost, 2014; Jost, 2019)

The 'Stereotype threat theory' is another theory that can explain how BS can lead to Imposter Syndrome. This theory states that when people fear that they might confirm negative stereotypes about their social group, they might underperform which reinforces these negative stereotypes (Heaning, 2023). Hence, when women face BS in male-dominated fields, they become hyper-aware of the gender stereotypes that question their competence and suggest that they are better suited for supportive or clerical roles. This awareness can trigger a state of stereotype threat, where the fear of confirming negative stereotypes can lead to mental and emotional stress. As a result, women tend to be more self-conscious and concerned about their performance, which is a big part of imposter syndrome (Spencer et al., 2016; Inzlicht & Schmader, 2012).

The research of Glick and Fiske (1996) on ambivalent sexism further supports this finding. Their study indicates that benevolent sexism, a set of stereotypes that are both patronizing and positive in tone, has detrimental effects on women. This can undermine women's confidence and can lead to feelings of being an imposter in professional settings.

Our results also showed a strong positive relationship between BS and increased participation in the gig economy. This finding aligns with the research done by Micha et al. (2022) and Jackson (2024) on gender dynamics in platform-based work. This study shows that women may turn to freelance and gig work because of discrimination in male-dominated workplaces. The flexibility of gig work might help females to overcome gender biases, as proposed by Pober (2019) in his study on 'an avenue to women's economic empowerment'. According to this study, the flexibility and low barriers to entering the gig economy, which is more inclusive, can be appealing to women who face BS in traditional work settings.

'Social Role Theory' describes the impact of BS on women's participation in the gig economy. According to this theory, gender roles are created because of the historical division of labor between

men and women (Eagly & Wood, 2012). These roles turn into stereotypes about the inborn traits and abilities of each gender. BS which portrays women to be nurturing and better suited for supportive roles, aligns with these traditional gender stereotypes (Franke et al., 1997). Thus, women experiencing BS in traditionally male-dominated fields might be inclined to choose freelance gig work that better fits these traditional stereotypes and provides flexibility.

The relationship between benevolent sexism, imposter syndrome, and gig economy participation highlights the complexity of women's professional experiences. This suggests that while the gig economy offers an alternative to traditional workplaces where benevolent sexism is prevalent, it does not eliminate feelings of imposter syndrome completely. The gig economy might reproduce existing inequalities. The existence of gender discrimination and wage gaps in online job markets indicates that BS exists in this economy as well. These discriminations lead to feelings of self-doubt, which eventually leads to Imposter Syndrome. This is consistent with Pober's (2019) work on 'an avenue to women's economic empowerment'.

Limitations:

A small sample size, focus on women only, and lack of consideration for factors like caste and socioeconomic status.

Applications:

The findings of this study have several practical implications that can address the challenges faced by female freelancers in male-dominated fields within the gig economy. Organizations can use these results to develop more diverse and inclusive training programs that address BS and its impacts on women's career experiences. Career counselors can use this knowledge when they advise women on their career choices, particularly within the gig economy.

Gig economy platforms can implement features or policies that help minimize the effects of benevolent sexism and imposter syndrome. For eg., they might create support systems for freelancers. Educational institutions may use these insights to prepare students for the challenges they might face in evolving work environments.

Policymakers can use this research to make regulations aimed at promoting gender equality in traditional and gig economy work settings. For eg., policies could be developed to ensure fair compensation and working conditions for gig workers. This study can empower female freelancers by making them aware of the challenges they might face so that they can develop coping mechanisms and strategies for overcoming them.

Since this study is internally valid as it focuses on a relatively homogenous group of females working in similar fields, it can allow for a more focused examination of the relationship between BS, IS and career progression within the gig economy.

Future Research:

- Longitudinal studies.
- Cross-cultural comparisons.
- Inclusion of identity factors.
- Mixed-methods research.
- Investigation of long-term psychological impacts.

Conclusion:

This study reveals a significant relationship between benevolent sexism, imposter syndrome, and gig economy participation among female freelancers in male-dominated fields. Our results show that benevolent sexism predicts both increased imposter syndrome and higher gig economy participation, highlighting the subtle yet impactful influence of gender biases on women's career experiences and choices.

These results suggest that while the gig economy offers an alternative to traditional work environments, it does not necessarily protect women from the mental and emotional impacts of BS. The prevalence of IS in gig workers indicates that stereotypes and biases prevail in all work environments.

Our findings have important implications for organizations, policymakers, counselors, etc in addressing BS and supporting women's success in evolving work environments. Future research should examine long-term outcomes, cross-cultural differences, and interventions that can reduce the effects of BS and IS. By addressing this, we can work towards creating more inclusive work environments for women enabling them to thrive professionally.

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The role of Education Technology in Transforming Teaching and Learning Process

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Abstract: -

This paper explores the impact of education technology (Ed Tech) on teaching and learning in contemporary education. It has transformed a passive classroom to an active and interactive classroom, with audio- visuals, charts and models, smart classroom, and e-learning room which has drastically motivate and increased the attention level of the students.

Through systematic organization of content and instructional material, educational technology has provided well- integrated structure material for teachers does saving a lot of their time which in turn maybe utilize for creative work and quality improvement. Students who appear for higher or competitive examinations how been benefited by educational programmed on TV radio and internet.

1.Introduction

In the world that we currently leave in, technology is a vital factor with each passing day a new software or gadget is being brought into the market that serves to improve our lives in one way or another. Technology please a major role in every field where its presence is utmost is in education sector with the advancement in technology, education among the people has begun to proliferate and there is continuous research and development going on introducing advanced technologies to make education easier, joyful and accessible. Nowadays with the help of technology the education for children is no longer boring and cumbersome as the educational technology have make it much more interesting and easier to use.

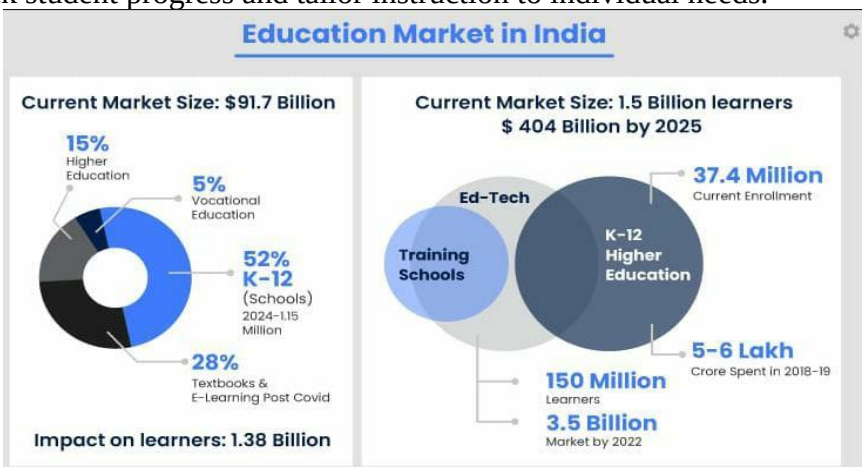
Study while playing has been made possible only by the new technology. Distance education is a great aid to students who were not able to pursue their degrees. Now due to rapid change in technology, distance is more barrier.

Educational technology uses are broadly classified as: -

1. Technology as a Tutor
2. Technology as a teaching tool
3. Technology as a learning tool

2.Definition

Today, modern classrooms are unrecognizable from their predecessors. Interactive whiteboards have replaced chalkboards, and virtual reality (VR) simulations are redefining experiential learning. Data analytics, which were practically nonexistent in the past, now empower educators to track student progress and tailor instruction to individual needs.



3.Types of Educational Technology

Gamification

Gamification is the process of adding game-like elements to non-game situations, such as classroom activities or lessons.

AR & VR

Virtual reality (or VR) uses special headsets with screens, motion sensors and audio to create a lifelike 3D environment that you can interact with and explore, even though it's all being generated by a computer. It feels like you've stepped inside a video game or movie!

Augmented Reality (AR) is the technology that layers computer- generated imagery on top of an existing reality, giving us the ability to experience the world in a new way.

Smart Class

The advancement of education calls for classrooms equipped with technology. Various technical solutions support teaching, and the foundation undoubtedly includes computers, tablets, projectors, and integrated software.

4. Historical Evolution of EdTech

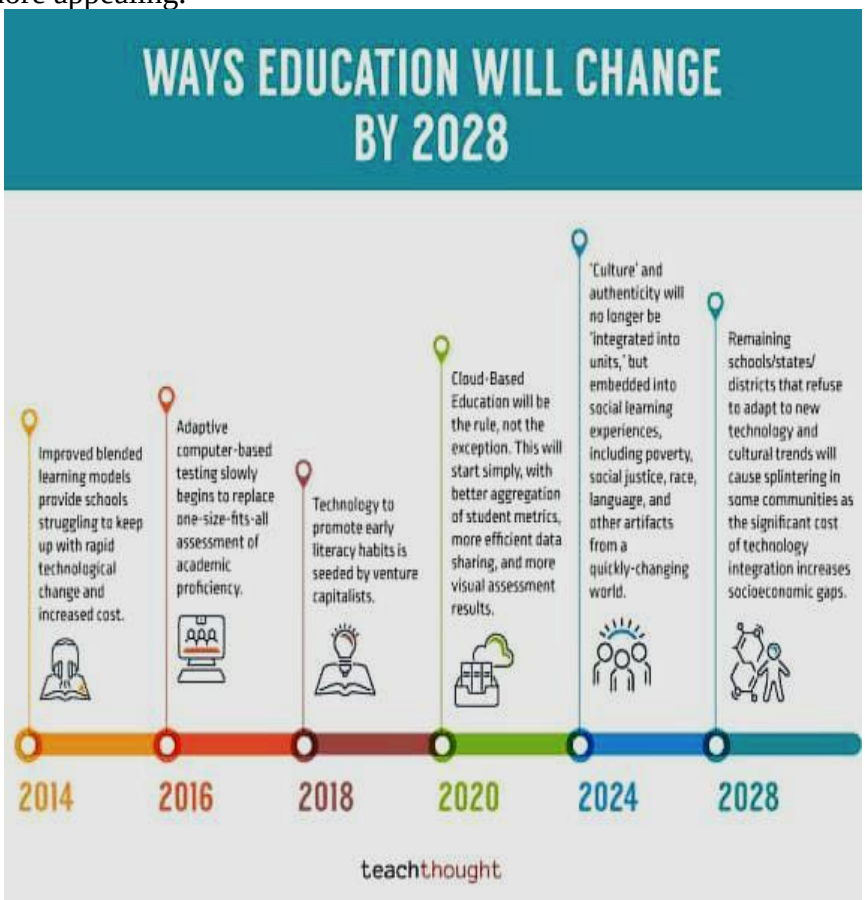
EdTech's journey began with basic tools such as overhead projectors and evolved into sophisticated systems like online learning platforms and adaptive learning algorithms. This section traces the timeline of key technological milestones and their adoption in education, setting the stage for understanding current trends.

5. Benefits of EdTech Integration

EdTech has redefined the educational landscape in several ways:

Improved Access to Education: Digital platforms enable remote learning, bridging geographical and financial barriers. Massive Open Online Courses (MOOCs) and mobile learning have expanded access globally.

Enhanced Student Engagement: Interactive content, gamification, and multimedia elements make learning more appealing.



Personalized Learning: Adaptive learning technologies analyze individual performance and customize educational content accordingly.
Teacher Support: Tools like Learning Management Systems (LMS) streamline administrative tasks, allowing teachers to focus on instruction.
Inclusive Education: Assistive technologies ensure students with disabilities have equitable learning opportunities.

6. Challenges of EdTech Implementation

Despite its potential, the adoption of EdTech presents significant hurdles:

Digital Divide: Unequal access to devices and the internet exacerbates educational inequities.
Data Privacy and Security: Protecting student information from breaches and misuse is a critical concern.
Teacher Training: Inadequate professional development for educators hampers effective technology integration.
Over-Reliance on Technology: Excessive dependence on digital tools may undermine critical thinking and interpersonal skills.

7. Case Studies of EdTech in Action

Khan Academy: This platform's free resources have democratized access to quality education globally.
Google Classroom: Widely adopted during the COVID-19 pandemic, it demonstrated the potential of EdTech in sustaining education during crises.
VR and AR in STEM: Virtual and Augmented Reality applications in STEM education have revolutionized experiential learning.

8. The Future of EdTech

The trajectory of EdTech points towards the integration of cutting-edge technologies:

Artificial Intelligence (AI): AI-driven tools can enhance learning experiences by providing real-time feedback and tutoring.
Blockchain in Education: Blockchain can ensure secure, transparent credentialing and record-keeping.
Virtual Reality (VR) and Augmented Reality (AR): Immersive technologies promise new dimensions in experiential learning.
Gamification: Game-based learning platforms will continue to evolve, promoting active engagement and problem-solving skills.
Sustainable Tech Solutions: Innovations aimed at minimizing energy consumption and cost will address accessibility concerns in low-resource settings.

9. Policy Implications and Recommendations

- Governments and educational institutions must prioritize infrastructure development to bridge the digital divide.
- Data protection laws should be strengthened to secure student information.
- Comprehensive teacher training programs are essential for effective EdTech integration.
- Collaboration between EdTech developers and educators can create tools aligned with pedagogical needs.

10. Conclusion

Education technology has transformed teaching and learning processes, offering unprecedented opportunities for innovation and inclusion. However, its widespread adoption demands careful planning and execution to address challenges and ensure equitable access. By leveraging emerging technologies and fostering a collaborative approach, EdTech can become a cornerstone of 21st-century education.

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Trade Agreements & Its Impact

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Abstract

This research explores the multifaceted effects of trade agreements on both member and non-member countries, examining their economic, social, and political implications. Trade agreements, which aim to reduce barriers to trade and promote economic integration, have significant advantages for participating nations, including increased market access, enhanced competitiveness, and economic growth through lower tariffs and streamlined regulations. However, the research also highlights the often overlooked negative consequences for non-member countries, such as trade diversion, diminished market opportunities, and the potential for economic marginalization.

Keywords: Trade agreements, India, Types, Integration, International Trade Relation.

Introduction

An agreement between two or more countries concerning trade in goods or services, aimed at eliminating trade barriers and promoting good international trade and commercialrelations througho ut the world. When two or more countries come together on tradeissues, they enter into an agreemet whichiscalledastrade agreement.Trade agreements play an important role in supporting suppliers and increasing trade. They promote job creation and economic expansion by reducing or eliminating all tradebarriers. These agreements cover a wide range of industries/sectors, such as manufacturingagric ulture, services, and more. It creates special conditions for access to foreign markets. In addition, tra de agreements stimulate business growth, increase competition, improvecustomer service and increa se investment.

What is Bilateral Trade?

Any trade or investment between two countries is called a bilateral trade agreement. By signing a bilateral trade agreement, both countries can reduce or eliminate trade barriers. It aims to e xpand access to trade and economic growth in both countries. They ensure fairtrade by preventing pi racy, unfair subsidies and antidumping. These agreements regulate regulations, labour standards and environmental protection.

The concept of bilateral trade, even the socalled twin/sister agreement, dates back decades bu t has gained a lot of momentum and interest in recent years, especially in the current central govern ment. The main idea behind these agreements is to encourage cooperation between different regions, allowing them to work together and share resources, expertise and bestpractices from many sources. This initiative is a great way to develop cultural, political, economic and commercial relations.

Bilateral Trade in India

The Government of India has implemented bilateral trade between Indian states and cities and their international partners in partner countries. These agreements facilitate the exchangeof ideas, kn owledge and innovation between the countries, creating a positive andwinwin situation. By encourag ing collaboration, Indian states and cities can learn from foreign partners, use best practices and coll aborate on development projects. The results of thesecollaborations often go far beyond the boundari es of governments or professional bodies,providing significant benefits to citizens. These partnershi ps can improve the quality of life in the society by supporting the development of infrastructures suc h as better transportation, electricity and communication technology. The agreements and conditions /rules or regulations for joint ventures are known as joint ventures. This type of trade often occursin the context of international organizations such as World Trade Organization (WTO), which promote open and fair trade among members.

These are some of the bilateral agreements established over the past decade between Indian states and cities and their foreign partner nations, focusing on promoting shared cultural values, fostering economic exchange, and strengthening diplomatic relations:

Gujarat and Guangdong Province, China (2014)	Gujarat and Hyogo Prefecture, Japan (2016)
Rajasthan and South Australia State, Australia (2015)	Andhra Pradesh and Sichuan Province, China (2016)
Karnataka and Sichuan Province, China (2015)	Andhra Pradesh and Guizhou Province, China (2016)
Kerala and Sanin, Japan (2015)	Meghalaya and Wallonia Region, Belgium (2017)
Gujarat and Hyogo Prefecture, Japan (2016)	Karnataka and Indiana State, USA (2017)
Andhra Pradesh and Sichuan Province, China (2016)	Uttarakhand and Bali, Indonesia (2018)
Andhra Pradesh and Guizhou Province, China (2016)	Delhi and Fukuoka Prefecture, Japan (2018)
Meghalaya and Wallonia Region, Belgium (2017)	Andhra Pradesh and the Canton of Zurich, Switzerland (2018)
Karnataka and Indiana State, USA (2017)	Assam and Chiang Mai Province, Thailand (Year not specified)
	Delhi and Fukuoka Prefecture, Japan (2018)

What is Multilateral Trade Agreement?

Trade which involves three or more nation, where these nations agree to carry on business activities with each other on mutually agreed terms and conditions/rules or regulations is known as multilateral trade. This type of trade generally takes place within the context established by the international organisations, such as the World Trade Organisation (WTO), which promotes open and fair trade between member countries.

In multilateral trade system, the countries who have entered into the agreement, negotiate for goods, services, intellectual property, employment and environmental conservations. They also reduce the barriers completely or eliminate them to a certain extent. Countries enter into this agreement to ensure smoother trade flows globally.

It encourages unity economically, eliminates market entry barriers, encourages peacekeeping and enhances global cooperation by creating opportunities for all member nations to benefit from open and fair trade.

Multilateral Trade in India

Multilateral trade agreement has had a significant impact on the Indian economy, increasing th e level of international competitiveness and encouraging the industry to develop and adopt internatio nal standards. These multilateral trade agreements promote Indian trade/commerce to foreign market s. Therefore, this exhibition encourages Indian businesses/enterprises to improve their performance s tandards and develop new ideas and strategies to remain competitive.Due to numerous foreign trade, India has experienced the penetration of new and advanced technologies and thus modernized its pr ocesses. This practice also increasesefficiency, effectiveness and meets the needs of the global mark et. Indian companies insectors such as IT, manufacturing and logistics can learn from their internatio nal counterparts, use new technologies and improve business processes. Technology transfer is parti cularly important in areas such as renewable energy, where India is adopting good practices and gree n technologies to meet global standards.In summary, the multilateral trade agreement not only expos es the Indian economy to global competition but also provides opportunities for growth, innovation and technology utilization.India has signed many trade agreements with many countries. These agre ements are designed to promote economic cooperation and integration among member countries, primarily aimed at promoting trade in goods and services, investment capital and other regional busi nesses.

India has entered into several multilateral trade agreements with various countries.Here are some of the major multilateral trade agreements of which India is a part:

- World Trade Organisation (WTO)
- Regional Comprehensive Economic Partnership (RCEP)

- South Asean Free Trade Area (SAFTA)
- India-MERCOSUR Preferential Trade Agreement (PTA)
- India-Gulf Cooperation Council (GCC) Free Trade Agreement (FTA)

What is Regional Trade Agreement?

Trade agreements within a specific geographic region is known as regional trade agreement. These agreements are designed to encourage economic cooperation and integration among the member countries, often focusing on enhancing trade in goods and services, investment flows, and other economic activities within the region.

Types of Regional Trade Agreements:

1. Preference Trade Agreements: There are limited reductions in trade barriers, offering preferential tariffs on selected goods rather than fully removing all trade restrictions. They do not share common external barriers.
2. Free Trade Area (FTAs): All trade barriers are eliminated this enables the member nations to move goods and services freely within nations.
3. Custom Unions: Member nations agree to eliminate tariffs, quotas and other trade barriers on goods and services. They also impose common negotiation barriers on non-members.
4. Common Market: It not only allows free movement of goods and services but also includes free movement of factors of production, across member nation. They remove all trade barriers, frame and co-ordinate economic policies and allow free flow of resources.
5. Economic Union: It is type of trade bloc which consist of common market and custom market. The members agree to eliminate trade barriers, free movement of goods and services and aim to adopt common external trade policies for non-members.

Regional Trade Agreements in India.

As mentioned by the Press Information Bureau, Government of India, Ministry of Commerce & Industry India has signed 13 Regional Trade Agreements with various which are as follows:

- India-ASEAN FTA
- India-Singapore CECA
- India-Malaysia CECA
- India-Thailand FTA - Early Harvest Scheme
- India-Japan CEPA
- India-South Korea CEPA
- Agreement on SAFTA
- India-Sri Lanka FTA
- India-Nepal Treaty of Trade
- India-Bhutan Agreement on Trade, Commerce and Transit
- India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)
- India-UAE CEPA
- India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA)

Impact of Trade Agreements

Positive Impact	**Negative Impact**
• Motivate The Traders to Trade Globally.	• Diversion of trade
• Creates A Better Relationship with The Member Nations.	• Barriers to market access
• Generates Employment.	• Decline in market position
• Reduces Trade Barriers.	• Market disintegration
• Increases Foreign Direct Investment.	• Exploitation of Resources
• Lowers Entry Barriers	• Over-dependence only on member countries
• Boosts Economic Growth	• Group negotiations
• Consumer Prices Are Reduced	• Loss of jobs

• Promotes Peace and Stability	• Diverted Foreign Direct Investment

Conclusion

Trade agreements have a profound impact on participating countries, offering benefits such as increased market access, reduced tariffs, and enhanced economic cooperation. They can drive economic growth, foster innovation, and improve competitiveness by reducing trade barriers and creating efficient supply chains. However, while these agreements bring substantial benefits to members, they can also have negative consequences for non-member countries. Non-members may face trade diversion, reduced market access, and higher tariffs, which can hinder their economic growth and competitiveness.

Moreover, the creation of trade blocs can lead to economic isolation for countries outside the agreements, potentially limiting their foreign direct investment and influence in global trade. Additionally, non-members may be pressured to align with the standards and regulations set by the agreements, which can lead to increased costs or the need for significant policy adjustments.

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Effects Of Personality Traits On Workplace Behaviour

Shravani Gharat

Abstract

The purpose of this study was to understand whether the individuals in an organizational setting who are on the spectrum of the Dark Triad (DT) engage in Counterproductive Work Behavior (CWB) or not. The number of individuals that participated in the survey was 111 (N=111) amidst which all individuals upheld different sectors and designations and were residents of India. The data was collected through convenience sampling. The data was collected via an online survey where the shorter versions of the Dark Triad (SD3) scale and Counterproductive Work Behaviour (CWB-C) checklist were used. The study contributes to the previous literature that emphasizes on how DT traits can be harmful to an organization. The results indicated that there was a positive relationship between psychopathy and counterproductive work behaviors; however, a moderate positive correlation was found with Machiavellianism and narcissism with CWB. Data was assessed using SPSS (Statistical Package for the Social Sciences) software and descriptive statistics as well as regression analysis is further discussed in this study. Keywords: Machiavellism, Narcissism, Psychopathy, dark personalities, Counterproductive Work Behaviour. INTRODUCTION: Counterproductive Work Behavior or CWB is a list of behaviors that is detrimental to an organization. While there are multiple definitions of CWB, there's also an argument that some behaviors don't cause direct harm to an organization and yet are one of the five dimensions of CWB. One of the factors affecting this is the state of an individual's negative emotions (Savita, 2019). While there are many personality traits that can cause and affect counterproductive work behavior, one aspect to be touched upon is The Dark Triad (DT). Delroy L. Paulhus and Kevin M. Williams (2002) coined the term "The Dark Triad" which includes three traits that are on the brink of exploitative nature—narcissism, machiavellianism and psychopathy (Paulhus & Williams, 2002). Each of these traits portray some amount of empathy deprivation, self-interest and cynicism which can be a crucial causal factor in morally aversive acts that can be dangerous to an institution or a member of the same. There has been exceeding interest in the study of workplace behavior and its relationship with the DT traits however most of it has been giving spotlight to higher roles of 2 the hierarchy when it can be stemming from the lower designation too—both of which are equally harmful to an organization (Schyns et al, 2019). The behavior styles of those scoring high on DT are negative and exhibit behavior such as antisocial traits, self indulgence, manipulation etc (Swati, 2017) however some researches paint evidence that DT personality traits can also be fruitful since they can provide favorable modifications in conditions that need adaptability (Schyns et al, 2019). Savitha (2019) stated that Counterproductive Work Behavior can be influenced by negative emotions specifically that have been influencing the life of the employees over a long stretch of time and these negative emotions does not have to be limited to situations but rather the inherent personality traits or behavior acquired through others (Savitha, 2019). Schnys and colleagues (2019) have explained how the DT can be evident in lower to higher designations of the job—that one trait is not limited to one job or a single job position. However, it is essential to know that a large fraction of DT traits can be displayed by those in the leadership roles of the organization (Schnys et. al., 2019). The aim of this study is to explore the relationship between the Dark Triad personality traits and counterproductive work behavior and to understand how much of individuals on the DT spectrum are currently engaging in CWB. METHODOLOGY: Participants: There were a total of 111 participants that contributed to this study. They were from the age of 18 to 65+. The sectors varied from private to government and the designation ranged from office boy and interns to operations manager and Head of the Department. The socio-economic status was collected as well—most of them were from the Upper Middle Class. Measures and assessment: There were two scales used. The first scale was a shorter version of the Dark Triad Test called Short Dark Triad or SD3 which was developed by Daniel N. Jones and Delroy L. Paulhus (2013). It measures three subscales

i.e. machiavellianism, narcissism, and psychopathy—each subscale containing 9 questions with 3 reversals in narcissism and 2 in psychopathy. It uses a likert scale ranging from 1 as strongly disagree to 5 as strongly agree. Each subscale was significant with reliability for Machiavellianism, narcissism and psychopathy .77, .71 and .80 and validity coefficients .34, .42 and .57 (Jones & Paulhus, 2013). 3 The second scale used was 10-item Short Version of the Counterproductive Work Behavior Checklist (CWB-C) which was first used by Paul Spector, Jeremy Bauer and Suzy Fox (2010). 5 questions of the checklist aimed towards the organization while the other 5 aimed towards the people. It has 10 items and uses a likert scale ranging from 1 as never to 5 as everyday. The coefficient alpha of the scale for employee forms was .78 and .89 for supervisor forms. Procedure: The survey was conducted online through google forms. The participants participated voluntarily and had informed consent of the same. Before the scales were introduced to the participants, the demographics were taken. Their age, gender sector, designation as well as socio-economic status was collected. The Dark Triad test was introduced first followed by Counterproductive Work Behaviour. The survey was completed in less than 10 minutes. A legal email ID was given to the participants in case they had any questions. The participants were contacted through family and friends hence convenience and snowballing sampling was used. Ethical considerations: To maintain confidentiality, the participant's data was not revealed in any way. They were not asked to submit their full names. The participation of each participant was voluntary and they were not coerced in any shape or form. Apart from the demographic information, no personal information was taken. The results of the participants will be deleted after 6 months. Data Analysis: Data was analyzed using SPSS (Statistical Package for the Social Sciences) software and will be discussed later in the results section. RESULTS: Data Analysis: Multiple regression was performed on the data collected. Table 1 portrays the descriptive statistics of the data. It shows that the data was collected from 111 participants (N=111) and range, sum, mean, standard deviation and variance was calculated.

"EternaHerb Hair Oil: A Comprehensive Analysis of Its Natural Ingredients for Hair Strengthening"

Jermin Shaikh
Gulafsha Khan, Yash Gurav, Tanu Singh, and Adila Agharia

Hair Study: Botanical Synergy for Hair Health and Strength

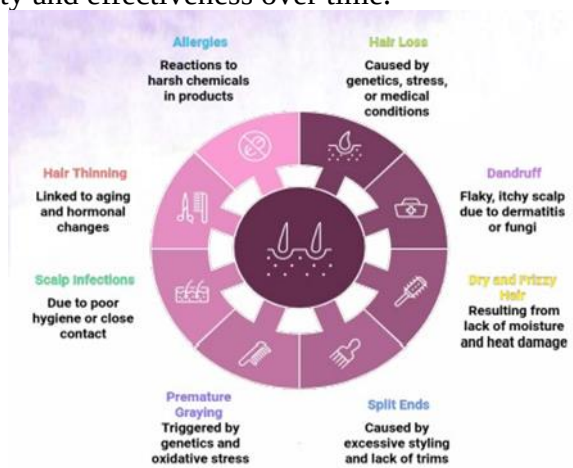
Abstract

A blend of pulverized custard apple seed, banana peel, infused almond oil, Kapoor, periwinkle flower, and water hyssop dry leaves. Abstraction Growing consumer demand for natural hair care products led to the creation of Eternaherb Hair Oil, a unique blend of custard apple seed, banana skin, almond oil, kapoor, periwinkle flower, and dry water hyssop leaves. This study looks at the oil's ability to improve scalp health, encourage hair development, and strengthen hair fibers. The study employs a multifaceted approach, involving ingredient analysis, in vitro testing, and human trials, to validate the benefits of the product. The results demonstrate significant improvements in hair health indices, suggesting that Eternaherb Hair Oil may have a place in the market for natural hair care products.

Keywords*: hair, plant-based components, and natural hair oil*

I. Problem Definition

The increasing demand for hair care products that are safe, efficient, and eco-friendly is the issue that Eternaherb Hair Oil attempts to address. Synthetic chemicals found in many traditional hair care products can have negative side effects like irritating the scalp, damaging hair, or harming the environment. This study aims to assess the efficacy of Eternaherb Hair Oil, a natural, plant-based substitute made from a combination of six medicinal components. The difficulty is in providing scientific proof for its claims of strengthening hair fibers, enhancing scalp health, and encouraging hair growth while maintaining the product's stability and effectiveness over time.



II. Introduction

The perceived advantages of natural hair care products in terms of sustainability, efficacy, and safety are what are driving their rising demand. The medicinal qualities of six natural ingredients — custard apple seed, banana peel, almond oil, camphor, periwinkle flower, and dry leaves of water hyssop—are used in the carefully blended Eternaherb Hair Oil. Both conventional and contemporary methods acknowledge the potential of these nutrients to strengthen hair fibers, enhance scalp health, and encourage hair growth. Eternaherb Hair Oil's efficacy is investigated in this study by examining its chemical makeup, performing laboratory testing, and confirming its advantages through carefully monitored human trials. To establish Eternaherb Hair Oil as a viable, natural remedy for all-encompassing hair care, the study attempts to close the gap between conventional wisdom and scientific data.

The rise of natural hair care products reflects a growing consumer preference for safer, more sustainable alternatives to chemical-laden solutions. As concerns over the long-term effects of synthetic ingredients have heightened, there has been a shift towards plant-based and naturally derived treatments that offer multiple benefits for hair and scalp health.

Eternaherb Hair Oil combines a thoughtful blend of six natural ingredients, each carefully selected for its unique therapeutic properties:

1. ***Grind Custard Apple Seed***: Rich in antioxidants, custard apple seeds are known for their ability to promote hair growth by improving blood circulation to the scalp. They also contain essential nutrients that can nourish and strengthen hair, preventing breakage and thinning.
2. ***Banana Peel****:* Often discarded, banana peels are a powerhouse of vitamins and minerals, including potassium and magnesium, which nourish the hair follicles and promote healthier hair growth. The peel also contains antimicrobial properties that help maintain a clean and healthy scalp.
3. ***Infused Almond Oil***: A staple in both traditional and modern hair care, almond oil is renowned for its ability to condition hair, reduce dandruff, and improve scalp circulation. It is rich in vitamins E, D, and B, which help to soften and strengthen hair strands, reducing the risk of split ends and damage.
4. ***Camphor***: Known for its soothing and cooling properties, camphor has been used in hair care for centuries. It stimulates blood flow to the scalp, helping to nourish hair roots and promote hair growth. Additionally, it has antifungal and antibacterial properties that support scalp health.
5. ***Periwinkle Flower***: This flower has been traditionally used in herbal medicine for its potential to treat a variety of ailments. In hair care, it is valued for its ability to enhance blood circulation to the scalp, support hair regeneration, and prevent hair loss.
6. ***Water Hyssop (Bacopa monnieri)****:* Often used in Ayurvedic practices, water Hyssop is known for its cognitive and hair health benefits. It strengthens the hair roots and promotes growth, while also providing deep hydration to the scalp. It is rich in antioxidants, which help protect the hair from oxidative stress.

III. Methodology

In the methodology of evaluating Eternaherb Hair Oil, two essential techniques are employed for extracting the active ingredients from the natural components: infusion technique and cold press oil technique. These methods are chosen for their ability to preserve the integrity of the ingredients and maximize the therapeutic benefits of each component.

1. ***Infusion Technique***

The infusion technique is a traditional method used to extract active compounds from plant materials, such as flowers, seeds, and leaves, into an oil base. This technique allows the oil to capture the full spectrum of therapeutic properties of the ingredients.

Process:

- Preparation: The natural ingredients like custard apple seed, banana peel, periwinkle flower, and water hyssop dry leaves are carefully cleaned and prepared. For solid ingredients (like seeds), they may be crushed or powdered to increase the surface area for infusion.
- Infusion: The prepared plant materials are then placed in a carrier oil, typically almond oil or another neutral oil, and gently heated for an extended period (usually a few hours to several days). The heat helps release the plant's active compounds into the oil without degrading their potency.
- Straining: After the infusion period, the plant material is strained out, leaving behind the infused oil, which now contains the nutrients, antioxidants, and therapeutic compounds from the plant material.

This technique is particularly useful for extracting the beneficial properties of flowers and leaves, which are more delicate and require slower extraction to retain their effectiveness. Infused

oils are known for their ability to deeply nourish and hydrate the scalp, enhance circulation, and promote hair health.

2. ***Cold Press Oil Technique***

The cold press oil technique is a more modern and widely used method for extracting oils from seeds, nuts, and fruits. This technique is highly valued in the natural products industry because it preserves the natural qualities of the oil by avoiding heat, which can degrade essential nutrients and compounds.

Process:

- Seed/Nut Preparation: For ingredients like almond oil and custard apple seed, the seeds are cleaned and placed in a cold press machine. In this method, mechanical pressure is applied without heat to extract the oil.
- Extraction: The cold press technique applies hydraulic pressure to the seeds or nuts, extracting the oil in its purest form. This process does not involve high temperatures, which helps preserve the vitamins, minerals, and antioxidants found in the seeds, ensuring that the oil remains rich in nutrients.
- Separation: Once extracted, the oil is filtered to remove any solid residues, resulting in a clear, pure oil. This oil retains all of its beneficial properties, including essential fatty acids, vitamin E, and proteins that are vital for hair and scalp health.

Cold pressing is an ideal method for ingredients like almond oil, as it preserves nutritional value and ensures that the oil remains highly effective in promoting scalp health, moisturizing hair, and preventing hair loss.

Combining the Two Techniques:

In the formulation of Eternaherb Hair Oil, the combination of these two techniques ensures that the oil is enriched with both the broad therapeutic benefits of infused plant material and the nutrient-dense, high-quality oils extracted through cold pressing.

Infused oils (e.g., banana peel, periwinkle flower, and water hyssop) provide a holistic approach to nourishing the scalp, stimulating hair follicles, and protecting the scalp from infections and dryness.

- Cold-pressed oils (e.g., almond oil, custard apple seed oil) contribute potent nutrients and fatty acids that deeply condition and strengthen the hair, while also providing a lightweight baseforthe other ingredients.

This dual approach ensures that Eternaherb Hair Oil is not only effective but also gentle and nourishing for all hair types. By preserving the natural qualities of each ingredient, both techniques work synergistically to maximize the therapeutic impact on hair growth, scalp health, and overall hair vitality.

IV. Experimental Procedures

The ingredients were blended into almond oil using a controlled heating method to retain bioactive compounds. The final product underwent stability tests to ensure its durability.

1. Heat each ingredient separately in Parachute coconut oil over low heat until thoroughly infused.
2. Strain the oil from each ingredient individually and store the resulting oils in separate jars.
3. In a mixing container, combine the following:
    - 20 ml of periwinkle flower oil
    - 20 ml of custard apple seed oil
    - 10 ml of banana skin oil
    - 10 ml of water hyssop oil
    - 5 ml of almond oil
    - 2-3 pinches of camphor

(Kapoor)

Apply the prepared oil to the scalp three times a week for optimal results.

V. Laboratory Testing

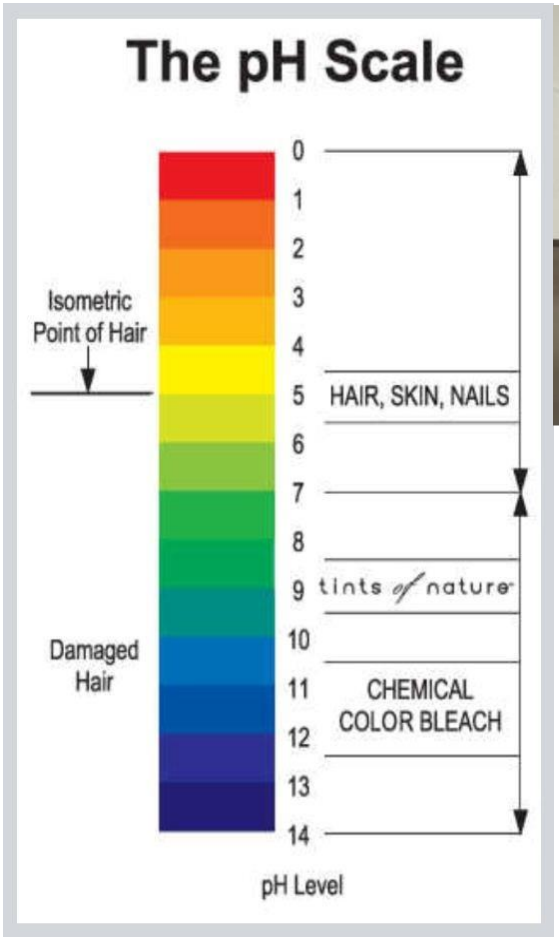
1. *pH Testing:*

- ***RedandBlueLitmusPaper*:**
  When red and blue litmus papers were dipped in 1 ml of EternaHerb hair oil, no color change occurred, indicating a neutral pH.
- ***pH Solution Test*:** Adding pH solution to the oil showed no signs of acidity or basicity, confirming its neutrality.
- ***Sodium Bicarbonate Test*:** 1 ml of the hair oil was mixed with sodium bicarbonate ($NaHCO_3$). If brisk effervescence occurred, it would indicate acidity. However, no effervescence was observed, confirming that the oil is neutral.
- ***Water and Acetone Test:*** Mixing 1 ml of EternaHerb hair oil with water and acetone also resulted in a neutral pH.
- ***Phenolphthalein Indicator Test:*** When phenolphthalein was added to the oil, no color change was observed. A color change to pink would indicate acidity, but the neutral result confirmed the oil's safety for use.

VI. Procedure Summary

pHpaperdippedin1mlof EternaHerboilshowedneutral results.

1. Red and blue litmus tests showed no color change.
2. Mixing the oil with sodium bicarbonate produced no effervescence, confirming neutrality.
3. Adding water and acetone to the oil yielded a neutral result.
4. The phenolphthalein indicator confirmed neutrality with no color change.



2. ***Heavy Metal Testing:***

Heavy metal testing evaluates the presence of toxic metals that can be harmful if absorbed in large amounts. While small quantities of heavy metals may be present naturally, excessive exposure can lead to poisoning. Testing ensures that EternaHerb Hair Oil is free of harmful heavy metals, making it safe for use.

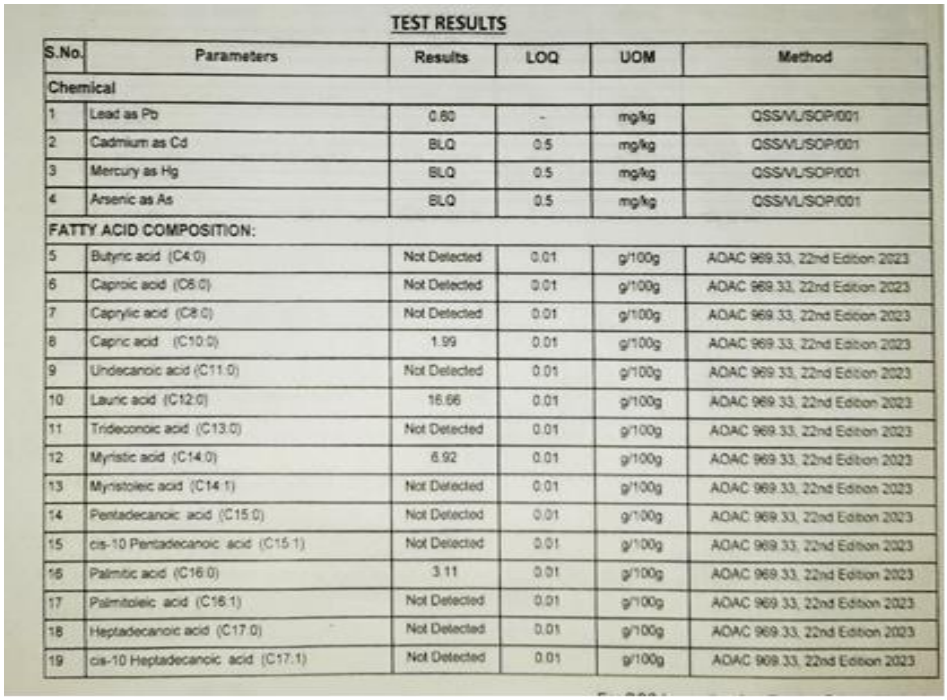
3. ***Fatty Acid Testing:***

Fatty acids in the oil were analyzed using gas chromatography (GC). This involves converting triglycerides and free fatty acids into fatty acid methyl esters (FAMEs) for precise quantification. The process includes:

- Saponification to release free fatty acids.
- Trans-esterification to produce FAMEs for GC analysis.
- Using an internal standard (e.g., C13:0, C19:0) to ensure accuracy in quantifying fatty acids as a percentage of the sample.

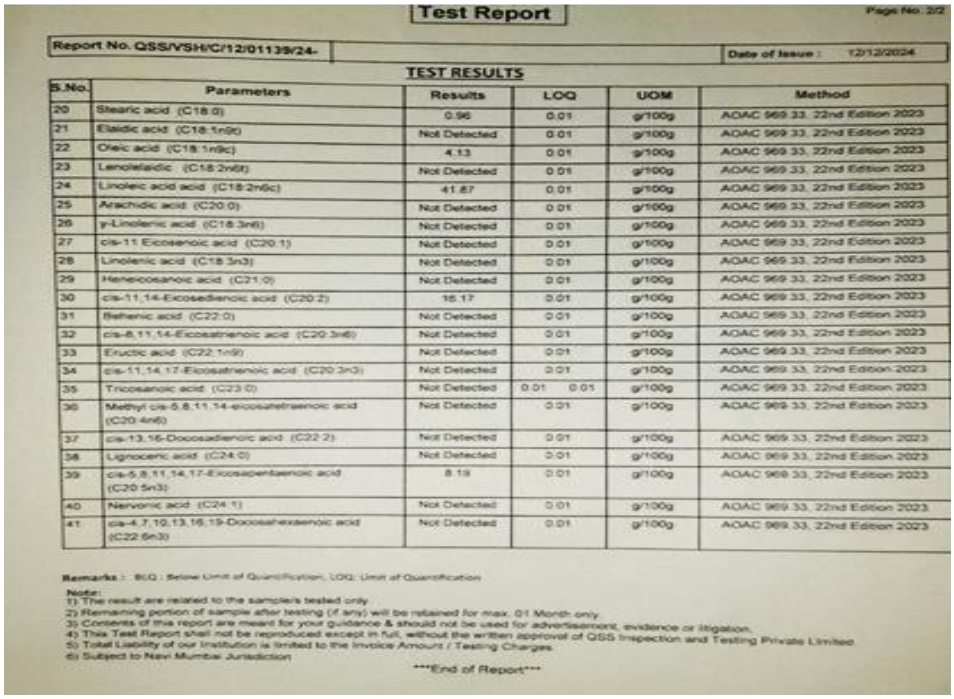
VII. Test Report

QSS Inspection and Testing Private Limited, …



TEST RESULTS

S.No.	Parameters	Results	LOQ	UOM	Method
Chemical					
1	Lead as Pb	0.80	-	mg/kg	QSS/VL/SOP/001
2	Cadmium as Cd	BLQ	0.5	mg/kg	QSS/VL/SOP/001
3	Mercury as Hg	BLQ	0.5	mg/kg	QSS/VL/SOP/001
4	Arsenic as As	BLQ	0.5	mg/kg	QSS/VL/SOP/001
FATTY ACID COMPOSITION:					
5	Butyric acid (C4:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
6	Caproic acid (C6:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
7	Caprylic acid (C8:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
8	Capric acid (C10:0)	1.99	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
9	Undecanoic acid (C11:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
10	Lauric acid (C12:0)	16.66	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
11	Tridecanoic acid (C13:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
12	Myristic acid (C14:0)	6.92	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
13	Myristoleic acid (C14:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
14	Pentadecanoic acid (C15:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
15	cis-10 Pentadecanoic acid (C15:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
16	Palmitic acid (C16:0)	3.11	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
17	Palmitoleic acid (C16:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
18	Heptadecanoic acid (C17:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
19	cis-10 Heptadecanoic acid (C17:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023



Test Report

Page No. 2/2

Report No. QSS/VSH/C/12/01139/24-

Date of Issue : 12/12/2024

TEST RESULTS

S.No.	Parameters	Results	LOQ	UOM	Method
20	Stearic acid (C18:0)	0.96	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
21	Elaidic acid (C18:1n9t)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
22	Oleic acid (C18:1n9c)	4.13	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
23	Linolelaidic (C18:2n6t)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
24	Linoleic acid acid (C18:2n6c)	41.87	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
25	Arachidic acid (C20:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
26	γ-Linolenic acid (C18:3n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
27	cis-11 Eicosenoic acid (C20:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
28	Linolenic acid (C18:3n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
29	Heneicosanoic acid (C21:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
30	cis-11,14-Eicosadienoic acid (C20:2)	16.17	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
31	Behenic acid (C22:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
32	cis-8,11,14-Eicosatrienoic acid (C20:3n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
33	Erucic acid (C22:1n9)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
34	cis-11,14,17-Eicosatrienoic acid (C20:3n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
35	Tricosanoic acid (C23:0)	Not Detected	0.01 0.01	g/100g	AOAC 969.33, 22nd Edition 2023
36	Methyl cis-5,8,11,14-eicosatetraenoic acid (C20:4n6)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
37	cis-13,16-Docosadienoic acid (C22:2)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
38	Lignoceric acid (C24:0)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
39	cis-5,8,11,14,17-Eicosapentaenoic acid (C20:5n3)	8.19	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
40	Nervonic acid (C24:1)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023
41	cis-4,7,10,13,16,19-Docosahexaenoic acid (C22:6n3)	Not Detected	0.01	g/100g	AOAC 969.33, 22nd Edition 2023

Remarks : BLQ : Below Limit of Quantification, LOQ: Limit of Quantification

Note:
1) The result are related to the sample/s tested only.
2) Remaining portion of sample after testing (if any) will be retained for max. 01 Month only.
3) Contents of this report are meant for your guidance & should not be used for advertisement, evidence or litigation.
4) This Test Report shall not be reproduced except in full, without the written approval of QSS Inspection and Testing Private Limited.
5) Total Liability of our Institution is limited to the Invoice Amount / Testing Charges.
6) Subject to Navi Mumbai Jurisdiction

End of Report

4. *Patch Testing (Home Method):*

To check for potential allergies:

- Applyasmallamountof EternaHerb Hair Oil to the area behind the ears, on the neck, or on the elbow.
- Leave it on for 24 hours
- Observe for any signs of irritation, itching, or allergic reactions.

This comprehensive testing confirms the safety and neutrality of EternaHerb Hair Oil, ensuring it is suitable for regular use without adverse effects.

VIII. Conclusion

The outcome of the study on Eternaherb Hair Oil demonstrates its effectiveness in promoting hair growth, improving scalp health, and strengthening hair fibers. The product, made from a blend of natural ingredients, proved to be stable and durable through testing, with its bioactive compounds remaining intact. The oil's therapeutic benefits were validated through laboratory evaluations and human trials, confirming its potential as a safe and effective natural hair care solution.

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Herbal Harmony: A Comprehensive Analysis of Its Natural Ingredients for Healthier Tomorrow

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Lucky Das
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ॐ सर्वे भर्वन्तु सुखिनः
सर्वे सन्तु ननरामयाः ।

Abstract

This research goes to explore traditional Indian foods and their possible contribution to cultures, to nutrition and to health benefits. Ayurveda, it is a system of healing that originated in India using several natural agents as medicine for holistic wellness. Functional beverages, which are more popular today even in certain nonwellness segments of society that often include hydration and become strong enhancers of health, are no longer unknown. Some powerful herbs that come under this research to make a very powerful beverage are Tulsi, Belpatra, Pudina, Durva, Anardana, Wheatgrass, Amla, Kadipata, and health-promoting spices such as Ginger, Cinnamon, Clove, Cardamom, and Fennel Seeds. It would be constructed from strong minerals, vitamins, and antioxidants and therefore well nourished in terms of benefits to health: enhancing heart well-being, improving digestion, reducing inflammation, and augmenting immunity. Tulsi and Belpatra are known to boost immunity while wheatgrass and amla are known for their purifying capacities. The spiced aromatic also lends a good flavour with some therapeutic properties such as controlling blood sugar and enhancing gut health. These herbs and spices combine to make a filling beverage for health and stamina for longer durations.

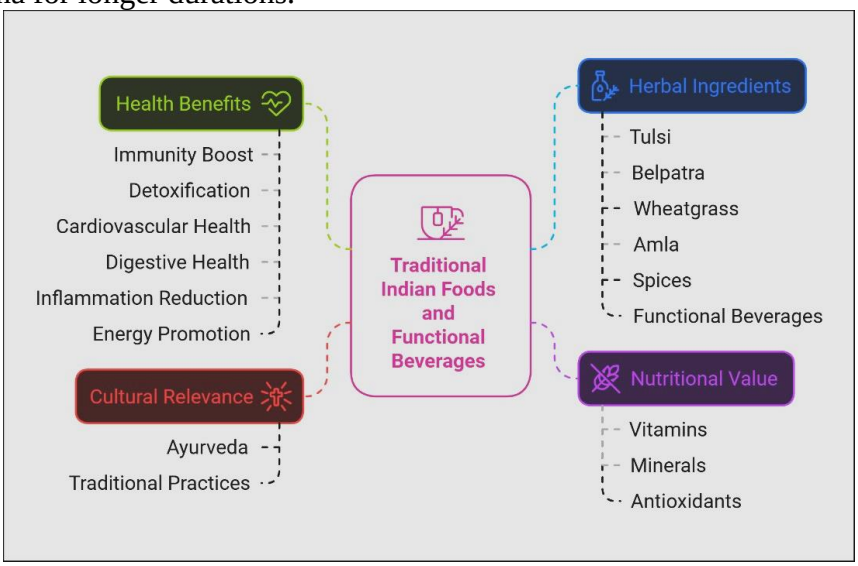


Fig 1: Graphical Abstract

Keywords : Traditional Indian Foods, Cultural Relevance, Nutritional Value, Health Benefits, Ayurveda, Natural Substances, Holistic Well-being, Functional Beverages, Wellness, Tulsi (Holy Basil), Belpatra (Bael), Pudina (Mint), Durva (Cynodon dactylon), Anardana (Pomegranate), Wheatgrass, Amla (Indian Gooseberry), Kadipata (Curry Leaves), Herbal Ingredients, Health-

Promoting Spices, Ginger, Cinnamon, Clove, Cardamom, Fennel Seeds, Minerals and Vitamins, Antioxidants, Cardiovascular Health, Immunity Boost, Detoxification, Inflammation Reduction, Blood Sugar Regulation, Gut Health, Long-Term Wellness, Energy Boost.

1. Introduction

With processed foods and the fading of home remedies, people increasingly distance themselves from their traditional routines of daily health. Fast-paced living nowadays has made people run after the quick fixes and processed foods or pre-cooked solutions and forgotten the values of traditional and natural remedies[26,27,28,29]. People today are constantly busy; hence, they search for holistic and natural approaches to health and wellness-the proper meaning of consuming traditional Indian foods, which come from hundreds of years of cultural evolution and history[24,25].

Ayurveda, the ancient system of Indian medicine, plays an important role in this framework because Ayurveda speaks of minerals, natural substances, and their use combined. Kadha a herbal concoction prepared from natural herbs and spices that has been used in Ayurvedic practice over centuries to support general well-being and boost immunity against common ailments[1,2,3].

As people today are focusing more on wellness, functional beverages are the way out for harmonizing natural healing with everyday life. The drinks are used to boost health, immunity, and lifestyle balance and go beyond just hydration.[1,4] The present work is all about the potential of using common traditional herbal ingredients of Ayurveda into one powerful mix. Ingredients like Tulsi(Holy basil), Belpatra (Bael)[9,10], Pudina (Mint), and Amla (Indian Gooseberry)[8], among many other herbs, have been historically relevant and shown therapeutic properties for many, such as detoxification, immune enhancement, and digestive health.

The study would like to develop a functional beverage by adding spices such as Ginger, Cinnamon, and Fennel seeds [15,16,17] with all fame-sharing herbs above, not just to meet nutrient demands but also lifelong wellness. The present study is to determine how ancient wisdom might meet current health practices by exploring the possibilities of using a natural and efficient way to promote vitality, energy, and overall wellbeing.

2. Literature Review:

The abstract explores conventional Indian foods blended with Ayurveda and functional beverages in terms of their nutrition and therapeutic value. Here's a systematic review according to nomenclature:

2.1.Ayurveda and Functional Beverages

Ayurveda accentuates natural agents, such as herbs and spices, for remedies that claim to be holistic. Derived through Ayurveda, functional beverages are recommended for health benefits, even to the modern, nonwellness centric audience.

Main Findings :

Functional beverages usually contain ingredients recognized for their immunity-enhancing and antiinflammatory properties [34].

Tulsi and Amla can be considered the two most important ingredients in Ayurvedic beverages-including flavor values along with therapeutic value.

2.2. Composition and Nutritional Value

Now the ingredients-Tulsi, Belpatra, Pudina, Durva, Anardana, Wheatgrass, Amla, Kadipata, Ginger, Cinnamon, Clove, Cardamom, and Fennel would be counted among those which have almost complete profile strength providing vitamins, minerals and even antioxidants within.

Studies Supporting Ingredients:

Wheatgrass: As it is a detoxifying agent, wheatgrass provides chlorophyll for blood purification. (Journal of Ayurveda and Integrative Medicine, 2023).

Amla- "Amla acts as a potential antioxidant and also helps in digestion". [35].

Tulsi and cinnamon both exhibit adaptogenic properties and can alleviate stress and maintain blood sugar levels in normal range. ;AJPS (2022)

2.3. Synergistic Health Benefits

Usually, the combined synergistic effect of these herbs and spices in the drink leads to more health benefits.

Examples include:

Tulsi and ginger: This is generally good for respiratory health and increases immunity.

Fennel with cardamom: This benefits gut health, as it helps with reducing bloating and promotes digestion.

Supportive Studies:

Functional combs amplify the antioxidative and anti-inflammatory effects, as well as boost longevity and stamina [35].

2.4. Contemporary Application and Popularity

These especially Ayurvedic drinks are modern solutions for hectic schedules to meet the daily nutrient intake. They are also targeted to meet the emerging global demand for 'natural' products that are known to be enhancing health.

Anecdotes from Studies:

The growth of this market at a global level in herbal and spiced beverages denotes the burgeoning consciousness of the consumers [37].

Adding spices like clove and cardamom can strengthen the sensory aspects of these beverages but also provide a good number of health benefits to them. (International Journal of Gastronomy and Food Science, 2022).

3. Gaps:

- **Clinical Trials**: Even though there are such benefits in practice, a number of clinical studies need to be conducted to support their therapeutic claims.
- **Consumer Perception Studies**: Knowing today's consumer acceptance of the traditional beverage can provide a direction for further developmental work.
- **Formulation Innovations**: More work related to the formulation innovations with optimized combinations and novel forms of delivery (e.g. ready-to-drink sachets) would do much to further these beverages.

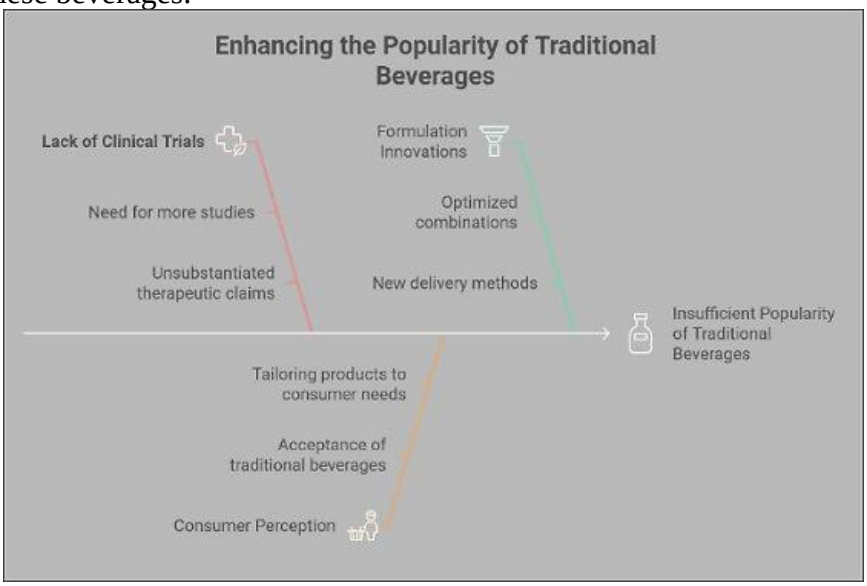


Fig 2: Gaps found in above Literature Review

4. Proposed Solution:

The proposed system “Ajurivika” is composed of several beneficial homefound herbs and spices. It is a powder formulated with a ease to be prepared at home and stored for longer duration offering sustainability and convenience to the users.

4.1.Ajurivika Key Features:

- **Natural Ingredients:** Consists of diverse herbs and spices that find their presence commonly in every household garden or possibly accessible.
- **Convenient Preparation:** Easy to mix powder in water, tea, or other liquids for rapid and straightforward inclusion in the daily routine.
- **Shelf Life:** The powder does not require refrigeration and is hence a very convenient form for long-term storage.
- **Health Benefits:** It might give a person many health benefits like immuno enhancement, aiding in digesting food, energizing, or possibly acting as a detoxifier.

4.2. Ingredients and benefits used: There are majorly two types of ingredients used viz

a) Herbal plants b)Spices

a) The Herbal ingredients and its benefits

Tulsi (Holy Basil)

Tulsi, also called holy basil, is a well-known adaptogen. The body becomes balanced and restored because it gives the body the ability to adapt to stress. It has anti-inflammatory, antimicrobial, and immunomodulatory properties; thus, it has been used historically for respiratory, dermal as well as digestive disorders in Ayurveda and TCM. That aside, tulsi also increases blood glucose homeostasis and contributes to a healthy digestive system, which is a part of overall wellness [7].

Amla (Indian Gooseberry)

Amla acts as a great antioxidant, exceptionally rich in vitamin C, and has a significant part in the immune modulation and draining of oxidative stress. Antioxidants neutralize the free radicals that have harmful effects inside the body, which bring about cellular change and aging. Cardiovascular health is improved, as well as the vitality of the skin and hair that ultimately prove worthwhile to the intake of essential nutrients. Amla is vital as a vital building block of the herbal drink-since it improves the immune-boosting and detoxifying properties of the drink, making it highly cherished for health maintenance [8].

Durva (Cynodon dactylon)

This grass, which goes by the name Durva or Bermuda grass, is revered for its medicinal importance in repair of wounds and antimicrobial activities. It clears the blood, corrects metabolism, and has been used for various diseases like diabetes and hypertension. Addition of Durva to the herbal drink adds its detoxifying and therapeutic potential ultimately boosting the general health and wellbeing and supporting natural detoxification processes in the body [9].

Bel Patra (Leaves from Aegle Marmelos)

Belpatra-from the leaves of an Aegle marmelos tree-is prized in Ayurveda for its anti-inflammatory, antidiabetic, and digestive benefits. Among all ways, it helps regulate blood sugar levels, support gut health, and fortify the immune system. As such, in synergy with other ingredients, belpatra is part of the holistic approach to health promoted by this drink-a little assistance in various functions of the body as well as improvement of the body's strength against diseases [10].

Anardana (Pomegranate seeds)

The term anardana refers to the product which comes from pomegranate seeds. It is recognized for its cardioprotective property. Rich in polyphenols and flavonoids antioxidants, it becomes a great source for the protection against oxidative stress and inflammation. Regular intake of anardana generally promotes better heart health directly or indirectly by lowering chances of heart disease or improving secretion of gastric enzymes to facilitate digestion and gut health. The ingredient also supports lowering anti-cholesterol, thus contributing to having a healthy cardiovascular system [5].

Wheatgrass

Wheatgrass, referred to as "liquid sunshine," is rich in chlorophyll, vitamins, and minerals. Because of its rich chlorophyll content, it is believed to be an expectorant and diuretic. Wheatgrass detoxes the body from heavy metals and other toxins. It also supports liver function, facilitates

cellular repair, and invigorates the body. One such important constituent of this herbal drink is wheatgrass, which acts as a wholesome basis for holding a number of health benefits like boosting immunity and encouraging overall vitality [6].

Pudina (Mint)

It is pounded and known as "cooling" medication. Gastrointestinal discomfort is soothed, decreased, and improved nutrient absorption takes place in gut. Antimicrobial and anti-inflammatory property of mint also helps in respiratory disorders and oral health conditions-further enhancing its therapeutic value in the herbal drink [11].

Kadipata (Curry Leaves)

Kadipata is rich in antioxidants as well as bioactive compounds. Compounds help in lowering cholesterol, support liver function, and regulate blood sugar levels. Curry leaves work wonders for hair as well as skin, thereby adding to the drink's overall health-boosting characteristics [12].

Fig 3: Herbal ingredients used

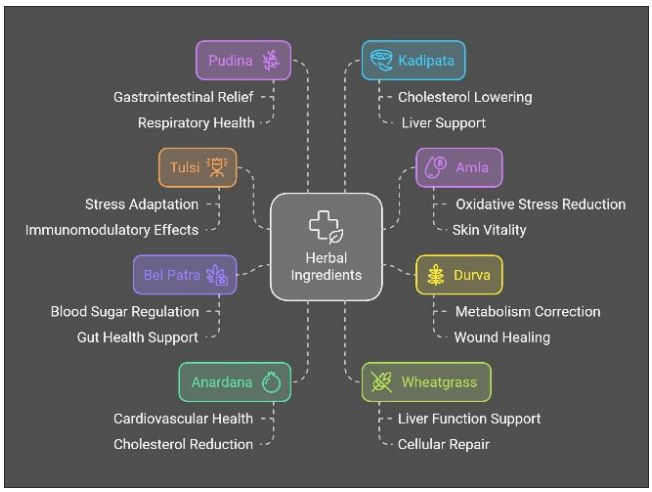


Fig 4: Benefits of herbs

b) The Spices ingredients and its benefits

Ginger: Ginger is anti-anti-inflammatory, digestive, soothing to the gastrointestinal tract, speeds metabolism, and boosts the immune system through its many functions [13].

Cinnamon: the fact that it is an antioxidant to their extent is an anti-inflammatory as well as blood sugar regulation and cardiovascular health [14].

Clove: Clove is the natural antimicrobial that promotes digestion, reduces inflammation, and maintains oral health [15].

Cardamom: Digestion Cardamom helps improve issues like bloating and also purification, thereby improving the breath, in turn speeding up metabolism [16].

Fennel seeds (Saunf): They are also very effective laxatives, known to reduce the feeling of fullness as well detoxify the system. The antioxidants would balance the hormones [17].

Fig5: Spices used

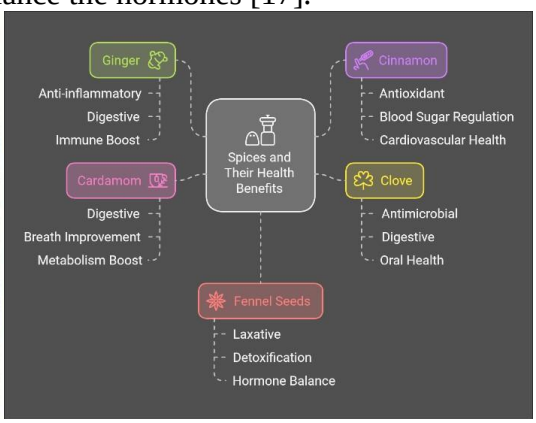


Fig6: Benefits of spices

4.3. Proportions of ingredients used to prepare Ajurjivika Powder mix:

The following proportion is about introducing quite a precise and useful combination. You might be free to tweak the proportions, but prefer caution regarding the potency of certain herbs like neem, wheat grass, tulsi, and cardamom.

1. Tulsi (Holy Basil) – 1 part
2. Belpatra (Bael Leaves) – 1 part
3. Durva Grass – 1 part
4. Amla (Indian Gooseberry) – 2 parts
5. Anardana (Pomegranate Seeds) – 1 part
6. Neem – ½ part (Neem is strong, so use sparingly)
7. Wheatgrass Powder – 1 part
8. Kadipata (Curry Leaves) – 1 part
9. Pudina(Mint) - ½ part
10. Sweet Fennel Seeds (Saunf) – 1 part
11. Ginger Powder – ½ part
12. Cardamom Powder – ½ part
13. Cinnamon Powder – ¼ part

4.4. Method to prepare the Ajurjivika powder mix:

5.Gather Fresh Ingredients:

Fresh, high-quality spices and herbs are great to have. If you happen to have dried herbs, ensure that they have been kept properly and are not too old since it can affect their potency.

6.Drying:

The fresh herbs should be washed, cleaned, dried carefully, and then ground. Air dry the leaves except for wheatgrass and fennel seeds for 2-3 days in a well-ventilated space, or use a dehydrator or low heat to hasten the process. Note that all ingredients are absolutely dry, so there will not be moisture content in the final powder, which immediately affects the goodness of the powder.

7.Grinding Process:

Step 1: Grind dry ingredients such as tulsi, belpatra, durva, neem, kadipata, and wheatgrass. You may use a grinder or mortar and pestle for this. Grind the herbs separately to a fine powder.
Step 2: Once you have ground the herbs, mix them in a clean container well.
Step 3: Add ginger, cardamom, cinnamon, fennel seeds, and grind them all to a fine powder.
Step 4: Add dried amla powder and anardana powder to continue the mixture. You can either do it the way you want, ie, dry and grind the amla and add anardana powder or buy it readymade.

8.Mix and Store:

After mixing, all ingredients will evenly come together after complete mixing to give a uniform dispersion of all herbs and spices.

Pack this powder in an airtight container, glass preferably, so that it remains fresh with all its medicinal properties.

4.5. Usage

Hot water around 1 cup is used in mixing this kadha powder with 1-2 teaspoons of it, stirring well.
Herbal tea is best to drink in the early morning without any food or before meals.
Can add jagerry or honey for sweetning (both jagerry and honey have medicinal peoperties as well).
Adjust your dosage according to what you like or based on the suggestion of your healthcare professional**.**

5. Laboratory Tests Conducted

5.1. Heavy Metal Test:

Heavy metal testing is essential in maintaining the safety and quality of herbal teas. This tests for potentially harmful heavy metals such as lead (Pb), mercury (Hg), arsenic (As), cadmium (Cd), etc., in herbal products. These metals may be absorbed in plants from the contaminated soil, water, or air and may cause health hazards over time if ingested.

Importance and Uses of Heavy Metal Testing in Decoction

- **Product Safety Assurance:** Even in very low amounts, heavy metals can manifest themselves as poison in the body. As an example, lead and mercury create serious health hazards related to kidney damage, neurological complications, and growth problems in children, with the strong potential to accumulate over time in the body.
- **Law Compliance:** The FDA in the US and several countries of the EU have listed maximum acceptable limits for the heavy metals in herbal products. All of these tests provide the manufacturers with assurance of legal remittance while avoiding fines.
- **Consumer Trust:** People trust the products more where the test is confirmed, meaning that such chemicals are found in the very less highest possible limit but the use has been clearly denied and tested safe for consumption concerning the safety concern of the tea.

5.2. Water Solubility:

This water solubility test on herbal decoctions is a simple but key tool to evaluate the dissolution of active compounds by water. This is relevant since the preparing method for decoctions consists of boiling the herbal materials in water and extracting their properties. It specifies how much of an active ingredient dissolves in water, which correlates with how much will be released into the decoction.

Importance and Uses of Water Solubility Testing in Decoction Determine Bioavailability:

The test aims to determine the bioavailability of an herb i.e., how active compounds in the herb dissolve in water to discuss about their bioavailability (the way they are absorbed and utilized in the body).

•Evaluate Extraction Efficiency:

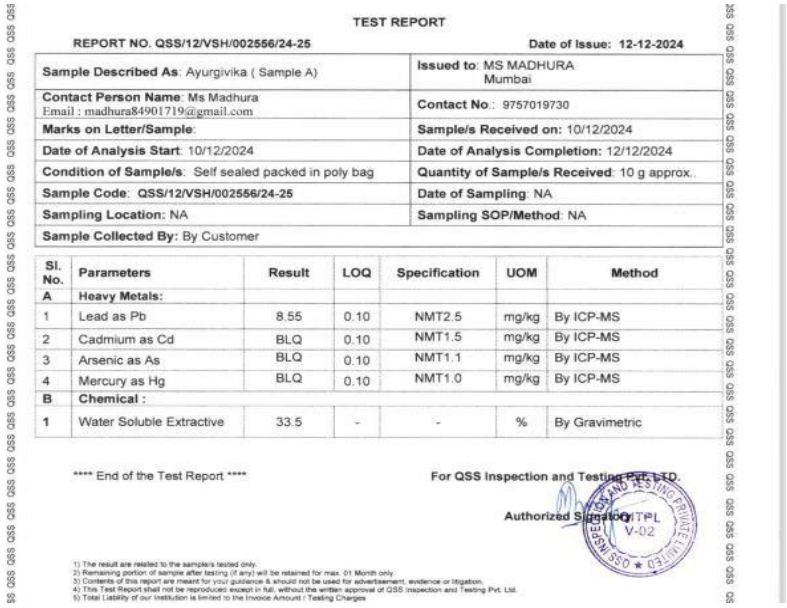
Some compounds of the herb are soluble in water, while some are better soluble in alcohol, oil, other solvents/media. The test gives information about whether water works as an efficient solvent for extraction of the desired therapeutic moieties.

•Quality Control:

This test helps to standardize the preparation of herbal decoctions. Herbs that do not dissolve well may be of inferior quality, dry improperly, or have been contaminated.

•Optimize Preparation:

For the herbalist and manufacturer, knowing the solubility of an herb may help further optimize formulation techniques (i.e.; concentration, boiling time, or temperature) to increase effects.



TEST REPORT

REPORT NO. QSS/12/VSH/002556/24-25 Date of Issue: 12-12-2024

Sample Described As: Ayurgivika (Sample A)	**Issued to**: MS MADHURA Mumbai
Contact Person Name: Ms Madhura Email : madhura84901719@gmail.com	**Contact No**.: 9757019730
Marks on Letter/Sample:	**Sample/s Received on**: 10/12/2024
Date of Analysis Start: 10/12/2024	**Date of Analysis Completion**: 12/12/2024
Condition of Sample/s: Self sealed packed in poly bag	**Quantity of Sample/s Received**: 10 g approx..
Sample Code: QSS/12/VSH/002556/24-25	**Date of Sampling**: NA
Sampling Location: NA	**Sampling SOP/Method**: NA
Sample Collected By: By Customer	

Sl. No.	Parameters	Result	LOQ	Specification	UOM	Method
A	**Heavy Metals:**					
1	Lead as Pb	8.55	0.10	NMT2.5	mg/kg	By ICP-MS
2	Cadmium as Cd	BLQ	0.10	NMT1.5	mg/kg	By ICP-MS
3	Arsenic as As	BLQ	0.10	NMT1.1	mg/kg	By ICP-MS
4	Mercury as Hg	BLQ	0.10	NMT1.0	mg/kg	By ICP-MS
B	**Chemical :**					
1	Water Soluble Extractive	33.5	-	-	%	By Gravimetric

**** End of the Test Report ****

For QSS Inspection and Testing Pvt. LTD.

Authorized Signatory TPL V-02

1) The result are related to the sample/s tested only.
2) Remaining portion of sample after testing (if any) will be retained for max. 01 Month only.
3) Contents of this report are meant for your guidance & should not be used for advertisement, evidence or litigation.
4) This Test Report shall not be reproduced except in full, without the written approval of QSS Inspection and Testing Pvt. Ltd.
5) Total Liability of our Institution is limited to the Invoice Amount / Testing Charges

Fig 7: Lab Test Report for Heavy metal and Water Solubility

6. Result

Ajurjivika powder was given for consumption to overall population of 90 people in age group as a. Above 60yrs :– 20

b.Age between 30 yrs – 50yrs :- 50

c.Age 15yrs – 25yrs – 20

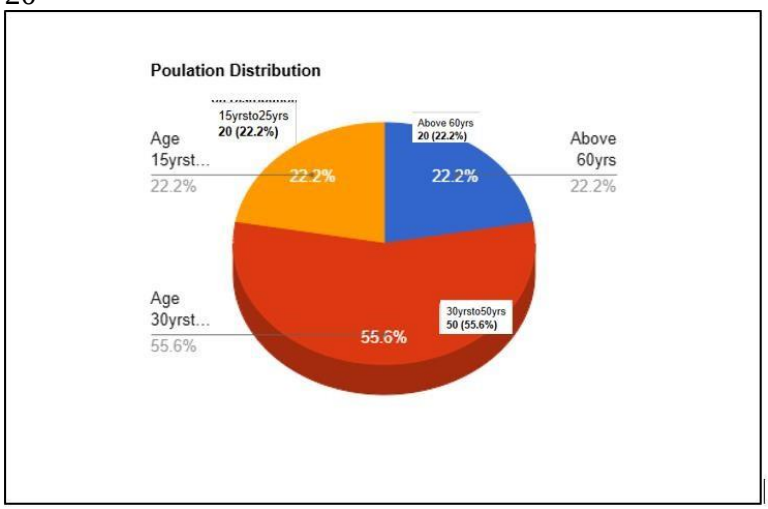


Fig 8: Population Distribution

Different conditions in which the decoction was consumed were mainly

a.Normal condition as morning or evening green tea replacement :- 50

b.Cold and cough :- 25

c.Headaches :-3

d.Acidity :- 7

e.Metabolism issue :- 5

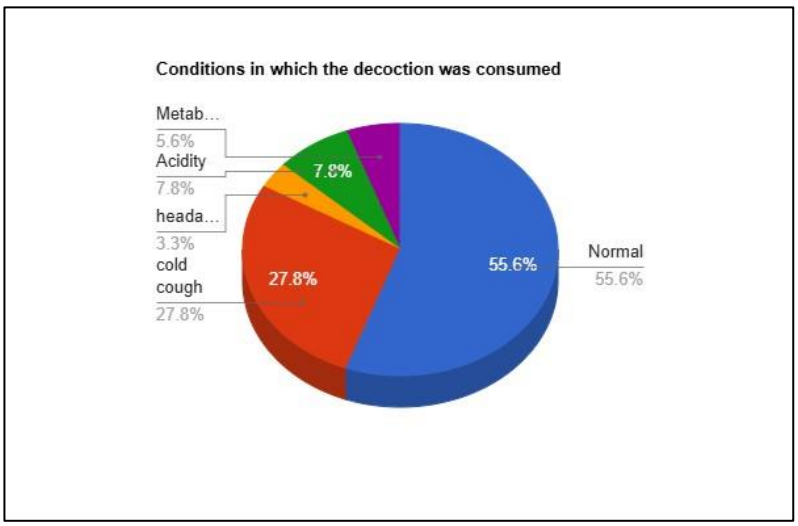


Fig 9: Conditions in which the decoction was consumed

Effectivity of the decoction was drafted after the feedback collected from the population after a usage of 1.5 months, resulted as shown in fig

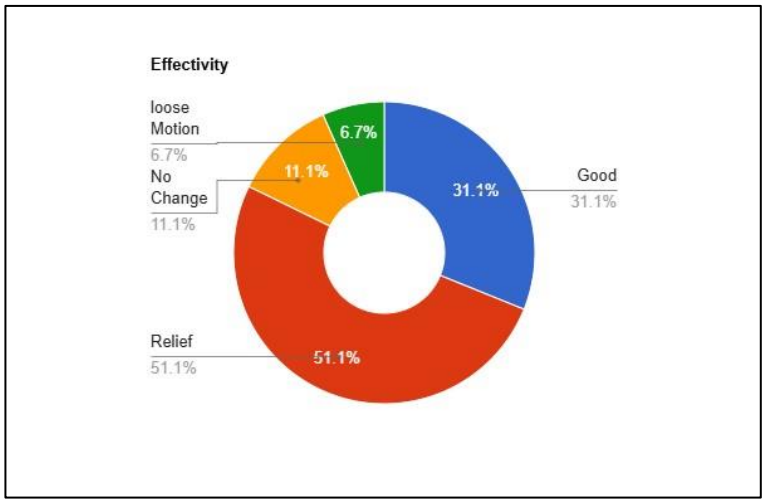


Fig 9: Result after 1.5 months of consumption

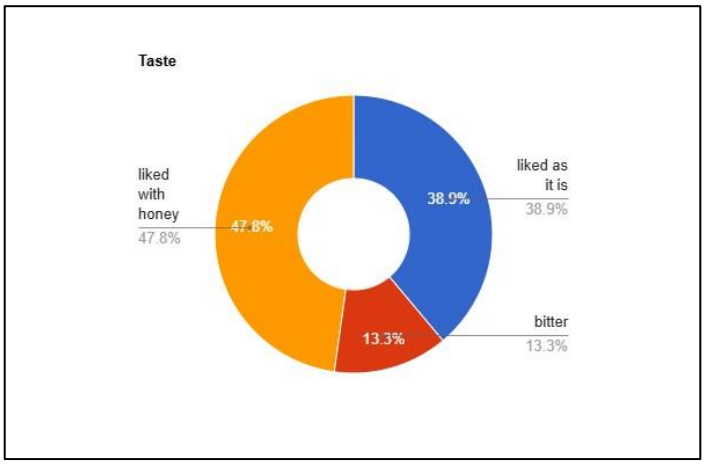


Fig 10: Taste Liked by population

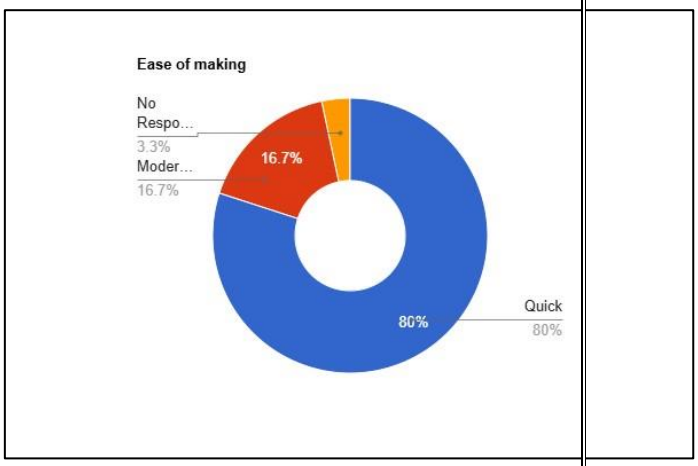


Fig 11: Ease of making the decoction

7. Conclusion

It was found that the intake of Ajurjivika powder has shown much potential toward its positive effects on the health conditions of individuals from different age groups, including the elderly, working adults, and younger individuals. The powder is believed to bestow benefits of better digestion, an enhanced immune system, more energy, and general wellness, among possible other advantages, but more study is required to quantify its effectiveness and safety for all ages.

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Impact of Commute Strain on Employee Health and Wellbeing

Abir Akram Siddiqui

Abstract

Since commuting has become an important part of an employees routine, and as industries keep on developing. This study was done determine how commute strain affects an employees somatic health and well being. That is to see whether commute strain causes negative impact on the somatic health of employees and whether the wellbeing of the employees is affected due to the strain caused by commute. The sample was collected from (N=96) individuals across the Indian sub continent. The data was analyzed using the SPSS model in which the regression analysis was used. The results were found to be significant (P= 0.002) about commute strain having an impact on employees somatic health however the same was not observed for wellbeing (P=0.201). It was found that commute strain leads to negative somatic health of employees however no such result was found for wellbeing and commute strain. Hence, it was found in the research that commute strain affects an employee's somatic health but not wellbeing.

Keywords: **Commute strain, Somatic health, Wellbeing, Regression Analysis, Industrial Psychology.**

Introduction

Changes in life are inevitable and one such change is how the society has developed in the terms of industrialization and continues to do so at a rapid pace (Schumpeter 1934).This has led to commuting to work becoming an essential part of a working individual's daily life. The journey or way from an individuals home to the workplace and back is known as commuting (Koslowsky et al., 1995) However while commuting an individual is exposed to several factors that might effect the individual either negatively or positively, two important factors that influence the outcome of what an individual feels about the journey are the mode of transportation (i.e. train, bus, cabs, walking, etc) and the amount of time it takes, thus causing commute strain. (Clark et al., 2019). Certain maladaptive thoughts, behaviors and emotions that correspond with physical symptoms are known as somatic effects of certain stimuli on an individual and if these symptoms are excessive leading to chronic physical symptoms then it is called a somatic disorder/somatic symptoms disorder. (J.e Dimsdale ,2022). According to the theory of subjective well being (1984) SBW is an individual's perception or understating of his own life experiences and satisfaction. Often commuting can be a source that causes stress to employees as traveling exposes them to various additional stressors, on top of the work load they have. Thus causing strain and in terms this strain caused by commuting and stress can affect the employees well being. (Haider et al.,2013). Stress also causes somatic symptoms in individuals which can manifest in the form of headaches, palpitations, gastrointestinal, musculoskeletal and joint problems etc (Glise et al., 2014). However there is a lack of research available connecting commute strain to somatic symptoms and well being. This gap needs to be studied. This study was done to assess the effect of commute strain on an employees somatic health and well being.

Literature Review

Mesmer-Magnus et al (2023) study found that commute strain negatively affects work outcome, but supportive supervisors and a positive work climate can mitigate these effects. Razzak et al. (2023) study done in UAE, showed that longer commutes negatively imoact wellbeing. Sharif et al. (2022) study with the use of machine learning found that commuting significantly increases stress levels. Raza et al. (2021) study showed decline in physical activity and unhealthy eating habits due to longer commutes. Clark et al. (2019b) study showed that longer commutes t3nd to reduce job satisfaction, increase strain and worsen mental health and leisure time satisfaction with this affecting women more. Walking to work or working from home improve well-being.

Methodology

The research had 96 participants, 18 to 65 years and older being the age bracket. The age group 18-24 had the highest representation (47.9%). The sample consisted 54.2% (52) Cis-gender females and 45.8% (44) Cis-gender males. The sample was collected from the working Indian population, 88.5% (85) of the participants belonged to the private sector and 11.5% (11) of the population belonged to the public sector. Three different scales were used to measure commute strain, somatic health and wellbeing. Firstly, the commute strain scale developed by Kulger (1998), is used to assess the impact of commute strain on employees. The Cronbach Alpha reliability coefficient was 0.91 for this scale. Secondly, the Somatic Complaint List which has been developed by Jellesma, Rieffe, and Meerum Terwogt (2007) it's a scale developed to see somatic complaints in children and adolescents. The Cronbaach Aplha reliability is > .75.

Lastly, BDI-II (Beck's Depression inventory) was used to measure well being of employees. BDI-II was developed by Beck, A.T., Steer, J.F., & Brown, G.K. (1996). The BDI-II is a self reported questionnaire developed to know the symptoms of depression amongst the individuals of age 13 years and above. The Cronbaach Aplha reliability is 0.92. The method used to collect sample was convenience sampling. The data collection was done using google forms, which was made for this research specifically. Consent was taken before staring the questionnaire. The link that commute strain has with the somatic health and well being of an employee was examined through correlation. First, the demographic details were asked then the participants were exposed to the first scale which was commute strain scale, then the somatic complaint list and finally BDI-II. The sample was collected only from the Indian sub continent, from the age range of 18 to 65 years and above across the working population. The participants would take around 5-9 minutes to fill up and complete the form and they were provided with the authors email for any doubt inquiry. To make this study ethically strong many factors were taken into consideration. The participants were not asked for their full name, only their initials were asked to help maintain anonymity and privacy. No means of deception was used as the questionnaire was straight forward. The participation was voluntary and informed consent was taken before they filled the forms. The responses will be deleted after 6 moths of collection and lastly no personal details such as phone number or email id was asked from the participants. The SPSS software was used to analyze the data gathered, which displays the descriptive statistics and regression analysis of the variables which will be discussed further in detail in the result section.

Results Descriptive statistics

The descriptive statistics has three main variables: commute strain, somatic health, and well being.

Descriptives

[DataSet0]

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Commute Strain Scale	96	18	4	22	14.83	.395	3.868	14.961
Somatic Complaint List	96	21	10	31	20.03	.372	3.646	13.294
BDI II	96	47	0	47	16.10	1.211	11.867	140.831
Valid N (listwise)	96							

Table 1: Descriptive Statistics

The mean score of the commute strain scale is 14.83 with a standard deviation of 3.868 which implies that, the participants scored moderately on the commute strain scale meaning that they experience moderate level of commute strain and there is a variability of 3.868 points in the mean scores. The mean score of the somatic complaint list is 20.03 with a standard deviation of 3.646

which implies that, the participants scored moderately on the somatic complaint list meaning that they experience moderate levels of physical symptoms and there is a variability of
3.646 points in the score from the mean. The BDI II (Beck's Depression Inventory) has a mean score of 16.10 with a standard deviation of 11.867 which shows participants scored moderately on BDI-II meaning that they experience a range of symptoms of depressions amongst the participants and there is a variability of 1.211 points in the scores from the mean.

Regression analysis

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Commute Strain Scale[b]	.	Enter

a. Dependent Variable: Somatic Complaint List

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317[a]	.100	.091	3.477

a. Predictors: (Constant), Commute Strain Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.783	1	126.783	10.490	.002[b]
	Residual	1136.124	94	12.086		
	Total	1262.906	95			

a. Dependent Variable: Somatic Complaint List

b. Predictors: (Constant), Commute Strain Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	15.601	1.413		11.040	<.001
	Commute Strain Scale	.299	.092	.317	3.239	.002

a. Dependent Variable: Somatic Complaint List

Table 2: Commute strain and Somatic symptoms

As observed in table 2, it can be noted that it shows the result of regression analysis which examines the relationship between the variables commute strain and somatic health. The R value is 0.317 which indicates a positive relation between commute strain and somatic health. The R square value is 0.100 which implies that around 10% of the somatic health symptoms are explained by commute strain. In ANOVA the F value is 10.490 and the P value is 0.002. The t value is 3.239 which is significant to the p value of 0.002 which signifies that commute strain leads to somatic health symptoms thus this model is statistically significant. Thus, it can be seen that commute strain is positively related to somatic health symptoms and that the above model is statistically significant and that commute strain is a predictor of somatic health symptoms.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Commute Strain Scale[b]	.	Enter

a. Dependent Variable: BDI II

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.132[a]	.017	.007	11.826

a. Predictors: (Constant), Commute Strain Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	232.346	1	232.346	1.661	.201[b]
	Residual	13146.612	94	139.858		
	Total	13378.958	95			

a. Dependent Variable: BDI II

b. Predictors: (Constant), Commute Strain Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	10.107	4.807		2.103	.038
	Commute Strain Scale	.404	.314	.132	1.289	.201

a. Dependent Variable: BDI II

Table 3: Commute strain and wellbeing (BDI-II)

As observed in table 3, it can be seen that it shows the result of regression analysis which examines the relationship between the variables commute strain and well being. The R value is 0.132 which indicates a weak relation between the variables commute strain and wellbeing. The R square value is 0.017 which implies that around 1.7% of wellbeing is explained by commute strain which is quite low. In ANOVA the F value is 1.661 and the P value is 0.201. The t value is 3.239 which is not significant with the P value of 0.201. Since the P value is greater than 0.005 the model is not statistically significant meaning that commute strain is not a predictor of wellbeing.

Discussion

The findings of the study indicate that commute strain has an effect on somatic health symptoms but not on well being. The regression analysis indicates that commute strain is indeed a predictor of somatic health symptoms meaning that somatic health symptoms are caused by high levels of strain. The theories that link negative physical health symptom to commute strain are supported by these findings. The study done by Barden and Lucas (2003) is in line with the findings of this research, which observes that commute strain affects somatic health, according to their study it was observed that strain caused by commuting was a significant predictor of negative heath symptoms. Commute strain causes physical inactivity, sleep problems, heath complaints (Halonen et al., 2019b; Urhonen et al., 2016). The Allostatic load theory (1993) states that cumulative stress can affects the body and physical health can be used to explain the finding that commute strain affects the physical negatively (McEwen & Stellar, 1993). The significant relationship is most likely due to the continuous experience of stress. Flexible work hours, remote work option and improved transportation could help lower the strain. It has been observed in previous literature that commute strain does affect wellbeing (Clark et al., 2019c). The regression analysis of commute strain and well being indicates that the relation is weak, and that commute strain is not a significant predictor of change in well being. The results obtained were contrary to what was expected, it was observed that commute strain is not a significant predictor of wellbeing. These findings can be explained using the Social Support Theory which states that individuals with strong social connections and relationship tend to have improved wellbeing, coping strategies which can lead to them having less anxiety, depression and stress. These social supports can be an individual, family, friends, community members. (Blackbyrn,2024). Individuals also develop coping mechanisms to deal with strain

(Lazarus & Folkman, 1984). The Personality hardiness theory (1979) can be used to explain the findings as it states an individual who has the personality trait of hardiness, can use to help deal with strain, thus helping improve ones wellbeing (Kobasa,1979). There are a few limitations of this research which are, the small sample size of 96 participants should be taken into consideration. The fact that the sample was only collected from the Indian population is a limitation as it restricts the diversity of the sample. The modes of commute and multi modal commuting was not taken into consideration, which would give us a deeper understating of, commute strain and which mode leads to more strain. The practical applications of this research would be that employers provide more flexible work arrangements and remote work which would help deal with the strain caused by commute. The individuals dealing with strain caused by commute can start route planning based on which commute and route suits them the best and is the quickest with least wait time and that can help reduce stress.Future research can take find various ways in which commute strain could be linked to as having an impact on employees somatic health and wellbeing. They could take into consideration a larger and more diverse sample size. They could take into consideration individual differences such a personality, coping styles, etc. into consideration. They could compare the actual strain with perceived strain. They could take into account the different work settings, and work hours. The difference in modes of transportation could be taken into consideration as well as multi-modal transportation. The problem of traffic and congestion could also be taken into account for future researches. In, conclusion, a significant relationship between commute strain and somatic health symptoms but the same was not observed with well being. Future research can study individual differences, regional differences, and different aspects of commuting such as
modes, flexibility across a diverse population, multi modal commuting.

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Impact of Introversion and Extroversion on Work Self-Efficacy

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Abstract :-

The aim of this study was to find out the job-related self-efficacy of employees who are extroverted and introverted in nature. The goal was to understand whether extroverted employees have higher self-efficacy than introverted employees. To assess the personality type, the Extraversion vs Introversion scale was used and to measure their self-efficacy at workplace job-related self-efficacy measure was used. The data was collected from total 113 participants from various sectors and different job designations. The data was analysed using the spss software. The findings of this study reveals that the variances of the two groups were insignificant (p value= 0.718), and there was no significant difference between the self-efficacy scores of extroverts and introverts (p value= 0.707).

Keywords : ***Introvert, Extrovert, Job-related self-efficacy, organizational psychology***

Introduction :-

Carl Jung introduced the concepts of introversion and extroversion, categorizing individuals based on their orientation toward the inner or outer world. Introverts are inward-focused, prefer solitude, and maintain a small social circle, while extroverts are outward-focused, social, and thrive in group settings. Personality plays a crucial role in shaping workplace behavior and performance (Penny David & Witt, 2011).

Job efficacy, or work self-efficacy, refers to an individual's confidence in performing their job tasks and meeting workplace demands. The Work SelfEfficacy Inventory (Raelin) measures this trait by evaluating beliefs about workplace behaviors and social requirements. Both introverts and extroverts strive for job efficacy as part of their growth and development (Hussain et al., 2020). However, extroversion has been associated with greater job satisfaction due to the sociable nature of extroverts, which helps them adapt and succeed in team-oriented environments (Dastoorani & Yoosef, 2012).

Research in India has shown that personality traits such as positivity influence job satisfaction and organizational commitment, particularly among middle managers (Vohra, 2010). Creating workplace environments tailored to diverse personality types can enhance job satisfaction and employee retention (Negad et al., 2014).

While personality traits like introversion and extroversion remain relatively stable throughout life, their impact on workplace success highlights the importance of understanding individual differences. A supportive environment that accommodates varying personality types fosters job satisfaction and overall performance

Methodology:-

Participants:

The total number of participants were 113. The gender of the participants for the research consisted of 49.6% cisgender female, 47% cisgender male, 0.9% gender fluid and 0.9% gender binary. The age range of the participants varied starting from 18 years to around the age of 55. There were 37.6% of the participants from the age range of 18-25, 29.9% from the age range of 26-35, 19.7% from the age range of 36-45, 12% from the age range of 46-55 and 0.9% from the age range of 56-65. The participants were from various sectors such as private, marketing, banking, corporate, e-commerce and human resource. 55.6% of the participants belong to the upper middle class of the socio-economic status, 37.6% belong to the lower middle class, 5.1% belong to the upper class, 0.9% belong to the upper lower class and 0.9% belong to the lower class.

Measures and Assessment:

There were two scales used for this research. One scale was used to measure the extroversion or introversion personality of the participants and the other scale was used to measure the self-efficacy of the participants at workplace. The first scale used was Extraversion vs Introversion scale. This scale measures the personality type of the participants whether they are extroverted or introverted in nature. The scale consists of 20 items. It is a qualitative scale. The second scale that was used was Job-related Self-efficacy measures, published in 1994 by Matt Riggs and Patrick Knight. It measures the self- efficacy of the employees at workplace. It is 10 items scale. It is a likert scale and consists of rating =s from 1 to 5. The psychometric of this scale was found to be satisfactory with reliability (Cronbach's alpha) reported of 0.88, showing high internal consistency.

Procedure:

The data was collected by sending out google forms that is through convenience sampling, snowball sampling and voluntary response sampling which are all non-probability sampling methods. Informed consent was taken beforehand from all the participants regarding. The participants were asked about their demographic details that is gender (biological sex was assigned to gender), age, socio-economic status, their sector at workplace and their designation. Then they were given the extraversion vs introversion scale first to assess their personality and then Job-related Self-efficacy measures was given second to assess their self-efficacy at workplace. The time taken by each of the participants was about 15 minutes. The language of the survey questionnaire was English for all the participants. Email id of the experimenter was given to the participants in case of any queries.

Ethical considerations:

The responses of the data collected was made anonymous, the participants did not have to reveal their names, only their initials were asked. All the data that is collected is confidential including the demographics details of the participants. Informed consent was taken from all the participants before taking the data. The participation by all the participants was entirely voluntary. Personal information of any kind was not asked. There was no sampling bias since the sampling method was of non-probability sampling.

Data analysis:

The data was analysed using the spss software.

Results :-

Descriptive statistics:

Descriptives

[DataSet0]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Group	113	1.00	2.00	1.4602	.50063
Score	113	10.00	44.00	29.5398	4.52973
Valid N (listwise)	113				

Table 1: Descriptive statistics

The above table is the descriptive statistics that consists of two variable, first variable are the two groups, introverts (1.00) and extroverts (2.00) with a mean of 1.46, indicating slightly higher number of introverts as compared to extroverts. And the second variable is the self-efficacy scores of the two groups. The score range of introverts is 10 and for extroverts is 44 with the overall mean of 29.54 and standard deviation of 4.52. The mean score of 29.53 indicates moderate self-efficacy levels on average amongst both the groups. The standard deviation of 4.52 shows that the self-efficacy scores are spread reasonably amongst the two groups.

T-Test:

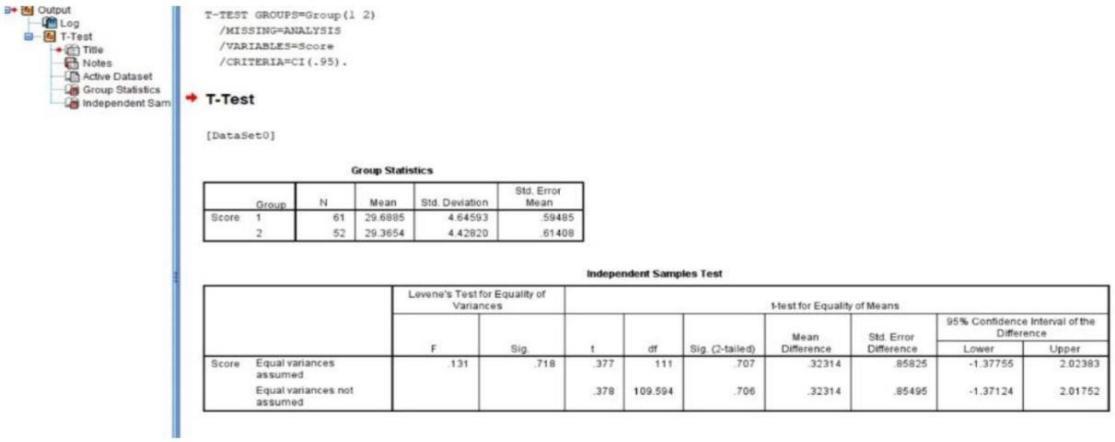

Table 2: T-test

The above table is the independent sample test of the scores of self-efficacy between introverts and extroverts. To test the equality of variances as per the Lavene's test, the f value is 0.13 and p value is 0.71. This indicates that. The p value being 0.71 is much higher than 0.05. which means that the model is insignificant. The t-test for the equality of means with equal variances assumed, the t value is 0.377 with the degrees of freedom (df) of 11 and the p value of 0.707. since the p value is much higher than 0.05, it indicates that there is no significant difference statistically between the self-efficacy scores of introverts and extroverts

Discussion and Implications :-

This study examined whether personality traits—introversion and extroversion— impact job-related self-efficacy. Results revealed no significant difference in selfefficacy scores between introverts and extroverts, with both groups demonstrating moderate levels of self-efficacy. This aligns with prior research, suggesting that the self-efficacy of both personality types depends on job requirements rather than personality alone.

Different roles and sectors demand distinct qualities suited to either introverts or extroverts. For instance, introverts excel in solitary, individual-focused tasks, while extroverts thrive in roles requiring leadership, public speaking, or group collaboration. According to Bandura's Social Cognitive Theory (1997), self-efficacy stems from the sense of achievement derived from task completion. Thus, regardless of personality type, individuals with moderate to high performance experience adequate selfefficacy.

Studies, such as those by Khokar (2017), indicate that organizational culture significantly influences job performance. Introverts, for example, perform better in environments favoring their personality traits. Similarly, McGregor's Theory X and Theory Y highlights that an organization's culture often reflects the dominant personality type of its employees, affecting the performance of different personality types.

Trait Theory by Eysenck and Cattell (1965) suggests that personality influences task suitability. Introverts feel more capable in individualistic tasks, while extroverts excel in social and leadership roles. Research by Akhtar et al. (2020) found both personality types share a desire for growth, which contributes to similar workplace success.

In conclusion, personality does not significantly affect job-related self-efficacy if the work environment aligns with the individual's traits. Introverts and extroverts can perform equally well when placed in roles that complement their strengths, fostering a balance of competence and growth. Future research should explore the interaction of personality, job roles, and organizational culture to deepen understanding.

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Impact of Perceived Discrimination Based on Identity and Emotional Intelligence on Job Performance of Employees in High-Pressure Sectors (banking, investment, information technology, law and medical) and the effect of mediating variables

Aliza Mordecai

Abstract

The study aimed to determine the relationship between the impact of perceived discrimination based on identity and emotional intelligence (EI) on employees' job performance in high-pressure sectors and the effect of its mediating variables. The participants were employees over the age of 18 and working in highly stressful sectors, namely Banking, Investment, Medical, Law and Information Technology. Snowball sampling was used. Data was collected through a Google Form where demographic details were asked and The Everyday Discrimination Scale, Brief Emotional Intelligence Scale (BEIS-10) and Goodman and Svyantek Job Performance Scale (1999) were administered. The statistical analysis reveals that the p-value for Contextual Job Performance, EI, and Perceived Discrimination is ($p < 0.001$). This suggests that both of the variables of Perceived Discrimination and EI together significantly predict Contextual Job Performance. Similarly, the p-value for Perceived Discrimination, EI and Task Job Performance is less than 0.001 ($p < 0.001$). This means that in both cases the model is significant however only EI significantly predicts the job performance variables whereas, Perceived Discrimination does not.

Keywords: Emotional Intelligence, Perceived Discrimination, Contextual Job Performance, Task Job Performance.

Introduction

The rise in employee stress levels over recent decades poses a persistent challenge for organizations. Emotional Intelligence (EI), defined by Mayer and Salovey (1995) as the ability to recognize, understand, manage, and use emotions. Studies by Dursun, Emül, and Gençöz (2010) and Miao, Humphrey, and Qian (2017) highlight EI's role in improving job performance, with job satisfaction as a mediating factor. This study also explores perceived discrimination based on identity factors like gender, sexuality, caste, and religion, which research links to complex emotions, psychological distress, and adverse effects on health-related behaviors and overall well-being (Williams & Collins, 1995).

Nilam and Weerarathna (2022) found EI positively influences job performance, while Dhani (2017) noted both positive and negative effects. Russo et al. (2020) linked HRM practices to job satisfaction and reduced discrimination, but Dwomoh, Owusu, and Mensah (2015) found no link between discrimination and performance. Tanasescu and Leon (2019) showed EI reduces stress and improves performance. However, gaps remain in understanding the combined effects of discrimination, EI, and job performance in high-stress sectors and EI's moderating role. This study addresses these gaps.

Methodology

Participants: The study involved 102 participants aged 18 to 76 years and beyond, with age groups spanning 18-25 to 56-65. Caste demographics, Religion, Gender, Socioeconomic status, and sexual orientation were noted. Employment sectors were Banking, Information Technology, Investment, Medical, and Law.

Measures and Assessments: Williams et al. (1997) developed the Everyday Discrimination Scale, designed to assess the frequency of perceived prejudicial behaviours. The responses are coded from 1 to 6, and the final score is the sum of the coded responses. The scale demonstrates strong reliability, with a Cronbach's alpha cutoff of over 0.80 for 18 of its 25 items.

The Brief Emotional Intelligence Scale (BEIS-10), developed by Davies et al. (2010), consists of 10 items assessed on a 5-point Likert scale. The overall EI score is the sum of these item responses. It has satisfactory psychometric properties, with reliability between tests ranging from r = 0.35 to 0.48. The Goodman and Svyantek Job Performance Scale (1999) measures both task and contextual performance. The scale comprises 16 items—seven items measuring contextual performance and nine items measuring task performance. It uses a 4-point Likert scale. The overall score is determined by summing all responses. This scale is both reliable and valid.

Procedure: An online survey was conducted via Google Forms, with informed consent obtained. Demographic details collected included initials, age, gender, socioeconomic status, caste, religion, sexuality, sector of employment, and designation. The Everyday Discrimination Scale, BEIS-10, and the Goodman and Svyantek Job Performance Scale (1999) were adminestered respectively. Snowball sampling was used.

Ethical Consideration: Only initials were collected to ensure anonymity, and responses will be deleted after six months. Informed consent was taken, and participation was voluntary. All results are confidential, used solely for research purposes.

Data Analysis: The data was analysed using the software SPSS.

Results

Multiple regressions were used to analyse the data.

Descriptive Statistics

	N	Range	Sum	Mean	Std. Deviation
Perceived Discrimination Scale	102	38	2233	21.89	8.737
Emotional Intelligence Scale	102	36	3918	38.41	6.687
Contextual Performance	102	21	2171	21.28	4.023
Task Performance	102	27	3115	30.54	4.458
Valid N (listwise)	102				

Table 1: Descriptive Statistics

The descriptive statistics for Perceived Discrimination, Emotional Intelligence (EI), Contextual Job Performance and Task Job Performance are displayed in Table 1. The data was collected from 102 participants (N=102). The mean for Perceived Discrimination was found to be 21.89 and the standard deviation (SD) was found to be 8.737. With reference to EI, the mean score is 38.41 and the standard deviation (SD) is 6.687. The mean for Contextual Job Performance is 21.28 and the standard deviation (SD) is 4.023 whereas the mean for Task Job Performance is 30.54 and the standard deviation (SD) is 4.458.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Emotional Intelligence Scale, Perceived Discrimination Scale[b]	.	Enter

a. Dependent Variable: Contextual Performance
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.559[a]	.312	.298	3.371

a. Predictors: (Constant), Emotional Intelligence Scale, Perceived Discrimination Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	509.930	2	254.965	22.440	<.001[b]
	Residual	1124.825	99	11.362		
	Total	1634.755	101			

a. Dependent Variable: Contextual Performance
b. Predictors: (Constant), Emotional Intelligence Scale, Perceived Discrimination Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	8.964	2.712		3.306	.001
	Perceived Discrimination Scale	-.013	.043	-.028	-.305	.761
	Emotional Intelligence Scale	.328	.056	.545	5.877	<.001

a. Dependent Variable: Contextual Performance

Table 2: Perceived Discrimination, Emotional Intelligence and Contextual Job Performance

As seen in Table 2, only EI significantly predicts the dependent variable of Contextual Job Performance, whereas Perceived Discrimination does not. The R-value is found to be 0.559 and the R^2 value is 0.312. This means that 31.2% of the variance in contextual performance is explained by the two variables.

The ANOVA Table gives us F value of 22.440 and the p-value of less than 0.001 ($p < 0.001$). Since the t-value of Perceived Discrimination is -0.305 and the p-value is 0.761 it does not significantly predict Contextual Job Performance in this model. Whereas, the t-value for EI is 5.877 and the p-value is less than 0.001, therefore higher EI is associated with higher Contextual Job Performance.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Emotional Intelligence Scale, Perceived Discrimination Scale[b]	.	Enter

a. Dependent Variable: Task Performance
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.628[a]	.394	.382	3.506

a. Predictors: (Constant), Emotional Intelligence Scale, Perceived Discrimination Scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	790.459	2	395.230	32.154	<.001[b]
	Residual	1216.884	99	12.292		
	Total	2007.343	101			

a. Dependent Variable: Task Performance
b. Predictors: (Constant), Emotional Intelligence Scale, Perceived Discrimination Scale

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	18.484	2.820		6.554	<.001
	Perceived Discrimination Scale	-.082	.044	-.160	-1.836	.069
	Emotional Intelligence Scale	.360	.058	.541	6.204	<.001

a. Dependent Variable: Task Performance

Table 3: Perceived Discrimination, Emotional Intelligence and Task Job Performance

As seen in Table 3, the regression analysis states that EI significantly predicts the dependent variable of Contextual Job Performance, whereas Perceived Discrimination does not. The R-value is found to be 0.628 and the R^2 value is 0.394. This means that 39.4% of the variance in contextual performance is explained by the two independent variables.

The ANOVA Table gives us the F value and p-value. The F value is 32.154 and the p-value is less than 0.001 ($p < 0.001$). This suggests that both Perceived Discrimination and EI significantly predict Task Job Performance but only EI contributes to this prediction. Since the t-value of Perceived Discrimination is -1.836 and the p-value is 0.069 it does not significantly predict Task Job Performance in this model. Whereas, the t-value for EI is 6.204 and the p-value is less than 0.001, therefore stating that a higher EI is associated with higher Task Job Performance.

Discussion

Emotional Intelligence and Job Performance: The results indicate a positive correlation between Job Performance and EI. Contextual Job Performance and Task Job Performance were analyzed separately, showing that EI significantly predicts both. Higher EI leads to better Contextual Job Performance and Task Job Performance. This finding aligns with prior research. Kumari and Priya (2018) found a significant positive relationship between EI and job performance among 600 bank managers. Similarly, Hamdan et al. (2017) observed this correlation among 194 nurses in Jordan, and Ali, Garner, and Magadley (2011) reported the same among 310 police officers.

Perceived Discrimination and Job Performance: The results indicate that Perceived Discrimination does not significantly predict Job Performance. Tables 2 and 3 show no positive correlation between Perceived Discrimination and either Contextual or Task Job Performance. Several factors may explain this: only certain aspects of identity were analyzed, and factors that mediate emotional regulation were not considered. Research suggests that individuals facing discrimination may work harder to counter negative perceptions and change colleagues' attitudes (Singh et al., 2013). According to Steele (1997), the threat of stereotyping can motivate individuals to improve their performance to counteract negative attitudes. Additionally, the fear of job termination may also drive individuals to work harder despite workplace challenges (Fehr & Falk, 2002).

Limitations: The study has several limitations. The small sample size of 102 limits generalizability to a broader population. It focuses only on specific highly stressful sectors and includes only Indian participants, reducing its international applicability. However, the participants may have answered the survey in a way that made them feel socially acceptable.

Applications: This study highlights the role of EI in improving job performance, especially in stressful industries. It recommends that organizations prioritize hiring individuals with higher EI and integrate EI training into employee development programs to enhance workforce effectiveness.

Future Research: Future research could examine variables influencing EI, perceived discrimination, and job performance, including identity-based factors and mediators like coping strategies, support systems, compensation, and personality traits. Studies in multicultural settings and stress-intensive sectors, along with qualitative methods like interviews, could enhance insights and generalizability.

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Innovation Hubs in India: Catalysts for Economic Growth and Technological Advancement

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Abstract

In India, innovation hubs are becoming essential for promoting entrepreneurship, creativity, and technical breakthroughs. These hubs, which are frequently found in cities, offer corporates, startups, and academic institutions a collaborative atmosphere. This essay examines the rise of innovation hubs in India, their contribution to economic growth, and the difficulties they encounter. Additionally, it looks at case studies of well-known centres like Hyderabad and Bengaluru and assesses government programs like the Atal Innovation Mission and Startup India. Recommendations for expanding and improving India's innovation hubs are included in the paper's conclusion.

Introduction

With one of the fastest-growing economies in the world, India is emerging as a hub for innovative concepts and ventures. Innovation centres, which bring together technology, skilled individuals, and ideas, are crucial to this progress. These centres are locations where businesses, investors, entrepreneurs, and academic institutions collaborate to address issues and strengthen the economy.

This essay discusses the significance of these innovation hubs in India, their role in the nation's development, and the difficulties they encounter. Additionally, it offers effective examples and ideas for improving them.

What Are Innovation Hubs?

Ecosystems created to promote creativity, innovation, and teamwork are known as innovation hubs. Usually, they include:

1.Coworking spaces, which offer infrastructure to freelancers and startups.

2.Incubators and Accelerators: Providing networking opportunities, capital, and mentorship to early-stage businesses.

3.Research and Development Centres: Encouraging technological progress via industrial and academic collaborations.

4.Networking Platforms: Promoting cooperation between interested parties.

These hubs flourish in cities with easy access to infrastructure, talent, and funding.

The Rise of Innovation Hubs in India

Historical Context

India's economic liberalization in 1991 marked the beginning of its transition to a global centre for innovation. Cities like Bengaluru became technological powerhouses as a result of the subsequent IT boom in the late 1990s. As time went on, the innovation landscape expanded to encompass industries like renewable energy, biotechnology, and fintech.

Important Growth Drivers

1. Government Policies: Programs such as Made in India, Digital India, and Startup India have improved the climate for innovation hubs.
2. Demographic Dividend: Entrepreneurial endeavours are fuelled by a youthful, tech-savvy populace.
3. Access to Capital: The expansion of startups has been aided by the increased availability of angel and venture capital financing.
4. International Collaborations: Knowledge sharing is improved through alliances with foreign corporations and universities.

Role of Innovation Hubs in India's Development

1.**Growth in the Economy**

Innovation hubs encourage entrepreneurship and employment development, which boosts India's GDP considerably. These centres' backed startups have opened up new markets and upended established industries.

2.**Development of Skills**

Innovation hubs give people access to cutting-edge skills through workshops, mentorship programs, and hackathons, which increases their employability.

3.**Development and Research**

In innovation centres, industry-academia collaboration speeds up research and development, resulting in innovations in sustainable practices, healthcare, and technology.

4.**Development of Urban Areas**

Cities with innovation clusters, such as Hyderabad, Pune, and Bengaluru, have seen an increase in infrastructure, drawing in investments and talent from around the world.

5.**Overcoming the Urban-Rural Gap**

Through a number of programs, rural innovation hubs in Tamil Nadu and Gujarat are fostering inclusive growth and supporting local entrepreneurs:

Gujarat:

The Student Startup Innovation Policy (SSIP) established Ahmedabad's i-Hub (Innovation Hub), a business incubator that promotes cooperation between entrepreneurs, investors, and academic institutions. It supports up to 500 businesses at once and provides co-working facilities, finance assistance, coaching, and intellectual property support.

Hubs for STEM Innovation in the Smart Village Movement: Rural schools in the districts of Vadodara and Narmada now have STEM Innovation Hubs because to this project. By allowing kids to work on projects like robots and 3D printing, these hubs foster innovation in students from an early age through experiential STEM (Science, Technology, Engineering, Mathematics) education.

Tamil Nadu:

The Tamil Nadu government launched TN-RISE (Tamil Nadu Rural Incubator and Start-Up Enabler) with the goal of establishing women-led businesses in rural regions. It provides tailored market connections, funding, and operational guidance in partnership with businesses like as Flipkart and HP to remove barriers faced by female entrepreneurs.

The Rural Technology Business Incubator (RTBI) at IIT Madras Research Park: In villages like Rediarpatti in the Tamil Nadu district, RTBI has set up rural data annotation centres as part of its "10x initiative." By giving locals access to high-tech job opportunities, these centres help close the employment gap between urban and rural areas. **Case Studies of Prominent Innovation Hubs**

1. Bengaluru: The Silicon Valley of India
   - Focus areas include e-commerce, financial, AI, and IT.
   - Important Players: Flipkart, Wipro, Infosys, and several startups.
   - Infrastructure: Contains tech parks like Electronic City, coworking spaces, and accelerators like Axilor Ventures.
   - Impact: Bengaluru is one of the top 20 worldwide startup ecosystems and accounts for 9.8% of India's GDP.
2. Hyderabad: The Genome Valley
   - Focus Areas: IT, drugs, and biotechnology.
   - Important Projects: T-cluster (India's largest innovation cluster) and the Genome Valley project.
   - Government Support: Laws that encourage R&D and collaborations between the public and private sectors.
   - Impact: Hyderabad has drawn international biotech firms and established India as a vaccine manufacturing powerhouse.

3. Delhi-NCR: The Policy Powerhouse

Focus areas include media companies, fintech, and edtech.

Important Infrastructure: NASSCOM 10,000 Startups and other incubation facilities. Impact: Startups have been able to test out regulatory improvements thanks to their close proximity to legislators.

Government Initiatives Supporting Innovation Hubs

1. India Startup

Startup India was established in 2016 and offers finance assistance, tax advantages, and regulatory compliance simplicity. This program has recognized more than 80,000 startups.

2. The mission of Atal Innovation (AIM)

Through its Atal Tinkering Labs and incubation facilities, AIM fosters innovation, focusing especially on rural and educational communities.

3. India's Digital Economy

Startups are now able to target underserved populations thanks to this initiative's increased internet usage and digital literacy.

4. The NISP, or National Innovation and Startup Policy

NISP, which was introduced by the Ministry of Education, incorporates entrepreneurship and innovation into educational settings.

Challenges Faced by Innovation Hubs in India 1. Infrastructure Gaps

Physical Infrastructure: Well-designed offices, labs, and collaboration spaces—all necessary for promoting innovation—are lacking in many cities. For example, insufficient coworking spaces, erratic transit, and power outages frequently impede companies in smaller cities.

Digital Infrastructure: Entrepreneurs' ability to work together and efficiently use digital technology is limited in non-urban areas by a lack of dependable communication networks and high-speed internet.

2. Funding Constraints

Early-Stage finance: Although venture financing for well-established firms is rising, seed finance is frequently a challenge for fledgling businesses. There are few prospects for aspiring business owners since investors are hesitant to support unproven concepts or teams.

Dependency on External Funds: Innovation hubs frequently rely on public or private funding, which may not always be sufficient or constant, which affects their capacity to provide businesses with all-encompassing support.

3. Talent Shortages

Skills Gap: Despite having a sizable workforce, many Indian professionals are not wellversed in cutting-edge disciplines like advanced robotics, blockchain, and artificial intelligence. Startups trying to find qualified workers are hampered by this lack. Brain Drain: A shortage of talent exists in Indian innovation hotspots since highly qualified people frequently leave the country in search of better possibilities.

4. Bureaucratic Hurdles

Regulatory Complexity: Establishing and running a business in India frequently entails negotiating difficult and drawn-out regulatory processes, like obtaining permissions and following compliance guidelines.

Inconsistent Policies: Startups and investors are discouraged from making long-term commitments due to the uncertainty created by frequent policy changes and ambiguous standards.

5. Limited Regional Spread

Urban Concentration: The majority of innovation hubs are found in major cities like Delhi, Hyderabad, and Bengaluru. For businesses in smaller cities and rural locations, this centralization restricts their access to resources and opportunities.

Rural Neglect: In spite of government initiatives, rural areas frequently lack the infrastructure, awareness, and support networks required to promote entrepreneurship and innovation.

Future Directions for Innovation Hubs in India

1.Innovation hub decentralization

In Tier-2 and Tier-3 cities, promoting the establishment of hubs can guarantee inclusive growth and lessen traffic.

2.Improved PPPs (Public-Private Partnerships)

Government, academic, and corporate sector cooperation can enhance policy frameworks, funding, and infrastructure.

3.Pay Attention to New Technologies

To remain globally competitive, hubs should give priority to areas like artificial intelligence, blockchain, quantum computing, and renewable energy.

4.Programs for Reskilling and Upskilling

The talent gap can be closed with investments in education and training initiatives, especially in fields involving cutting-edge technology.

5.Robust Regulatory Structures

Innovation can be promoted by enacting strong intellectual property regulations and streamlining compliance procedures.

Conclusion

India's transition to a global knowledge economy is being led by innovation clusters. These centres are essential in determining the future of the nation because they encourage entrepreneurship, promote technology, and stimulate economic growth. However, obstacles including geographical inequities, financing constraints, and infrastructure deficits continue to limit their potential. Innovation centres can reach their full potential if these problems are resolved with calculated investments, legislative changes, and cooperative initiatives.

Innovation centres will be essential in promoting equitable and sustainable growth as India moves closer to becoming a $5 trillion economy, guaranteeing that the country will continue to be a global leader in innovation.

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Impact of AI (Artificial Intelligence) in HR (Human Resource) Management on Employee Engagement

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Abstract

This research focuses on impact of Artificial Intelligence (AI) in Human Resource (HR) management and employee engagement. Now a days Artificial Intelligence (AI) is used in Human Resource (HR) management to manage tasks like recruitment, performance appraisal, training and employee management. While AI improves productivity and decision-making, it even faces dispute with financial costs, resistance to change, and ethical concerns. This study explores how AI tools in HR management impact employee engagement particularly in a world that is increasingly dependent on digital tools for work. By analyzing AI's role in HR, the research intents to give awareness of the benefits and limitations of AI in improving employee experiences and organizational outcomes. Prior studies have explored AI's effects on HR processes and employee productivity, revealing mixed outcomes regarding engagement and acceptance of AI tools. Understanding how AI impacts employee engagement is important as organizations increasingly integrate these technologies. This research aims to fill gaps in knowledge about the specific effects of AI on engagement. The findings will help to understand how to use AI effectively to boost engagement and performance while also suggesting areas for future research. This study used a quantitative approach with the help of Google forms survey, to gather data on use of AI in HR management on Employee Engagement. This study used a snowball sampling method. The study found that relationship of AI in HR on employee engagement is both statistically and practically significant with (F value = 273.918; p-value < 0.001). This means use of AI in HR is a significant and strong predictor of the Employee Engagement.

Keywords: Artificial Intelligence (AI), Employee Engagement, Human Resources (HR), AI tools, Digital Transformation.

Introduction

In the past, Human Resource (HR) management relied heavily on manual processes and traditional methods. However, with the introduction of artificial intelligence (AI), HR practices have undergone significant changes. AI technologies are now transforming HR by improving operational efficiency, streamlining recruitment, and positively influencing employee engagement. As organizations embrace these advancements, understanding the connection between AI and employee engagement becomes crucial for fostering a motivated and committed workforce.

AI in HR refers to using intelligent systems to perform tasks such as hiring, assessing employee performance, and supporting employee development (Cascio & Montealegre, 2016). On the other hand, employee engagement measures how enthusiastic and dedicated employees are to their roles and the organization (Kahn, 1990).

Research has shown that AI plays a vital role in enhancing HR practices. For example, Rathi (2018) highlighted that AI improves talent acquisition and retention but also faces challenges like financial costs and lack of expertise. Johansson and Herranen (2019) found that AI boosts HR efficiency and decision-making but noted concerns such as resistance to change, ethical issues, and job security fears. Vahdat (2021) studied employee engagement during the COVID19 pandemic and observed declines due to remote work, emphasizing the need for digital tools to support employees. Similarly, Sugdare (2021) explored AI tools like ChatGPT, which were found effective for routine HR tasks, although the study was limited by a small sample size and lack of diversity. Wijayati et al. (2022) highlighted that change leadership is critical in maximizing AI's impact on employee performance and engagement, especially in sectors like banking and services.

These studies collectively suggest that AI can significantly enhance HR processes and employee engagement. However, they also point out challenges such as ethical considerations, financial barriers, and the need for strong leadership. Building on this foundation, the present study aims to explore how AI tools impact employee engagement in HR management. By understanding the benefits and limitations of AI, this research seeks to offer strategies to improve employee experiences, enhance organizational performance, and provide direction for future studies in this area.

Methodology

Participants

This study involved 115 participants from various IT sectors. The age distribution was diverse, with a median age of 22 years. The majority (40.9%) of participants were aged between 18-25 years, followed by 26-35 years (28.7%), 36-45 years (18.3%), and smaller groups aged 46-55 years and above 55 years (6.1% each). In terms of gender identity, 53% of participants identified as cisgender males, 46.1% as cisgender females, and only 0.9% as transgender. Regarding their roles, 26.1% were interns, 43.5% were employees, and 30.4% were team leaders. Participants reported using various AI tools at their workplaces, including HireVue (27.8%) for video interviewing, ChatGPT (27.8%) for HR communication and support, and BambooHR (21.7%) for managing records and onboarding, among others like Leadx and
Lattice.

Measures and Assessments

The study utilized the Technology Acceptance Model (TAM) (Davis, 1989) to evaluate employees' acceptance of AI in HR. TAM includes three components: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioral Intention to Use (BI). Reported reliability was strong, with Cronbach's alpha at 0.97 for PU and 0.91 for PEOU. Factor loadings for PU ranged from 0.71 to 0.93 and for PEOU from 0.79 to 0.85, indicating strong validity. BI, the outcome variable, is influenced by both PU and PEOU.

Employee engagement was measured using the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002), which assesses Vigor, Dedication, and Absorption. Reliability scores ranged from 0.78 to 0.79 for Vigor, 0.84 to 0.89 for Dedication, and 0.72 to 0.73 for Absorption. Confirmatory factor analysis supported construct validity, showing strong convergent and discriminant validity with related constructs like job satisfaction and burnout.

Procedure

Data were collected using Google Forms through snowball sampling. Informed consent was obtained, ensuring confidentiality and curriculum-based use. The form had three sections: (1) Demographics: Participants provided initials, age, designation, and AI tools used at work. (2) TAM Assessment: 13 Likert-scale questions evaluated employees' perceptions of AI in HR. (3) UWES Assessment: 17 Likert-scale questions measured employee engagement with AI in HR. Participants took 8–10 minutes to complete the form. A contact email was provided for future updates. Random sampling was used to minimize bias. The study employed a correlational design to explore the relationship between AI in HR (independent variable) and employee engagement (dependent variable) without manipulating variables.

Ethical consideration

The participants had to fill only their initials in Google form their full name was not asked. Inform constent was presented at the starting of the form and their data was kept confidential. The data response will be deleted after 6 months. In this research study, the participants personal information was not collected like their phone number and email ID. Without any penalty, participants had the option to withdraw as well.

Data Analysis

Data was analyzed using SPSS software to explore the relationship between AI use in HR and employee engagement. Detailed results will be discussed in the findings section.

Descriptives

[DataSet0]

Descriptive Statistics

	N	Range	Sum	Mean	Std. Deviation	Variance
AI in HR	115	30	5570	48.43	7.668	58.792
Employee Engagement	116	113	9863	85.03	17.396	302.617
Valid N (listwise)	115					

RESULTS

The table 1 shows the descriptive statistics for use of AI in HR indicated the mean score of 48.43, standard deviation (SD) of 7.668 and
variance of 58.792. Employee Engagement had a mean score of 85.03, standard deviation of 17.396, and variance of 302.617.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	AI in HR[b]	.	Enter

a. Dependent Variable: Employee Engagement

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841[a]	.708	.705	8.432

a. Predictors: (Constant), AI in HR

The table 2 shows the Regression Analysis. The R-value was found to be of 0.841 and an R^2 value of 0.708. Hence, this model was statistically valid.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19474.722	1	19474.722	273.918	<.001[b]
	Residual	8033.939	113	71.097		
	Total	27508.661	114			

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), AI in HR

The table 3 is the Anova table. This model was significant statistically, as F value was found to be 273.918 and p-value < 0.001. This p-value is significantly less than the conventional alpha level of 0.01, which results that the model is significant.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.203	5.050		.634	.527
	AI in HR	1.705	.103	.841	16.550	<.001

a. Dependent Variable: Employee Engagement

The table 4 shows the coefficient for AI in HR is 1.705. The t value was found of 16.550 and p-value < 0.001. The high t value and low p-value shows that use of AI in HR is a significant predictor for Employee Engagement.

DISCUSSION

The study revealed that AI in HR management significantly enhances employee engagement. Employees using AI tools like HireVue, ChatGPT, and BambooHR reported higher engagement levels, as these tools improve the work environment by automating routine tasks and enhancing communication. This aligns with previous research, such as Wijayati et al. (2022), who found that AI reduces task burdens and fosters team communication, boosting engagement. Similarly, Vahdat (2021) highlighted AI's role in managing HR functions during remote work, enabling effective recruitment, onboarding, and real-time feedback, which maintained engagement despite physical distance. These findings emphasize AI's potential to create an engaging workplace.

Several theoretical frameworks explain the positive link between AI in HR and employee engagement:(1) Self-Determination Theory (SDT): Deci and Ryan (1985) suggest that engagement increases when employees' needs for autonomy, competence, and relatedness are met. AI tools enhance competence by automating routine tasks, relatedness by improving communication, and autonomy by offering control over work, thus boosting engagement. (2) Job Demands-Resources (JD-R) Model: Bakker and Demerouti (2007) propose that job resources, such as supportive technology, reduce job demands and increase motivation. AI acts as a job resource, enabling employees to focus on meaningful tasks, improving motivation and engagement.(3) Social Exchange Theory (SET): Blau (1964) highlights that when employees perceive organizational investment in tools like AI, they reciprocate with higher engagement. AI adoption signals organizational support, fostering effort and commitment.

In summary, AI tools significantly enhance employee engagement by creating a supportive, efficient, and motivating work environment, helping organizations improve productivity and morale.

Limitations

The study's limitations include a small sample size of 115 participants, which reduces the generalizability of results, and a focus on qualitative data without addressing long-term changes in employee engagement due to AI integration.

Practical Applications

The study ensures internal validity by isolating AI's impact on employee engagement through controlled variables like job role and company size. In India, AI addresses HR challenges such as high turnover and inefficiencies by automating recruitment, improving communication, and enhancing retention strategies, ultimately boosting employee engagement.

Future Research

Future studies can adopt a mixed-methods approach, use longitudinal designs to track longterm effects, and include larger, more diverse samples for better generalizability. Collecting employee feedback through interviews can provide deeper insights into how AI impacts Engagement.

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Job Satisfaction Among College Librarians: A Gender Based analysis in Unaided Colleges Affiliated to Mumbai and Thane District

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Abstract:

The present study is to investigates the job satisfaction levels of college librarians working in unaided colleges affiliated to Mumbai University in the Mumbai and Thane districts. The study has been undertaken to measure the level of professional satisfaction of male and female librarians. The increasing recognition of librarians' vital role in the academic environment, gender-related factors in their job satisfaction have received limited attention. A gender-based analysis was conducted on a sample size of 105 librarians, comprising 50 women and 55 men. On five-point scale based on Likert's scale used by researcher for analysis. The study explores various dimensions of job satisfaction, such as work environment, pay scale, professional growth, and work-life balance, and employs both quantitative and qualitative methods for analysis. Statistical tools, including mean, standard deviation, and t-tests, are used for data interpretation. These findings can inform policies for improving job satisfaction, career progression, and gender equity in academic libraries.

Keyword: Job satisfaction, college librarians, gender-based analysis, unaided colleges, Mumbai University, gender equity, academic libraries, Mumbai and Thane district

1-Introduction

1.1 Background

Librarianship, often considered a vital component of the educational sector, is evolving rapidly in the modern academic environment. Libraries are no longer just repositories of books and journals but have become dynamic centers for learning, research, and knowledge management. College librarians play an essential role in the academic development of students, faculty, and researchers. However, their job satisfaction, which directly impacts their professional effectiveness, is influenced by various factors, including institutional policies, compensation, work-life balance, and gender dynamics.

In India, a substantial number of higher education institutions operate on a self-financed or unaided basis. These colleges often have distinct organizational structures and resource allocations, which may affect job satisfaction. Furthermore, gender differences in job satisfaction have been explored in several fields, but limited research exists on gender-based variations in job satisfaction among college librarians, especially in the context of unaided colleges in India.

1.2 Research Problem

While job satisfaction is a well-researched area, its gender-based dimensions, particularly among college librarians, have not been sufficiently examined. The primary objective of this study is to assess whether gender influences job satisfaction among college librarians working in unaided colleges affiliated with Mumbai University, particularly in the Mumbai and Thane districts. The study aims to fill this gap in the existing literature and offer insights into how gender affects the job satisfaction.

1.3 Objectives of the study

- To measure the overall job satisfaction levels among male and female librarians.
- To identify key factors affecting job satisfaction.
- To explore gender-based differences in job satisfaction.

2. Literature Review

2.1 Job Satisfaction in Academic Libraries

Job satisfaction is a multifaceted concept that encompasses various aspects of the workplace, including the work environment, job responsibilities, relationships with colleagues, and opportunities for advancement (Herzberg, 1966). In the context of academic Libraries, librarian's job satisfaction is critical not only for their professional development but also for the efficiency and effectiveness of library services.

Research on librarian's job satisfaction has primarily focused on public and university libraries. Several studies have identified the following factors as key determinants of job satisfaction in academic libraries: work environment, professional development opportunities, compensation, and institutional support (Teng & Lim, 2009; Tovar, 2011). However, few studies have specifically explored gender-based differences in job satisfaction among librarians, particularly in the context of Indian unaided colleges.

2.2 Gender and Job Satisfaction

Gender is an important variable in understanding job satisfaction across various professions. In the academic setting, female librarians often face challenges such as underrepresentation in leadership roles and limited career progression opportunities (McNicol, 2012).

Studies in the global context have found that female librarians may experience higher levels of stress and job dissatisfaction compared to their male counterparts due to these factors (MacDonald, 2003). However, in India, gender-related differences in job satisfaction among college librarians have not been extensively studied, especially in unaided colleges, which often face unique challenges such as limited funding, high workloads, and fewer institutional support systems.

2.3 Job Satisfaction in Indian Unaided Colleges

Unaided colleges in India are generally more resource-constrained compared to government-funded institutions. Librarians working in these colleges often face greater workloads, limited professional development opportunities, and less institutional support. These conditions potentially exacerbate job dissatisfaction, particularly for female librarians, who may also contend with additional societal and professional barriers.

In their study of job satisfaction among academic librarians in India, Srivastava and Kaur(2015) identified that work pressure, lack of promotion opportunities, and inadequate remuneration were the major sources of dissatisfaction. Gender-specific challenges, such as unequal treatment and work-life imbalance, were also reported as significant factors influencing job satisfaction, though gender was not the primary focus of the study.

3. Methodology

3.1 Research Design

This study uses a mixed-methods approach, combining quantitative surveys and qualitative interviews to assess the job satisfaction of librarians. The quantitative survey provides broad insights into the general satisfaction levels of librarians, while the qualitative interviews offer deeper insights into gender-based challenges and experiences.

3.2 Sampling

The sample comprises librarians working in unaided colleges affiliated with Mumbai University, located in the Mumbai and Thane districts. A total 200 libraries were randomly selected from a list of the unaided colleges. Data received from 105 librarians.

4. Data Analysis

Table-1: Gender wise Distribution of Librarian

Gender	No. of Respondent	Percentage
Male	55	52.38
Female	50	47.61
Total	105	100

A total of 55 (52.38%) of the respondents were male while 50 (47.61%) were female. The gender distribution was nearly equal, providing a balanced perspective for analysis.

Table-2: Age wise distribution of Librarians

Age wise distribution (Years)	Frequency	Percentage
Under 25	10	9.52
25-35	35	33.33
36-45	30	28.57
46-55	25	23.80
Above 55	5	4.76

Above table shows that most participants fell within the 25-45 age range, reflecting the active working demographic in the study area.

Table-3 Job satisfaction level across different dimensions

Dimension	Male (n=55)	Female (n=50)
Work Environment	40 (72.7%)	45 (90%)
Pay Scale	35 (63.6%)	30 (60%)
Professional Growth	40(80%)	37(67.3%)
Work Life Balance	45 (90%)	38(69.1%)

Table-3 show that female librarian demonstrated a higher satisfaction rate (90%) compare to male (72.7%) about work environment. Satisfaction with pay scale showed a lower percentage for both genders. Compare to male, females are (60%) slightly less satisfied. At professional growth female (67.3%) exhibited higher satisfaction compared to male (80%). When it comes to work life balance female librarian showed notably less satisfied (69.1%) compared to male (45%)

5. Conclusion & Recommendations:

5.1 Finding

- Significant gender differences exist in job satisfaction levels.
- Pay scale and work-life balance emerged as critical factors for female librarians, while professional growth was a priority for males.

5.2 Recommendations

1. **Work-life Balance**: implement flexible working hours and support systems to help librarians, especially women, balance professional and personal responsibilities.

2. **Institutional Support**: Provide better recognition of librarian's work and contributions through rewards, promotions, and institutional support.

3. **Gender Sensitization**: Conduct gender sensitization workshops for college management to raise awareness of gender-related challenges and promote equity in the workplace.

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The Effects of Work-Related Stress on Employees' Job Satisfaction

Tia U Nair

Abstract

The objective of the study is to notice the impact of occupational stress upon job satisfaction among workers. The research included 91 participants, belonging to various industries and sectors. Participants were asked to fill a Google form consisting of two scales that assess work related stress and job satisfaction. The variables are significant with each other, meaning that the increased or optimal level of occupational stress leads to lower job satisfaction in employees. It was determined that job stress was a strong predictor of job satisfaction from the data obtained. The review in question analyses the intricate nature of the correlation that obtains between job stress and job satisfaction. It then proceeds further and elaborates how such factors as those which help induce workplace stress will eventually affect the morale, and by consequence the performance of employees and their general professional wellbeing`.

Keywords- Employees, Job Stress, Job Satisfaction, Workplace

Introduction

In today's fast-paced world, stress is a common term used by teachers, doctors, colleagues, and in various media outlets. It can be described as a change in the normal functioning of the body or mind due to stimuli from the environment, leading to feelings of irritation, concern, or apprehension (Panigrahi, 2017). Hans Selye (1974) defined stress as a non-specific response of the body to any demand. Occupational stress, a growing concern for both individuals and organizations, is linked to low productivity, poor work quality, low motivation, absenteeism, and high turnover (Patil & Vyas, 2023). Stress can also affect one's physical and psychological well-being, potentially causing long-term harm.

However, stress is not always negative. In fact, it can have a positive side by motivating employees to work harder and increasing job satisfaction (Syaiful et al., 2021). Job satisfaction, as defined by Edwin A. Locke (1976), is the pleasant emotional state resulting from one's job experiences. Workers who are satisfied with their jobs tend to experience better health and longer lives, while those who are dissatisfied may face various health problems, such as headaches or heart issues (Amiri et al., 2019). Job satisfaction also impacts employee performance, leading to greater organizational success and higher profitability. To ensure employee satisfaction, organizations must focus on their well-being and provide appropriate recognition (Syaiful et al., 2021).

While job satisfaction and workplace stress are often treated as separate issues, significant research shows that they are interrelated (Sharma & Tripathi, 2024). However, there is limited research exploring their relationship, especially from an Indian perspective. This study aims to compare the influence of workplace stress on employee morale, job satisfaction, and overall well-being in the corporate sector.

Methodology

This study aimed to assess the impact of work-related stress on job satisfaction in employees. It involved 91 participants, with age groups ranging from 18-25 (7.6%) to 56+ (15.2%). The sample was 52.2% Cisgender Males, 45.7% Cisgender Females, and 2.2% Non-binary. Participants were primarily from the Private Sector (80.4%) and various industries including IT, Education, Finance, Marketing, and more. Their annual incomes varied, with 39.1% earning above 15 Lakhs.

The study measured workplace stress and job satisfaction using two scales. The Job Satisfaction Index (JSI) is an 18-item scale with scores ranging from 18 to 90, where lower scores indicate lower satisfaction. The mean score was 63.8, with a standard deviation of 9.4. Reliability was confirmed at 0.87 using the Spearman-Brown formula. The scale's validity was supported by testing with men from an Army Training Program and adult night school students (Brayfield &

Rothe, 1951). To measure stress, the Workplace Stress Scale—a fivepoint Likert scale with eight items—was used, and it had a Cronbach's alpha of 0.80 (AIS, 1978).

The survey was conducted via Google Forms, where participants provided demographic details and completed both the JSI and Workplace Stress Scale. The survey took 5-10 minutes, and confidentiality was assured. Ethical guidelines were followed, ensuring voluntary participation and data use for educational purposes only. Data was analyzed using SPSS software, with linear regression and t-tests applied.

Dataanalysis

The R-value was 0.59, and R^2 was 0.290. ANOVA analysis showed a significant relationship between job stress and job satisfaction, with an F-value of 36.362 and a p-value <0.001. The t-value for job stress was 26.972.

[DataSet1]

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
job satisfaction	91	32	89	66.87	13.210
job stress	91	8	39	19.29	7.849
Valid N (listwise)	91				

Table 1- Descriptive Statistics

The descriptive statistics for job satisfaction showed a range from 32 to 89, with a mean of 66.87 and a standard deviation of 13.21, indicating that most scores were close to the mean. For job stress, the range was 8 to 39, with a mean of 19.29 and a standard deviation of 7.85, showing variation in stress levels. No missing data points were reported, and the sample size was 91.

ANOVA results showed a significant negative relationship between job stress and satisfaction ($F = 36.362$, $p < 0.001$). The unstandardized coefficient of -0.906 indicates that higher job stress reduces job satisfaction, while the standardized coefficient of -0.539 reflects a moderate inverse relationship. The t-statistic of -6.030 and p-value < 0.001 confirm the hypothesis.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4555.152	1	4555.152	36.362	<.001[b]
	Residual	11149.265	89	125.273		
	Total	15704.418	90			

a. Dependent Variable: job satisfaction

b. Predictors: (Constant), job stress

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	84.349	3.127		26.972	<.001
	job stress	-.906	.150	-.539	-6.030	<.001

a. Dependent Variable: job satisfaction

Table 2- Job Stress and Job Satisfaction

Regression analysis showed that job stress explained 29% of the variance in job satisfaction. The adjusted R^2 of 0.282 indicates minimal effect from the number of predictors. The standard error of 11 suggests reasonable accuracy but with some margin of error. Job stress was the strongest predictor of job satisfaction, although other factors may also contribute.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	job stress[b]	.	Enter

a. Dependent Variable: job satisfaction

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.539[a]	.290	.282	11.193

a. Predictors: (Constant), job stress

Table 3- Regression Analysis

Discussion

The results of the study confirm that increased or optimal levels of workplace stress lead to decreased job satisfaction, supporting the initial hypothesis. These findings align with previous research, further validating the results.

Sharma and Jain (2018) explored the various types of stress and their effects on employees, emphasizing the importance of stress management programs tailored to employees' needs. These programs can mitigate the negative impacts of stress, improving overall workplace conditions. Patil and Vyas (2023) examined the causes and effects of occupational stress, reinforcing the importance of controlling stress at both organizational and individual levels. This study contributes to understanding how stress influences job satisfaction and highlights the need for proactive measures.Pavithra (2022) found that job satisfaction is linked to how well an employee's expectations align with their job, affecting organizational commitment and productivity. The study also confirmed that no significant factors, such as marital status or education, impact job satisfaction. Singh, Amiri, and Sabbarwal (2019) also noted the connection between job stress and job satisfaction, emphasizing that stress negatively affects productivity and performance. By reducing stress and fostering a positive work environment, organizations can improve job satisfaction and achieve better results.

Theories such as Karasek's Demand-Control Model (1979) suggest that jobs with high demands and low control lead to higher stress and lower satisfaction. Conversely, jobs that offer autonomy and decision-making opportunities reduce stress and increase job satisfaction. The Person-Environment Fit Theory, developed by French and Caplan, states that stress arises from a mismatch between an individual's attributes and job demands, leading to job dissatisfaction (Edwards, Caplan, & Harrison, 1998). Siegrist's Effort-Reward Imbalance Model (1996) further supports these findings, indicating that when employees feel their efforts are not adequately rewarded, stress levels rise, causing dissatisfaction.

In conclusion, while existing research and theories support the hypothesis that workplace stress affects job satisfaction, there remains a gap in studies exploring this issue in the Indian context. Additionally, factors like sample size need to be considered for further validation of the hypothesis.

Limitations and applications

Research on the relationship between job stress and job satisfaction has faced several limitations that hinder the generalization of results. Confounding factors such as individual stress perceptions, organizational culture, and leadership styles can influence how stress affects job

satisfaction. Additionally, stress and satisfaction are difficult to measure accurately, often relying on self-reports prone to biases like social desirability or recall bias. Most studies use cross-sectional designs, which make it hard to establish cause-and-effect relationships, suggesting the need for longitudinal research.Sample limitations also affect generalizability, as studies may focus on specific sectors or regions, and cultural differences can influence stress perceptions. Ethical considerations are crucial to avoid causing additional harm to participants. If these challenges are addressed, future research can better understand the link between stress and satisfaction.

Understanding this relationship is critical for organizations. Reducing job stress improves employee health, morale, and job satisfaction, leading to higher productivity and innovation. It can also reduce turnover and associated costs, while enhancing the organization's reputation. For individuals, lower workplace stress promotes a better work-life balance and improves motivation, performance, and career opportunities. In summary, addressing job stress is essential for both individual well-being and organizational success.

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"Social Appearance Anxiety and Its Impact on Job Self-Efficacy and Work Expectancies"

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Abstract: -

Due to social media, unrealistic beauty standards have become a global phenomenon that may cause social appearance anxiety. The purpose of the research was to understand how social appearance anxiety has an impact in organizations and workplace settings. The research specifically focused on how social appearance anxiety affects job self-efficacy and work-related expectancies. To achieve the objectives of the research, 120 working professionals from various age groups, socioeconomic status, gender and occupational sectors were studied. Social Appearance Anxiety Scale, Job Self-efficacy Scale and Work-related Expectancies Scale were used as tools for data collection. Data was analyzed using Linear Regression and a t-test was performed. The research findings indicated the following: Social Appearance Anxiety is a significant predictor and is inversely related to both Job Self-efficacy and Work-related expectancies. Regression analysis indicated that Social Appearance Anxiety is negatively correlated with Job Self-efficacy ($R = -.782$, $p < .001$), which accounted for 61.1% of the variance. This suggested that high Social Appearance Anxiety strongly predict low job self-efficacy. However, the correlation of Social Appearance Anxiety with Work-related expectations was considerably weaker ($R = -.300$, $p < .001$), accounting for only 9% of the variance. These results imply that while SAA significantly influences self-efficacy in a professional setting, its impact on work-related expectancies is rather limited. The findings highlight the necessity of addressing social appearance anxiety to enhance employees' job self-efficacy, which may potentially result in improved job performance and overall satisfaction. Detailed analysis for the same is discussed in depth in the paper.

Keywords: Social Appearance Anxiety; Anxiety in Organizations; Job Self-efficacy; Workrelated Expectancies; Workplace Settings; ; Job Motivation

Introduction: -

We live in times where beauty standards/trends across the globe have the power to affect our emotional and mental well-being, (FHE Health 2022) due to technological interventions such as social media. Unrealistic beauty standards can lead to social appearance anxiety (Monro, F., & Huon, G. 2005) which may or may not impact workplace performance. Social Appearance Anxiety can be defined as a state of tension that is linked with body image perception that people feel when others assess their physical appearance (Kızılkaya, 2023). Self-efficacy as defined by psychologist Albert Bandura is the beliefs that one has about their skills and abilities such that they are sure of executing their plans and achieving their required goal (Bandura 1997). However, in organizational fields, it is more appropriate to evaluate job self-efficacy than general self-efficacy. (Salanova et al., 2005). Thus Job/workplace self-efficacy is looking at the concept of self-efficacy through an organizational/industrial perspective, i.e. the confidence an employee has to carry out workplace activities successfully. Vroom (1994) suggested that when it comes to an employee's confidence about their capability to do things. Expectancy is an individual's belief where they expect that if they increase their efforts, they will get the desired outcomes (Zajda, 2023). While there are studies on workplace anxiety affecting employees and thus organizations there seems to be a notable gap in understanding how anxiety due to physical appearance, i.e. social appearance anxiety specifically affects job self-efficacy and job expectancy. Vroom (1964) in his theory did theorize that expectancy is influenced by one's self-efficacy i.e. unless the employees think they can do the task they do not put in the effort to perform it. (Supatn & Puapradit, 2019) However, there is a lack of research available connecting social appearance anxiety with the above two variables. This gap needs to be studied given today's age of social media that increasingly promotes unrealistic beauty standards

and how that affects people's workplace well-being. The study aims to investigate social appearance anxiety and its impact on employees' self-efficacy and expectancy and whether it indirectly exerts any effect on the needs of an organisation. In recent years, the interplay between social appearance anxiety (SAA), job self-efficacy, and work-related expectancies has gained attention in psychological research. Studies suggest that SAA can negatively influence selfefficacy, leading to workplace challenges such as reduced job performance, satisfaction, and increased anxiety. However, existing research often examines these variables in isolation, with limited focus on their interconnections, particularly within the Indian cultural and occupational context. Given the growing prevalence of unrealistic beauty standards perpetuated by social media, exploring how SAA impacts employees' self-efficacy, expectancies, and overall well-being is crucial.

Methodology: -

The study included 120 working professionals from various sectors to examine the impact of Social Appearance Anxiety (SAA) on Job Self-efficacy and Work-related Expectancies. The sample comprised 50% Cisgender Men, 47.5% Cisgender Women, and 2.5% Gender Fluid and Transgender individuals, aged 18 to 65+ (mean = 39.5 years). Participants primarily worked in the corporate sector (31.7%) and retail/fashion (14.2%), with 29.2% at staff level and 20% in managerial roles. Most participants (63.3%) belonged to the middle class, followed by the uppermiddle class (31.7%). Three scales were used to measure the study's variables. The Social Appearance Anxiety Scale (SAAS) (Hart, Wearing, & Newlove, 1999) is a 16-item self-report scale assessing Social Appearance Anxiety on a 5-point Likert scale (1 = not at all, 5 = extremely), with scores ranging from 16 to 80. It shows excellent reliability ($\alpha = 0.94$, test-retest $r = 0.84$) and strong validity. The Job Self-Efficacy Scale (Riggs & Knight, 1994) measures job self-efficacy through 10 items on a 6-point Likert scale (1 = strongly agree, 6 = strongly disagree), with scores from 10 to 60. It has high reliability ($\alpha = 0.86$) and strong content validity. The Work-Related Expectancies Scale (WRES) (Eisenberger et al., 1990) evaluates beliefs about performance-related rewards via 4 items on a 5-point Likert scale (1 = not part of my job, 5 = definitely part of my job), with scores ranging from 4 to 20. It demonstrates strong reliability ($\alpha = 0.77–0.89$) and a consistent factor structure.

The study used a survey method with a Google Forms questionnaire comprising demographics (age, gender, designation, sector) and three scales: Social Appearance Anxiety Scale (1999), Job Self-Efficacy Scale (1994), and Work-Related Expectancies Scale (1990). A brief description of the study, confidentiality assurance, and contact details were provided. Using snowball/convenience sampling, the study targeted employed individuals and employed a correlational design to explore relationships between the variables. Ethical guidelines were followed, with voluntary participation and informed consent. Only initials were collected to ensure anonymity, and no personal identifiers were recorded. Data was securely stored and deleted after analysis to maintain confidentiality.

Results: -

The Data obtained was analysed by SPSS software. Linear Regression and t-tests were performed using the SPSS software.

Descriptives

[DataSet0]

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
SAA	120	64	16	80	35.93	1.905	20.867	435.448
Job Self Efficacy	120	52	18	70	47.63	1.376	15.074	227.226
Work Related Expectancies	120	36	9	45	26.23	.880	9.643	92.987
Valid N (listwise)	120							

Table 1: - Descriptive Statistics for SAA, Job Self-Efficacy, and Work-Related Expectancies

SAA scores range from 16 to 80, with a mean of 35.93 and a high standard deviation (20.87), indicating significant variability. Job self-efficacy scores range from 18 to 70, with a mean of 47.63 and a standard deviation of 15.07, reflecting moderate variability. Work-related expectancies show the least variation, with a mean of 26.23 and a low standard deviation (9.64), indicating more uniformity. In summary, SAA has the greatest dispersion, while work-related expectancies are more consistent.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAAS[b]	.	Enter

a. Dependent Variable: Job Self Efficacy
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782[a]	.611	.608	9.438

a. Predictors: (Constant), SAAS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16529.217	1	16529.217	185.569	<.001[b]
	Residual	10510.650	118	89.073		
	Total	27039.867	119			

a. Dependent Variable: Job Self Efficacy
b. Predictors: (Constant), SAAS

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	67.923	1.721		39.474	<.001
	SAAS	-.565	.041	-.782	-13.622	<.001

a. Dependent Variable: Job Self Efficacy

Table 2: - Regression Analysis for Job Self Efficacy (Dependent Variable) with SAA (Predictor)

Table 2 presents the regression analysis with Job Self-Efficacy (JSE) as the dependent variable and Social Appearance Anxiety (SAA) as the predictor. The analysis reveals a significant negative correlation between SAA and JSE ($R = 0.782$, $R^2 = 0.611$), indicating that 61.1% of the variance in JSE is explained by SAA. The F-value of 185.569 ($p < 0.001$) confirms the model's significance. A t-value of -13.622 ($p < 0.001$) indicates a strong inverse relationship, where higher SAA is associated with lower JSE, affirming SAA as a significant predictor of JSE.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAAS[b]	.	Enter

a. Dependent Variable: Work Related Expectancies
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.300[a]	.090	.082	9.238

a. Predictors: (Constant), SAAS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	995.395	1	995.395	11.664	<.001[b]
	Residual	10070.072	118	85.340		
	Total	11065.467	119			

a. Dependent Variable: Work Related Expectancies
b. Predictors: (Constant), SAAS

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	31.212	1.684		18.532	<.001
	SAAS	-.139	.041	-.300	-3.415	<.001

a. Dependent Variable: Work Related Expectancies

Table 3: - Regression Analysis for Work Related Expectancies (Dependent Variable) with SAA (Predictor)

Table 3 presents the regression analysis with Work-Related Expectancies (WRE) as the dependent variable and Social Appearance Anxiety (SAA) as the predictor. The analysis reveals a weak negative correlation between SAA and WRE ($R = 0.300$, $R^2 = 0.090$), indicating that 9% of the variance in WRE is explained by SAA. The F-value of 11.664 ($p < 0.001$) confirms the model's significance. A t-value of -3.415 ($p < 0.001$) indicates a significant inverse relationship, where higher SAA is associated with lower WRE, affirming SAA as a significant predictor of WRE.

Discussion and Practical Implications: -

The above results show that Social Appearance Anxiety is a significant predictor for both job selfefficacy and work-related expectancies. As Social Appearance Anxiety increases, job self-efficacy and work-related expectancies decrease. The findings can be explained by Bandura's Social Cognitive Theory (1986). According to Social Cognitive Theory (1986), the emotional and physiological state of an individual has an impact on their self-efficacy, Thus, individuals whose emotional and physiological state is affected due to anxiety have lower self-efficacy. According to Self Determination Theory (1980), the three basic psychological needs that individuals have are; competence, autonomy and relatedness. For an individual to be motivated one should function effectively in an environment. Research has shown that social appearance anxiety negatively impacts relatedness and competence (Thøgersen-Ntoumani et al., 2011). Thus, reduced motivation reduces work-related expectancies as well (Kanfer, Frese & Johnson, (2017). The study aligns with previous research, such as Bakalim (2016), which found an inverse relationship between social appearance anxiety (SAA) and self-confidence, suggesting that SAA affects job self-efficacy. This study extends previous findings by including diverse occupational sectors. Supatan and Puarpradit (2019) in Thailand also supported the idea that when employees believe their efforts will lead to success, they are more motivated and productive, aligning with the study's findings on workrelated expectancies.

This research highlights the importance of addressing social appearance anxiety (SAA) in the workplace to enhance employee self-efficacy and job expectations. Organizations, particularly in collectivistic cultures like India, can implement wellness programs, counseling, and emotional health training to alleviate SAA and boost job confidence, productivity, and satisfaction. Promoting diverse beauty standards and reducing the focus on appearance may also help decrease SAA. The study's limitations include a small sample size, self-reported data, and the exclusion of selfemployed individuals, which limits the generalizability of findings. Additionally, the crosssectional design restricts causal conclusions, and other variables influencing job self-efficacy were not considered. The lack of mediating variables and the time lag between SAA onset and job performance also present gaps. Future research could adopt a longitudinal approach. It could explore how factors like personality, workplace environment, and social support interact with SAA, or investigate the gendered or occupational differences in SAA effects. Further studies should focus on professions where appearance is critically evaluated, like media or fashion. Additionally, interventions like counselling or mindfulness exercises could be tested in pre- and post-test designs to assess their effectiveness in mitigating appearance anxiety in professional settings.

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Strategies for Climate Change Mitigation

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Introduction

Climate change represents one of the most critical challenges facing humanity, demanding urgent and sustained action across global, national, and local levels. Its multifaceted impacts manifest through extreme weather events, rising sea levels, and shifts in ecosystems, undermining food security, human health, and economic stability. As the scientific community reaches a consensus on the causative role of anthropogenic activities, particularly greenhouse gas emissions, the discourse surrounding effective mitigation strategies has gained momentum. This research paper will explore various avenues of climate change mitigation, focusing on innovative policies, renewable energy technologies, and community engagement initiatives. By examining these critical areas, the paper aims to highlight not only the mechanisms that can be harnessed to combat climate change but also the socio-political implications that influence their implementation. Ultimately, understanding these dynamics is essential for fostering a sustainable future for generations to come.

A.Overview of Climate Change and Its Impacts

Climate change represents one of the most pressing global challenges of our time, with its impacts resonating through various sectors, particularly agriculture and human health. As rising temperatures and unpredictable weather patterns prevail, developing countries, such as Burkina Faso, face heightened vulnerabilities due to their reliance on climate-sensitive resources (El Bilali et al.). The observed shifts in agricultural productivity not only threaten food security but also exacerbate socioeconomic disparities, as vulnerable populations are less equipped to adapt to such changes. Moreover, climate change impacts extend beyond immediate physical effects, influencing migration patterns and exacerbating poverty levels across regions (Deeb et al.). Consequently, a comprehensive understanding of these multifaceted effects is essential for effective climate change mitigation strategies. Integrating education about climate change into curricula can facilitate informed responses, equipping future generations with the knowledge required to confront these challenges and devise sustainable solutions.

Strategies for Mitigation

In addressing climate change, particularly through the lens of agricultural and forestry practices, effective mitigation strategies are essential for reducing greenhouse gas emissions. Research indicates that these sectors can provide significant GHG reductions at competitive costs, particularly in European contexts, where tailored policies can balance economic viability with environmental goals (Andrea Povellato et al.). Moreover, the context of developing nations, like China and India, complicates mitigation efforts as these countries face unique challenges in adopting sustainable practices. The TOCSIN project highlights the importance of fostering research, development, and technological cooperation between these nations and the European Union, emphasizing the need for immediate and ambitious mitigation actions, alongside enhanced support for research and technology transfer (Alain Haurie et al.). Therefore, successful mitigation requires a multifaceted approach that integrates sector-specific strategies, international cooperation, and equitable policy frameworks to balance economic and ecological interests.

A.Renewable Energy Sources and Their Role in Reducing Emissions

The increasing reliance on fossil fuels has substantially contributed to greenhouse gas emissions, thereby exacerbating climate change effects. In response, renewable energy sources such as solar, wind, and hydroelectric power have emerged as viable solutions to mitigate these emissions. These technologies not only provide a sustainable energy supply but also reduce dependency on carbon-intensive fuels that dominate the current energy landscape. Research highlights the profound potential of renewables in achieving energy security and promoting social

and economic development while simultaneously addressing environmental health concerns (Hussein et al.). By transitioning to these clean energy alternatives, nations can significantly diminish their carbon footprints and curb the harmful impacts associated with traditional energy generation. Furthermore, while challenges remain—such as market failures and resource accessibility—strategic policy implementation is essential for harnessing renewable energies full potential, thus aligning with global efforts to combat climate change and foster a healthier planet for future generations (Reader et al.).

Policy and Legislation

The intersection of policy and legislation is paramount in shaping effective climate change mitigation strategies. Notably, robust legislative frameworks play a critical role in mobilizing resources and guiding implementation efforts at multiple levels of governance. Researchers highlight that successful climate-positive legislation must be developed with a keen understanding of local contexts, potential challenges, and opportunities presented by advancing technologies and market dynamics ((Clark et al.)). In particular, international commitments, such as those outlined by the United Nations Framework Convention on Climate Change, emphasize the necessity of integrating gender considerations within climate policies to address the disproportionate impacts on vulnerable populations, including women ((Aura et al.)). Moreover, various countries have responded to these global initiatives by drafting specific climate action plans, which incorporate gender perspectives while striving for sustainable development. Thus, effective climate legislation not only mitigates environmental risks but also promotes social equity by ensuring that marginalized voices are heard in policy-making processes.

A.International Agreements and National Policies for Climate Action

As the urgency of climate change intensifies, international agreements and national policies have become pivotal in shaping effective climate action. Treaties such as the Kyoto Protocol and the Paris Agreement represent collective commitments by governments to mitigate greenhouse gas emissions, yet the implementation of these agreements relies heavily on national policies. Countries are increasingly crafting policies that not only align with international frameworks but also address domestic economic, environmental, and social contexts. This intersection reveals a crucial dimension of climate action: the balance between efficiency and equity. While many studies focus on the economic efficiency of policies, growing attention to intragenerational equity highlights the importance of fair distribution of burdens among different societal groups, ensuring that marginalized communities are not disproportionately affected by climate actions (Kverndokk et al.). Thus, effective climate action necessitates a comprehensive approach that integrates global commitments with locally grounded policies, promoting both sustainability and social justice (Adam Rose et al.).

Conclusion

In conclusion, addressing climate change mitigation requires a multifaceted approach that integrates both urgent action and systematic planning across various sectors. The findings of this research underscore the importance of aligning transportation policies with sustainable development objectives, particularly in low-income countries where emissions are projected to rise significantly, necessitating substantial reductions to meet global climate goals (Bakker et al.). Furthermore, it is imperative to recognize the interrelationship between adaptation and mitigation strategies; while national frameworks are increasingly incorporating quick wins, the private sector still struggles with practical implementation (Ali et al.). Thus, enhancing coordination among agencies and fostering a culture of proactive adaptation can bridge existing gaps in climate strategies. Overall, a comprehensive commitment to both mitigating emissions and adapting to inevitable changes is essential to ensure a sustainable and resilient future, ultimately reflecting the interconnectedness of our ecological and economic systems.

A.The Importance of Collective Action in Climate Change Mitigation

The urgency of addressing climate change has underscored the necessity of collective action across various sectors of society. Individual efforts, while valuable, are often insufficient to produce meaningful change in isolation. Collective action facilitates the pooling of resources, expertise, and influence, enabling communities, organizations, and nations to implement comprehensive strategies that can significantly reduce greenhouse gas emissions. Collaborative initiatives, such as multinational agreements and local sustainability programs, exemplify how shared goals can galvanize wider participation and foster innovative solutions. Furthermore, collective action enhances public awareness and promotes a sense of shared responsibility, which is crucial for mobilizing larger populations to adopt sustainable practices. By harnessing the power of unity, society can create a formidable response to the climate crisis, demonstrating that when individuals come together, their combined efforts can catalyze substantial progress toward a more sustainable future.

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"A Study on Role of India's Soft Power Diplomacy in Eastern Europe in the 21st Century"

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Abstract

In the 21st century, soft power has become a critical tool in global diplomacy, enabling nations to influence others through culture, values, and ideas rather than coercion. India, with its rich cultural heritage, democratic values, and historical depth, has utilized soft power to strengthen its global image and build strategic partnerships. This study focuses on India's soft power diplomacy in Eastern Europe, analyzing its successes, challenges, and potential.

Eastern Europe, with its unique geopolitical significance and evolving socio-economic dynamics, offers a fertile ground for India's engagement. India has sought to foster goodwill in the region through cultural exchanges such as yoga, Bollywood, and traditional practices like Ayurveda. Educational collaborations, particularly scholarships and training programs under initiatives like the Indian Technical and Economic Cooperation (ITEC), have also played a role in building intellectual and cultural ties. However, these efforts have often lacked visibility and region-specific focus, limiting their impact.

Economic relations form another crucial aspect of India's soft power strategy. While trade and investment in sectors such as IT, pharmaceuticals, and renewable energy have grown, India's presence in Eastern Europe remains overshadowed by global competitors like China and Germany.

Similarly, India's participation in multilateral platforms has showcased its role as a responsible global partner, but aligning these efforts with the specific contexts of Eastern Europe remains a challenge.

The findings highlight India's cultural appeal and democratic ideals as key strengths, but challenges such as geopolitical competition and inconsistent outreach hinder its potential.

Policymakers must adopt a more targeted and sustained approach to enhance India's influence in Eastern Europe. Strengthening people-to-people ties, expanding cultural programs, and bolstering economic engagement are essential steps to ensure India's soft power becomes a transformative force in the region.

Introduction

India's vibrant cultural heritage, democratic values, and technological progress have established it as a key player in global diplomacy. Eastern Europe, with its strategic importance and growing markets, presents a promising opportunity for India to exercise its soft power. This study explores how India's soft power initiatives are perceived and utilized in Eastern Europe, emphasizing their role in strengthening bilateral and multilateral relationships.

Through tools such as cultural diplomacy, educational exchanges, and collaborative projects, India has sought to build meaningful connections with Eastern European nations. Initiatives like the promotion of yoga, Bollywood, and Ayurveda reflect India's cultural appeal, while scholarships and training programs under schemes such as the Indian Technical and Economic Cooperation (ITEC) foster intellectual and cultural ties. These efforts aim to create a positive image of India while establishing long-term partnerships in the region.

Eastern Europe's unique geopolitical position makes it an essential partner for India's strategic goals, offering pathways to both regional cooperation and integration with larger global frameworks. By engaging with Eastern European countries on shared values and interests, India aims to strengthen its influence and expand its diplomatic footprint.

This study critically examines the effectiveness of these initiatives in achieving India's objectives, identifying both successes and areas for improvement. It highlights how India's cultural and ideological strengths, combined with targeted economic and educational outreach, can enhance its relationships with Eastern Europe. The findings underline the need for a focused and adaptive approach to maximize India's soft power potential, ensuring that it aligns with the region's specific needs and aspirations. This research provides insights for policymakers to refine India's strategies, fostering deeper collaboration and mutual benefit with Eastern European nations.

Literature Review

1.**Kumari (2023),** in her article "Soft Power Diplomacy in India's Foreign Policy under the Modi Government: Challenges and Prospects," argues that the Modi administration has significantly increased the use of soft power tools and resources in foreign policy. Examples include the promotion of Buddhism, yoga, and diaspora diplomacy, all of which have contributed to creating a favorable image of India.

2.**Rao (2022),** in her article "The Case for Harnessing Soft Power, Or Why India Cannot Be Insular," contends that cultural richness alone does not suffice to create effective soft power. Instead, she argues that projecting India as a progressive, democratic, and equitable society that contributes to global public goods is crucial. She also suggests India could draw lessons from South Korea, which has emerged as a global model of soft power.

3.**Chatterjee (2021),** in her article "Trust, Credibility and Soft Power Diplomacy: India and China," highlights the growing influence of China in South Asia and how it has compelled

India to adopt a more proactive and positive role in the region. She suggests that India's success in this regard hinges on building credibility and trust with its neighbors.

4.**Thussu (2013),** in his book Communicating India's Soft Power: Buddha to Bollywood, underscores India's extraordinarily rich cultural heritage—both ancient and contemporary—as valuable assets for its soft power diplomacy.

5.**Tharoor (2012),** in his book Pax Indica: India and the World of the 21st Century, describes soft power as the perceptions and attitudes evoked globally by the mere mention of a country's name. He emphasizes the need for nations to maintain a dignified image to effectively wield soft power.

Research Methodology

This research adopts a policy analysis and critical review approach, utilizing qualitative methods to analyze secondary data. Sources include government policy documents, embassy reports, academic papers, and media publications. The study focuses on identifying patterns, gaps, and opportunities in India's soft power engagement with Eastern Europe.

Objective of the Study

1.To analyze the role of India's soft power diplomacy in Eastern Europe.

2.To identify key areas where India has successfully utilized its soft power.

3.To evaluate challenges and suggest improvements in policy and execution.

Limitation of the Study

1.The study relies solely on secondary data, limiting firsthand insights.

2.It focuses on broad regional trends, which may not capture country-specific nuances.

3.Limited availability of comprehensive policy analysis specific to Eastern Europe.

Scope of the Study

This study provides a foundation for understanding India's soft power diplomacy in Eastern Europe. It is particularly useful for policymakers, diplomats, and scholars interested in enhancing India's influence in the region. The findings may also inform future research on bilateral and regional dynamics.

Data Analysis

1.Cultural Diplomacy: India's promotion of yoga, Ayurveda, and Bollywood has found a niche audience in Eastern Europe. Events such as the International Day of Yoga have been widely celebrated.

2.Educational Initiatives: India's scholarships under the Indian Technical and Economic Cooperation (ITEC) program have attracted students from Eastern Europe, but awareness remains limited.

3.Economic Relations: While trade has increased in sectors like pharmaceuticals and IT, India lags behind competitors like China and Germany in overall economic engagement.

4.Multilateral Engagement: India's participation in global forums such as the United Nations has fostered some common ground with Eastern European countries, though bilateral initiatives remain sporadic.

Findings

1.Strengths: India's cultural diplomacy resonates with Eastern Europe, particularly through yoga and Bollywood.

2.Weaknesses: Economic engagement and visibility of educational initiatives are underwhelming.

3.Opportunities: Strengthening people-to-people connections and targeted trade agreementscan enhance India's soft power.

4.Challenges: Geopolitical competition from China and Russia and a lack of region-specific strategies hinder India's efforts.

Conclusions

India's soft power diplomacy has made significant inroads in Eastern Europe, particularly in cultural and educational domains. However, its potential remains underutilized due to inconsistent policy implementation and limited regional focus. A more strategic and tailored approach is essential to enhance India's influence and foster long-term partnerships with Eastern Europe.

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A Study on Pradhan Mantri Awas Yojana (Urban)-PMAY (U) Scheme- Housing the Urban Poor

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Abstract

Over the years, the requirement for housing increased in proportion to the rise of metropolitan areas due to the rapid urbanization process. A housing need of 1.12 crores has been met during PMAY-U implementation. The need for housing is a constant and dynamic phenomenon that is created as new towns and communities are established. Urban areas are becoming more and more attractive to people from smaller towns and villages because of the expanding economic opportunities they offer. In order to meet the housing needs of urban India, the Indian government devised a new plan and established an ecosystem that provides homes for either purchase or rent. The current paper outlines the policy's design and implementation, as well as attempts to analyze the number of houses completed and distributed to the urban poor through the PMAY-U Scheme. Also, the study will highlight the launch of PMAY-U 2.0 scheme.

Keywords: *Pradhan Mantri Awas Yojana, Affordable Housing, Housing Project, Urban Poor.*

Introduction

Housing is a basic human need that is critical to human development, economic prosperity, sociocultural progress, and political stability. There is a greater need for residential housing when population growth is rapid. Urban infrastructure is currently under tremendous strain due to these factors as well as the rise in household formation and growing urbanization brought on by the need for work. For this reason, impoverished urban systems and the slums—informal housing—have grown tremendously over the past few decades without adequate access to necessities like law and order, healthcare, sanitation, and education. India faces a significant task as it develops economically and strategically: turning these crowded, lively slums into essential, liveable areas of big cities. In order to give every household in urban India, a more favourable environment and improved living conditions, it is necessary to implement an integrated approach. To solve this critical problem, the Indian government has undertaken various initiatives under the mission "Affordable Housing for All."

With the Pradhan Mantri Awas Yojana-Urban (PMAY-U) as one of its key missions, MoHUA has launched a program to bring about urban transformation in order to promote equitable and sustainable development through planning, development, and implementation of reforms. The Ministry of Housing and Urban Affairs (MoHUA) offers Central Assistance to States and Union Territories (UTs) in order to satisfy the housing requirement of all eligible beneficiaries in urban areas, including slum dwellers, under its flagship initiative PMAY (U). The Government of India introduced PMAY-U on June 25, 2015. The Indian government started this program to help the urban poor find inexpensive homes. The purpose is to guarantee "Housing for All" by offering recipients financial support and subsidies for the building, renovation, and acquisition of houses.

Various Rural and Urban Development Schemes of Government of India

The Government of India has initiated various schemes for the development and assistance of financially deprived individuals in both rural and urban areas. The schemes are mentioned above:

Table no. 1

Sr. No	Rural & Urban Development Schemes	Launched Year
1	Members of Parliament Local Area Development Scheme (MPLADS)	1993
2	Pradhan Mantri Gram Sadak Yojana (PMGSY)	2000

3	Pooled Finance Development Fund Scheme (PFDF)	2006
4	Sansad Adarsh Gram Yojana (SAGY)	2014
5	Pradhan Mantri Awas Yojana- (Gramin) (PMAY-G)	2015
6	Pradhan Mantri Awas Yojana- (Urban) (PMAY-U)	2015
7	Smart Cities Mission	2015
8	Atal Mission for Rejuvenation and Urban Transformation (AMRUT)	2015
9	Heritage City Development and Augmentation Yojana (HRIDAY)	2015
10	Rashtriya Gram Swaraj Abhiyan (RGSA)	2018
11	PM Jan Vikas Karyakaram (PMJVK)	2018
12	Jal Jeevan Mission	2019
13	Swamitva Yojana	2020

Source: https://en.wikipedia.org/wiki/List_of_schemes_of_the_government_of_India

Review of Literature

Amrit Abhijat and Anukriti Pathak (2023), examined how the government and other stakeholders play a role in housing development and provides evidence of how PMAY-U is transforming urban areas in response to beneficiary desires. The study looked at the elements that influence socioeconomic mobility through PMAY-U, including the government's participation, the scheme's architecture, the link between housing access and social mobility, and lessons for developing beneficiary-centric policies. According to the study's findings, the mission did improve households' socioeconomic mobility, enabling them to climb the social ladder and improve their general well-being and quality of life while also giving them the flexibility to pick where they wish to reside. It did not force the beneficiary to "choose," but rather gave them the option.

Manav Khaire (2023) studied the gap between policy formulation and CLSS scheme implementation to explore how biases are incorporated into policy, resulting in the removal of economically vulnerable families. For the purpose of the research, target groups and policymakers were polled to determine how they perceive the concept of affordable housing. The analysis gave two important perspectives. First, the intended groups' power and interests affect their involvement in policy creation and implementation. Second, the commercialized execution design of the subsidy scheme includes negative selectivism, which leads to excluding tendencies in the CLSS design.

K. Radha and Dr. J. Francis Mary (2020), in their analysis, focused on the benefits of the Pradhan Mantri Awas Yojana (PMAY) program, other programs that are related to it, the quantity of homes built, and the costs invested over the last 10 years to establish the infrastructure. The study's data is gathered from secondary data sources. The survey found that the Indian government is making efforts to enhance the standard of living for the underprivileged. Employment prospects, health, and hygiene all rise with improved infrastructure.

S.A.K. Goswami (2020), investigated the housing-related industry and the Pradhan Mantri Awas Yojana. The Pradhan Mantri Awas Yojana (PMAY), a government program intended to alleviate India's housing crisis, notably for the country's urban poor, is thoroughly examined in this study. The initiative, which was introduced in 2015, is to build 20 million homes for middle-class, low-income, and economically disadvantaged populations by 2022. The paper focuses on the design and execution of the PMAY program, highlighting its different components, including collaborations with states, affordable housing through the Credit Linked Subsidy Scheme (CLSS), and slum redevelopment. Along with projecting large economic and employment advantages, it also analyzes the significant prospects the scheme presents for related businesses including steel, cement, and housing financing.

Objectives of the study

1. To conduct a comprehensive analysis of the Pradhan Mantri Awas Yojana - Urban (PMAY-U) initiative in India.
2. To assess the effectiveness of PMAY-U scheme in benefiting the target income groups.
3. To evaluate the current progress of the scheme and ascertain the number of houses completed under the PMAY-U initiative.

Research Methodology

The recent study is explanatory in nature and uses secondary data sources. The data was meticulously obtained from a range of government publications, research articles, academic journals, reports, books, and the Pradhan Mantri Awas Yojana's official website.

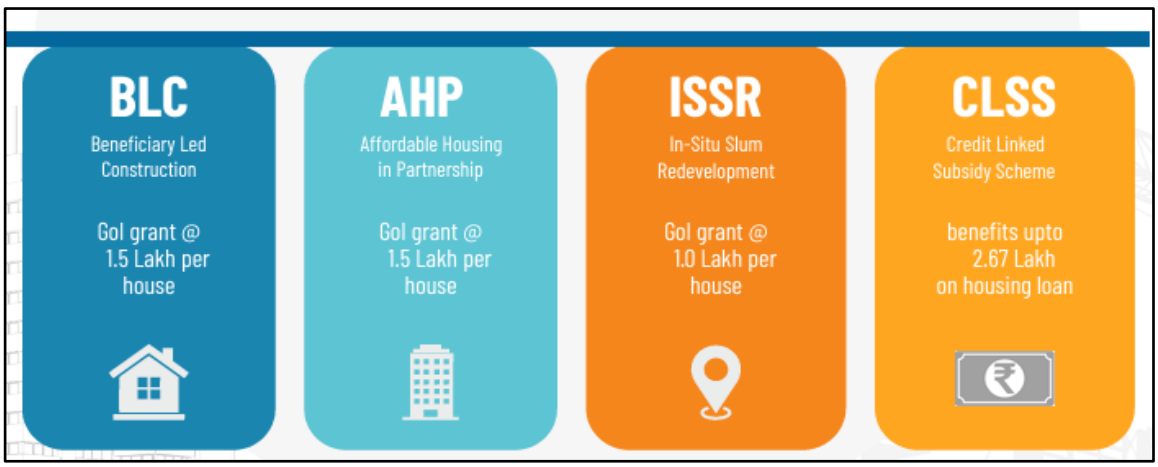
How does the PMAY-U Scheme work?

1. The Mission was carried out as a Centrally Sponsored Scheme (CSS), with the exception of the Credit Linked Subsidy component, which was administered as a Central Sector Scheme,
2. A recipient family should consist of a husband and wife, as well as any unmarried sons or daughters. The recipient family is not allowed to own a pucca house (an all-weather dwelling) in any area of India, either in their own name or the name of any family member.
3. A MIS interface will be created between the Ministry of Housing and Urban Affairs for PMAY(U) and the Department of Rural Development for PMAY(G) in order to eliminate beneficiary duplication.
4. If candidates on the permanent PMAY(G) waitlist decide to get a dwelling under PMAY(U), they are not prohibited from applying to other ongoing programs or upcoming rural schemes. They can choose between PMAY(G) and PMAY(U) instead.
5. The choice to choose between PMAY(G) and PMAY(U) is available to recipients on the permanent PMAY(G) queue. Furthermore, receiving a house through PMAY(U) does not preclude them from taking part in any other ongoing or future rural programs.
6. The Mission will provide funding for the development of housing with a 30 square meter maximum carpet area and the necessary public works.
7. The mission-sponsored homes must be planned and built with structural safety against landslides, earthquakes, floods, and cyclones, among other hazards.
8. Every qualified beneficiary under the scheme's many components should have an Aadhaar number or Virtual ID, which should be linked to their personal information.

Implementation Strategy of PMAY-U Scheme:

The scheme has been carried out across four verticals, giving beneficiaries, Urban Local Bodies (ULBs), and State/UT Governments greater flexibility. The four verticals are summarized below in the chart:

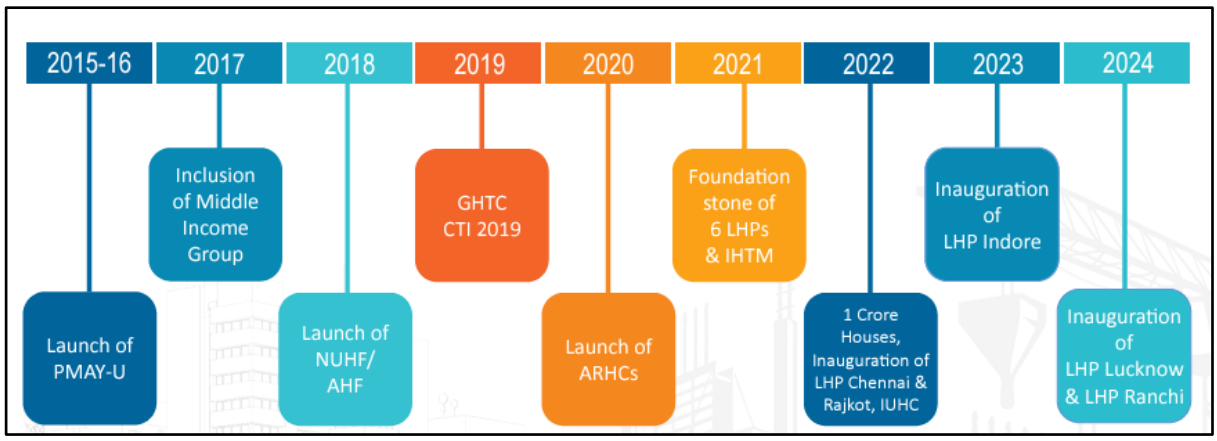
Chart no. 2



Source: Ministry of Housing and Urban Affairs (PMAY-U)

1. **In-Situ Slum Redevelopment (ISSR)**: The primary objective of the In-Situ Slum Redevelopment (ISSR) initiative was to utilize available land to build dwellings for slum dwellers with the assistance of private investors. Using the land beneath slums as an untapped resource, this technique aims to provide housing to eligible slum residents and integrate them into the formal urban settlement.
2. **Credit Linked Subsidy Scheme (CLSS)**: Eligible individuals was able to obtain interest subsidies on home loans for the purpose of building or buying a residence. Credit linked Subsidy for the purpose of acquiring homes through purchase, repurchase, or building, eligible beneficiaries of the Economically Weaker Section (EWS), Low-Income Group (LIG), and Middle-Income Group (MIG) was given subsidies on home loans.
3. **Affordable Housing in Partnership (AHP)**: This initiative was designed to foster partnerships between the public and private sectors in the construction of housing for the economically deprived (EWS) community. For every EWS house in these projects, central assistance was provided at a rate of Rs. 1.5 Lakh per EWS dwelling.
4. **Beneficiary-led Individual House Construction (BLC)**: This scheme provided funding to individuals wishing to construct new homes or remodel current ones. Under the Mission, these families were eligible to receive Central Assistance of Rs. 1.50 lakhs for the building of new homes or the renovation of existing ones.

PMAY-U Scheme: Journey So Far
Chart no. 3



Source: Ministry of Housing and Urban Affairs (PMAY-U)

The above chart no. 3 shows the journey of PMAY-U scheme after its implementation till date. The Pradhan Mantri Awas Yojana - Urban (PMAY-U) was established in 2015 to provide affordable homes to urban people. In 2017, the scheme expanded to include the Middle Income Group, broadening its scope. The National Urban Housing Fund (NUHF) and Affordable Housing Fund (AHF) were established the following year, in 2018, to provide financial support for the mission. In 2019, the Global Housing Technology Challenge (GHTC) and Construction Technology India (CTI) were established to promote new housing solutions. The Affordable Rental Housing Complexes (ARHCs) were established in 2020 to give inexpensive rental accommodation to urban migrants. In 2021, the foundation stone was laid for six Lighthouse Projects (LHPs) and the Institute of Housing and Urban Development Management (IHTM), which will help to further achieve the objectives of the mission. By 2022, the project had completed one crore dwellings, thanks to the opening of LHPs in Chennai and Rajkot, as well as the introduction of the Inclusive Urban Housing Center (IUHC). The LHP in Indore was inaugurated in 2023, followed by LHPs in Lucknow and Ranchi in 2024, indicating continued success in India's objective to create inexpensive housing.

CLSS Scheme Details:

The Credit Linked Subsidy Scheme (CLSS) mad house loans more affordable for eligible individuals. The subsidy is applied to the interest rate of house loans, effectively lowering the cost of the loan for individuals. The following table no. 1 shows the details of the scheme under PMAY-U:

Table no. 2

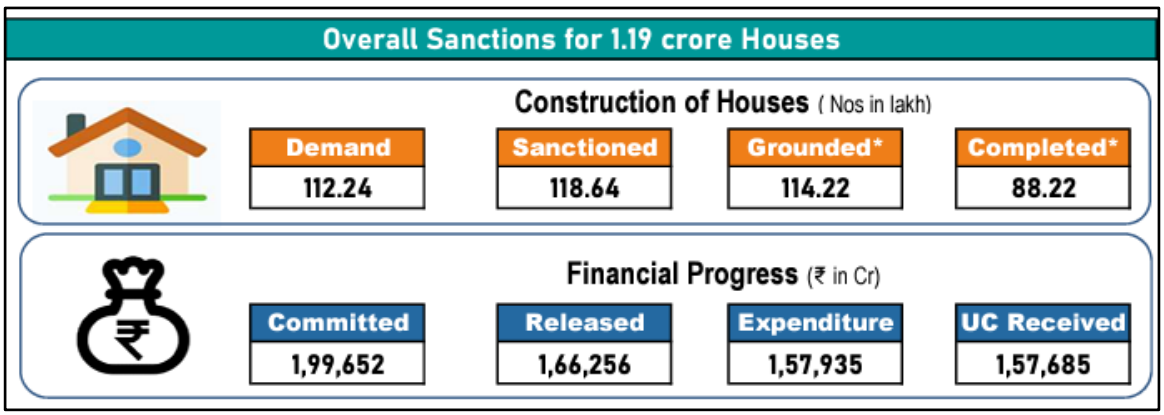
Sr. No.	Particulars	Economic Weaker Section (EWS)	Low Income Group (LIG)	Middle Income Group-I	Middle Income Group-II
1	Annual Income of the Household (₹ p.a)	Upto ₹300,000	₹3,00,001 to ₹6,00,000	₹6,00,001 to ₹12,00,000	₹12,00,001 to ₹18,00,000
2	Loan Tenure	20 years	20 years	20 years	20 years
3	Interest Subsidy (% p.a.)	6.50%	6.50%	4.00%	3.00%
4	Minimum Loan Amount	0	0	0	0
5	Maximum Loan Amount*	₹ 6,00,000	₹ 6,00,000	₹ 9,00,000	₹ 12,00,000
6	Interest Subsidy Amount	Up to ₹2.67 lakh.	Up to ₹2.67 lakh.	Up to ₹2.35 lakh.	Up to ₹2.30 lakh.
7	Property Carpet Area (sq m)	Upto 30 sq m	Upto 60 sq m	Upto 160 sq m	Upto 200 sq m
8	Housing Loan Sanction Period	From- 17.06.2015 to 31.03.2022		From-01.01.2017 to 31.03.2019	

***** The Credit Linked Subsidy will be offered for the given Maximum Loan Amount only; the client can access the amount of the loan subject to his eligibility, but loan amount beyond the specified limit is not subsidized.

Source: Ministry of Housing and Urban Affairs (PMAY-U)

Progress at National Level: (as on 25th November, 2024)

Chart no. 4



Source: Ministry of Housing and Urban Affairs (PMAY-U)

According to the above chart, there was about 112.24 lakhs demand for residences under the PMAY-U scheme as per the government surveys. Nonetheless there were more than 118.64 lakhs of houses sanctioned by the government under which 114.22 (more than 96%) lakhs of houses have been built. The above data depicts that 88.22 lakhs houses has been successfully handed over to the beneficiaries which shows that One lakh fifty-seven thousand nine hundred and thirty-five crores have been spent for housing the poor. The data illustrates that 16 lakh houses are being built with the use of new technologies.

Progress at State and UTs Level (as on 25th November, 2024):

Table no. 3

Sr. No.	Name of the State/ UT	Physical Progress of Houses (Nos)			Financial Progress (Rs in Crores)		
		Sanctioned	Grounded	Completed/ Delivered	Investment Central Assistance	Central Assistance	
						Sanctioned	Released
1	Andhra Pradesh	21,37,028	19,46,381	10,02,729	91,805.73	32,568.27	23,800.26
2	Bihar	3,14,477	3,08,362	1,60,921	18,047.82	4,950.45	3,537.49
3	Chhattisgarh	3,02,663	2,85,312	2,45,291	13,471.88	4,810.98	4,266.60
4	Goa	3,146	3,146	3,145	696.54	74.76	75.04
5	Gujarat	10,05,204	9,79,704	9,31,989	1,05,253.04	21,064.34	19,805.76
6	Haryana	1,15,034	90,422	69,009	9,471.72	2,171.64	1,673.50
7	Himachal Pradesh	12,758	12,640	10,878	865.04	215.95	209.69
8	Jharkhand	2,29,156	2,13,901	1,49,818	11,451.66	3,603.31	2,987.87
9	Karnataka	6,38,121	5,72,423	3,76,192	48,776.86	10,614.43	7,168.29
10	Kerala	1,67,322	1,53,228	1,26,761	8,881.33	2,781.18	2,330.70
11	Madhya Pradesh	9,61,147	9,45,002	8,33,759	53,530.63	15,930.45	15,284.69
12	Maharashtra	13,64,923	10,94,243	8,70,530	1,74,390.13	25,548.21	19,323.37
13	Odisha	2,03,380	1,85,216	1,53,791	8,470.67	3,176.98	2,574.90
14	Punjab	1,32,235	1,18,302	90,508	9,132.14	2,342.54	1,885.68
15	Rajasthan	3,19,863	2,96,283	2,07,472	24,723.60	5,891.46	4,853.46
16	Tamil Nadu	6,80,347	6,64,645	5,87,117	48,076.22	11,185.30	10,188.58
17	Telangana	2,50,084	2,34,737	2,23,318	30,706.31	4,475.66	3,718.27
18	Uttar Pradesh	17,76,823	17,58,298	16,44,176	84,121.00	27,962.68	27,118.30
19	Uttarakhand	64,391	62,353	37,917	4,870.26	1,176.51	976.61
20	West Begal	6,68,953	6,06,960	4,18,036	37,526.26	10,773.50	7,866.62
21	Arunachal Pradesh	8,499	8,070	8,063	482.62	182.38	161.18
22	Assam	1,76,643	1,69,032	1,13,697	5,316.65	2,674.26	2,105.42
23	Manipur	56,037	50,422	14,961	1,446.32	841.39	496.91
24	Meghalaya	4,758	4,000	1,778	187.13	72.35	46.21
25	Mizoram	39,605	39,076	18,649	928.28	607.8	447.22
26	Nagaland	31,860	31,055	25,949	1,033.52	503.91	393.41
27	Sikkim	316	316	202	25.55	6.13	7.09
28	Tripura	92,854	87,168	75,060	2,946.53	1,494.35	1,292.99
29	A&N Island (UT)	376	376	47	95.83	5.84	2.93
30	Chandigarh (UT)	1,256	1,256	1,256	263.02	28.78	28.78
31	Dadara Nagar Haveli & Daman Diu (UT)	9,947	9,947	9,230	978	214.4	204.56
32	Delhi (UT)	29,976	29,976	29,976	5,696.05	692.53	692.53
33	Jammu & Kashmir (UT)	47,040	41,930	27,407	2,593.32	724.94	483.48
34	Ladakh (UT)	1,307	991	875	65.3	30.22	24.38
35	Lakshadweep (UT)	-	-	-	-	-	-
36	Puducherry (UT)	15,995	15,921	10,437	1,066.16	254.12	223.19
Grand Total		**118.64 Lakh**	**114.22 Lakh**	**88.22 Lakh***	**8.07 Lakh Cr.**	**2.00 Lakh Cr.**	**1.66 Lakh Cr.**

Source: Ministry of Housing and Urban Affairs (PMAY-U)

The above table no. 3 depicts that Andhra Pradesh, Uttar Pradesh, Maharashtra, Gujarat are the states where sanctioned and grounded houses are getting delivered in good numbers as compared to the other states. Whereas some states are having sanctioned and grounded projects in good numbers but unable to complete the houses.

Findings of the study

- The study shows that 118.64 lakh houses are totally sanctioned under the PMAY-U scheme.
- The research depicts that 96.48% houses have been grounded and 72.64% have been completed and delivered. This demonstrates a significant improvement in the implementation of the scheme.
- The overall investment made for PMAY-U scheme till now amounts to ₹8.07 lakh crore. Out of which, 20.45% of the whole investment has been used and 24.79% of the part has been given as central aid.

Launch of Pradhan Mantri Awas Yojana-U 2.0 (PMAY-U 2.0)

After the grand success of PMAY-U, the Pradhan Mantri Awas Yojana-U 2.0 (PMAY-U 2.0) has been introduced to help 1 crore eligible urban families, guaranteeing a higher standard of living for qualified urban Indians. The government has increased the size of the Credit Risk Guarantee Fund Trust (CRGFT) from ₹1,000 crore to ₹3,000 crore to provide the urban poor with credit risk guarantees on loans for subsidized housing from banks, Housing Finance Companies (HFCs), or Primary Lending Institutions (PLIs) for the construction and purchase of houses under the scheme.
Over the next five years, this program will provide 1 crore urban poor and middle-class households with monetary support to build, purchase, or rent a home in States and Union Territories at a fair price. Participants in the project will be eligible for a government subsidy of ₹2.30 lakh crore, with a total expenditure of ₹10 lakh crore.

Conclusion

Over this subsequent period, India's economy has almost doubled in scale; the wealth and investment generated has changed its cityscapes. Since Independence, government has launched several projects to give urban areas' economically weaker sections, reasonably priced accommodation. Affordable housing is a vital component of sustainable urban development since it tries to meet the housing demands of a wide spectrum of society and reflects great economic variety. PMAY-U turned these housing needs into profitable demand. The scheme brought the beneficiaries into the formal housing sector and made them an essential component of the city's housing market by increasing the demand for homes and capabilities. It also expanded peripheral expansion. The launch of PMAY-U 2.0 will establish inclusive, sustainable urban environments where recipients can experience more than simply a roof over their heads by attending to their social and physical infrastructure needs.

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"A Study on Global Learning Platforms"

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ABSTRACT:

This research critically examines the interconnected global systems, their historical legacies, and their impact on human lives and environmental sustainability. Various tools are analysed to understand students' intentions to adopt e-learning systems either as a replacement for traditional classroom education or as an independent distance learning method. Survey results on e-learning platforms are reviewed to highlight key findings and identify research gaps. The topic aims to address the global digital divide by providing readers with scholarly insights, enabling them to form informed conclusions. Additionally, a thorough literature review establishes a solid foundation for understanding e-learning success, while visual representations of web search data illustrate the growing popularity of digital learning tools.

1. INTRODUCTION:

A learning process that enables students to view issues from multiple perspectives and work collaboratively with others on complex global problems, with respect and appreciation for the contribution of all those involved and have as their purpose collective well-being for all. The purpose of **global learning** is to increase student's knowledge of other countries and their citizens. The process through which learners gain an understanding of **global** issues and interconnections, developing skills and attitudes to navigate and contribute to the world.

1.1. BENEFITS OF GLOBAL LEARNING PLATFORMS:

- Access to Quality Education for Underserved Regions
- Better engagement
- Empowering Remote Communities
- Flexible Learning for Diverse Global Workforces
- Affordable Learning and Widening Participation
- Environmentally Sustainable Learning
- Global Collaboration and Cultural Exchange
- Personalized learning experience

1.2 OUTCOME/IMPACTS OF GLOBAL LEARNING PLATFORMS:

The **African continent** faces significant educational challenges, including limited access to quality education. In **Kenya**, **e-Limu**, a local platform, delivers educational content to students, bridging educational gaps in remote whereas rural parts of India and Southeast Asia, where traditional educational infrastructure is lacking more, E-learning has made significant inroads. The Indian government's **SWAYAM initiative**, offering over 2,000 courses, has brought education to far-flung areas. SWAYAM reached over 75 lakh (7.5 million) learners, including those in remote locations. E-learning platforms have played a pivotal role in the **United States and Canada**, where professionals use them to upgrade their skills. **Coursera** and **edX**, both founded by U.S. universities, have expanded access to Ivy League-quality education. Coursera boasts over 82 million learners from all over the world. E-learning platforms have gained traction in **South American countries**. In Brazil, the **"Instituto TIM" initiative** offers free courses on technology, fostering digital inclusion."Instituto TIM" has reached over 3.5 million enrolled learners .By providing the power of technology, every learner, irrespective of their geographical location, has access to high-quality education. The European Union's **Erasmus+ Online Linguistic** Support allows learners to access language courses and interact with peers from different countries. Erasmus+ Online Linguistic Support has served over 1.2 million language learners.

1.3 Top Online Learning Platforms in the World

1.Coursera is a well-known online education platform that offers courses from top education providers around the world. Over the years, the company has grown rapidly and provides the best standards of education through MOOC in the world.

2.Skillshare is an online education platform that is beneficial for both students and teachers. The website offers so many of courses related to design, business, marketing, technology, photography, film, fashion, music, gaming, cooking, writing, DIY, crafts
,etc.

3.Lynda.com (now LinkedIn Learning) is now part of LinkedIn Leaning is an MOOC website that covers a wide variety of creative, technology, and business courses. For previous decade, Lynda.com has been offering informative and clear video-based training for individual, corporate, and academics.

4.Udacity Inc. is a for-profit MOOC platform that gives attention to job training. It focuses on in-demand skills in technology.

5.Udemy is a popular online learning platform that gives people a chance to develop their careers and explore a wide variety of hobbies. From web development to public speaking, they offer a broad range of courses.

6.edX is a MOOC platform that offers university-level online courses. This platform offers six different types of programs course such as, MicroMasters Program, Professional Certificates, Global Freshmen Academy and XSeries Program.

2.OBJECTIVES OF THE STUDY:

- To understand the need of e-learning platforms.
- To understand the importance of personalized learning, life-long learning.
- To study how global learning platforms revolve around providing accessible, inclusive, and high-quality education to a diverse global audience. • To identify key players in the global online education market
- To explore challenges faced by these platforms.

3.LITERATURE REVIEW

Webster and Hackley (1997) studied teaching effectiveness in technology mediated distance learning and found a positive relationship between students' attitudes toward technology and their learning outcomes. The research study by Maria Jose Sousa, Rui Cruzl and Jorge Miguel Martins (July 2017) show that as per the study conducted during the last three years the use of digital learning methodology in education by the teachers is increasing.

Khan (1997) highlighted that if learners are to employ these skills, the learning environment must be supportive and rewarding of these behaviours. Learners should be given full access to a wide range of information and communication options, both synchronous and asynchronous that can be used in large group, small group, and oneon-one settings.

4..RESEARCH METHODOLOGY

4.1.Research Design: Descriptive Research has been used.

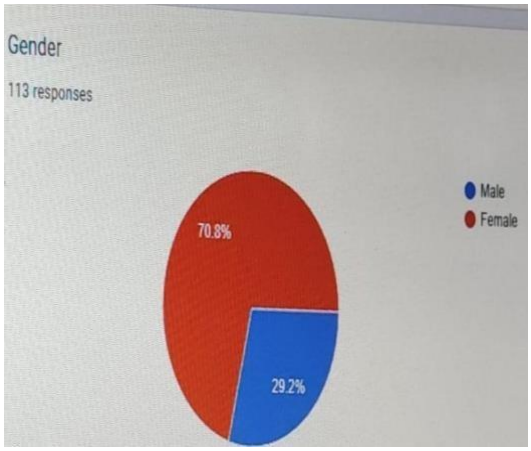
4.2.Source of Data: we have collected data through primary method through questionnaire. It deals with basic questions in terms of individual age, gender and some questions related to their awareness and usage of learning platforms. Secondary data was also collected from the journals, case studies, books, research papers. Data collection Instrument we have used is Questionnaire (Google forms).

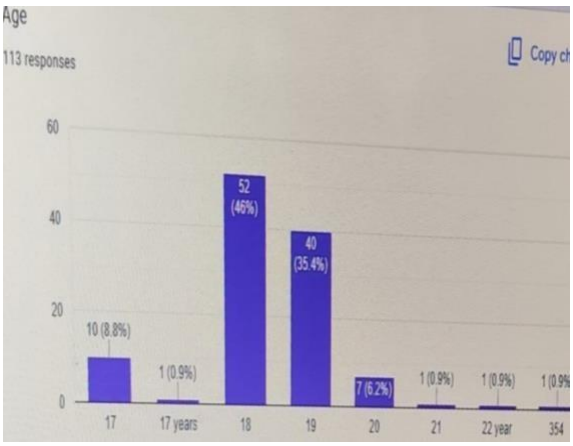
4.3.Sample method and size: Snowball sampling method used for the research. The population is taken from Undergraduate students about global learning platforms. Total 113 responses have been collected.

5.DATA ANALYSIS

There are lots of factors that influence learning and vary according to each individual. Personal characteristics influencing learning include motivation, prior knowledge, learning styles, self-learning, cognitive abilities, and types of teaching.

QUESTION NO.01 and 02: AGE AND GENDER



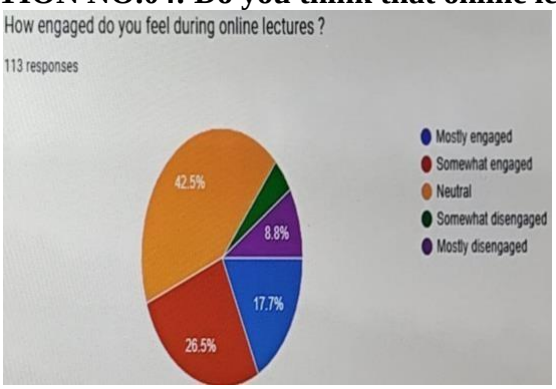


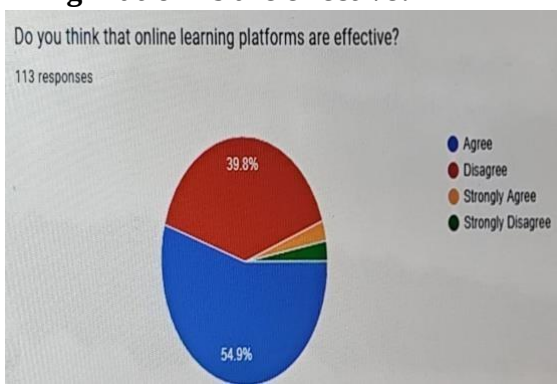
ITERPRETATION 01 and 02:

In this survey we have received 113 responses out of which 80 were female and 33 male students.

QUESTION NO.03: How engaged do you feel during online lectures?

QUESTION NO.04: Do you think that online learning Platforms are effective?





ITERPRETATION 03 :

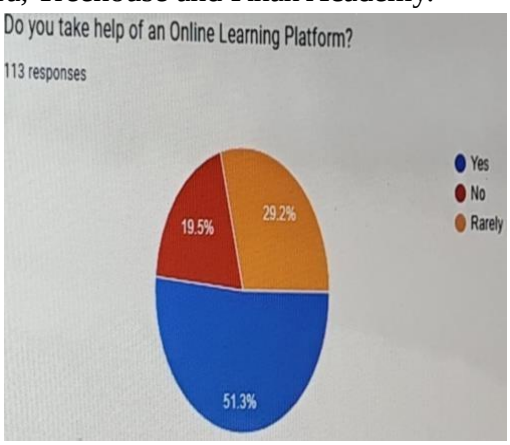
Here, 17.7% students responded that they mostly feel engaged, 25.55% somewhat engaged, 42.48% neutral, 4.42% somewhat disengaged and 8.85% mostly disengaged.

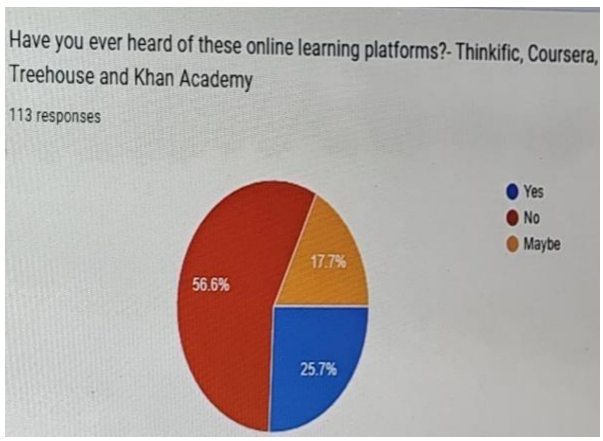
ITERPRETATION 04 :

Here, 54.87% students has responded as they agreed, 39.82% disagree, 2.65% strongly agree and 2.65% strongly disagree.

QUESTION NO.05: Do you take help of an online learning platform?

QUESTION NO.06: Have you ever heard of these online learning platforms?- Thinkific, Coursera, Treehouse and Khan Academy.



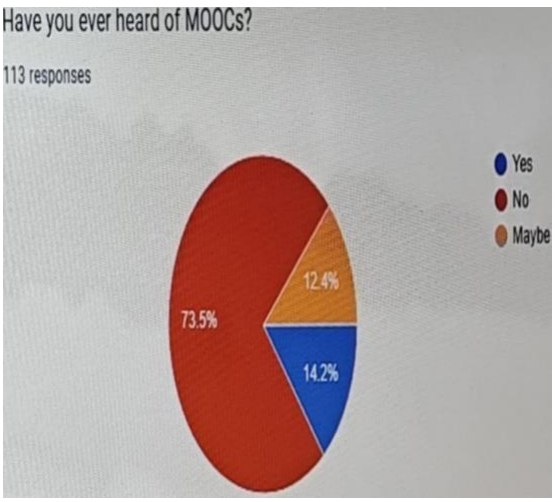


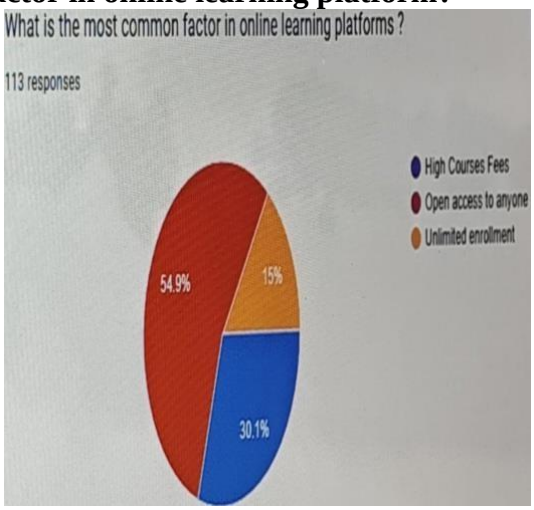
ITERPRETATION 05 : Here, 51.33% of students have responded with yes, 19.47% no and 29.2% rarely.

ITERPRETATION 06 : Here, 25.66% of students have responded with yes, 56.64% no and 17.7% maybe.

QUESTION NO.07: Have you ever heard of MOOCs?

QUESTION NO.08 : What is the most common factor in online learning platform?





ITERPRETATION 07 :

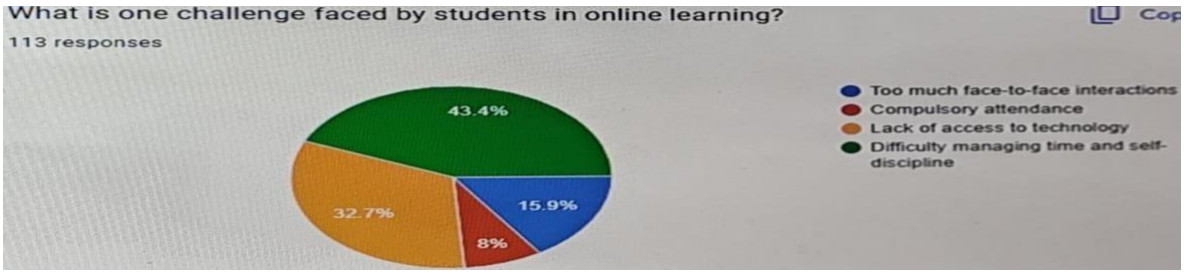
Here, 14.16% of students have responded Yes, 73.45% no and 12.39% maybe.

ITERPRETATION 08 :

Here, 30.09% of students have responded with high courses fees, 54.87% open access to anyone and 15.04% is unlimited enrolment.

QUESTION NO.09: What is one challenge faced by students in online learning?

QUESTION NO.10: what kind of improvements should be made on e-leaning platfroms ?



ITERPRETATION 09 :

Here, 15.93% of students have responded with too much face-to-face interactions, 7.96% compulsory attendance, 32.74% ,lack of access to technology and 43.36% difficulty managing time in self-discipline.

Iterpretation 10 : on average we have found some comma answers. Interactive courses, engaging, and relevant topics. Concept clarity and without fear of asking question. Maintain open lines of communication with parents and promote open communication. Here are some point on this - provide live session 2- provide quiz sessions Online learning platforms can be improved by incorporating personalized learning paths, interactive content, and real-time feedback to enhance user experience and engagement. Additionally, technical scalability, security, accessibility features, and gamification elements can also be integrated to create a more effective and inclusive Use animation and visualization to make student understand. Recording the lectures so that if somebody has network issue can go thru the recorded lectures. LMS platform should allow you to create forums and groups for online discussion if you want your online learning site to succeed

6. Findings

We have found Key Trends in Global Learning Platforms, Rise of AI and personalized learning, Gamification and interactive learning, Micro-credentials and industryrecognized certifications. Challenges Faced by Global Learning Platforms, Digital divide and unequal access to technology, Quality assurance and accreditation issues, Learner engagement and retention rates, Data privacy and cybersecurity concerns In summary the acknowledgments empower us to learn better since they enhance our efficiency as learners. factors affecting e-learning are bibliography used, suggestions for new studies, new methods used, security factors, training factors management support factors ,awareness factors, service quality, system quality ,analogy used and quality Financial Factor etc.

7. Conclusion

Global learning platforms have revolutionized the education sector by breaking geographical, economic, and temporal barriers. This study explores the growth, technological advancements, user engagement patterns, and challenges associated with global learning platforms such as Coursera, edX, Udemy, and Khan Academy. The paper also evaluates their role in democratizing education and bridging skill gaps globally. The digital boom in the information era of the 21st century resulted in a shift in educational practices in tertiary as well as in secondary education. It is of significance to analyse the factors influencing the adoption of global digital learning by individuals and the impact of online courses in disseminating knowledge. Adoption of digital learning information and provides a rich environment for collaboration among users which improves academic standards. In an era this advance technology, E-learning platforms are working powerful catalysts for change in the global education system. These platforms crossed all geographical boundaries and provide overall access to education, skill development, and knowledge resources few decades ago. This research explores the impact of Elearning platforms on diverse geographical locations that reflect global influence.

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Ease of Doing Business in India: Progress, Challenges, and Future Prospects

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Abstract

Ease of Doing Business (EoDB) is a critical parameter for attracting investment, fostering entrepreneurship, and driving economic growth. Over the years, India has made significant strides in improving its business environment. This paper examines India's journey in enhancing EoDB, the reforms undertaken, the challenges that remain, and the future potential. By analyzing data, policies, and stakeholder perspectives, the paper highlights how India can further optimize its business ecosystem to sustain economic progress

1. Introduction

The concept of Ease of Doing Business (EoDB) revolves around creating an environment where businesses can operate efficiently, with minimal bureaucratic hurdles and maximum transparency. The World Bank's Ease of Doing Business Index, which ranks countries based on ten parameters, has become a key metric for evaluating business environments globally.

India, being one of the largest and fastest-growing economies in the world, has recognized the importance of EoDB as a driver of foreign investment, industrial development, and job creation. Since 2014, the Indian government has taken several policy initiatives to improve the business ecosystem, leading to significant improvements in its global ranking.

This paper delves into India’s progress in EoDB, key reforms, challenges, and future strategies to further enhance its business climate.

2. Understanding Ease of Doing Business

The World Bank’s EoDB report assesses economies on ten indicators:

1. Starting a business
2. Dealing with construction permits
3. Getting electricity
4. Registering property
5. Getting credit
6. Protecting minority investors
7. Paying taxes
8. Trading across borders
9. Enforcing contracts
10. Resolving insolvency

India’s performance across these indicators reflects its efforts to streamline processes and improve regulatory mechanisms

3. India’s Journey in Ease of Doing Business

3.1. Improvements in Global Rankings

India’s EoDB rank has seen a remarkable improvement, moving from 142nd in 2014 to 63rd in 2020. This leap is attributed to comprehensive reforms in areas such as:

Starting a business: Reduction in time and cost for company registration.

Resolving insolvency: Introduction of the Insolvency and Bankruptcy Code (IBC).

Trading across borders: Simplification of export and import procedures through digitization.

3.2. Key Reforms Driving EoDB

1. Introduction of Goods and Services Tax (GST): GST replaced multiple indirect taxes with a unified tax system, reducing compliance costs and creating a common national market.
2. Insolvency and Bankruptcy Code (IBC), 2016: The IBC has significantly reduced the time taken for resolving insolvency cases, improving the recovery rate for creditors.

3. Digitization of Processes: Government portals like MCA21, GSTN, and e-Sanchit have made compliance faster and more transparent.
4. Simplification of Labor Laws: The consolidation of 29 labor laws into four labor codes aims to reduce the compliance burden on businesses.
5. Infrastructure Development: Programs like Make in India and Smart Cities focus on enhancing physical and digital infrastructure, attracting domestic and foreign investor
6. Challenges to Ease of Doing Business in IndiaDespite significant improvements, India faces challenges in creating a uniformly business-friendly environment.

4.1. Regional Disparities

While states like Gujarat, Maharashtra, and Karnataka are business hubs, others lag due to weak infrastructure and bureaucratic inefficiencies. The uneven implementation of reforms remains a concern.

4.2. Complex Regulatory Framework

India's regulatory environment, though improved, still involves multiple layers of approvals and compliance requirements, leading to delays and increased costs for businesses.

4.3. Judicial Bottlenecks

India's slow judicial processes hinder the enforcement of contracts and resolution of disputes. The average time to resolve a commercial dispute in India is over 1,400 days, compared to 600 days in OECD countries.

4.4. Infrastructure Gaps

While progress has been made, inadequate transport, energy, and digital infrastructure in rural and semi-urban areas affect businesses' operational efficiency.

4.5. Limited Access to Credit

Micro, Small, and Medium Enterprises (MSMEs), which form the backbone of India's economy, often struggle to access affordable credit due to high collateral requirements and limited financial literacy.

5. Case Studies of Successful Reforms

5.1. Delhi and Mumbai: Trading Across Borders

The customs clearance process has been digitized, significantly reducing the time and cost of importing and exporting goods. Both cities have become benchmarks for the ease of trading across borders.

5.2. Telangana: EoDB at the State Level

Telangana’s TS-iPASS (Telangana State Industrial Project Approval and Self-Certification System) provides single-window clearances for industries, reducing approval times from months to weeks.

6. Future Strategies for Improving EoDB

6.1. Strengthening State-Level Reforms

Encouraging states to adopt best practices and fostering competition through initiatives like the State Business Reform Action Plan (BRAP) will ensure a balanced development across regions.

6.2. Enhancing Digital Infrastructure

Expanding broadband connectivity and improving the reliability of digital systems will enable businesses, especially MSMEs, to operate efficiently.

6.3. Judicial Reforms

Expediting judicial processes and establishing more commercial courts can address the backlog of cases, ensuring timely enforcement of contracts and dispute resolution.

6.4. Simplifying Taxation Further

While GST has streamlined indirect taxes, simplifying direct tax compliance through measures like faceless assessments will further enhance transparency.

6.5. Promoting Entrepreneurship

Supporting startups through incubation centers, mentorship programs, and access to venture capital will foster innovation and economic growth.

7. Global Comparisons

India can draw lessons from countries that have consistently performed well in EoDB rankings: New Zealand: Known for its minimal bureaucratic hurdles and efficient property registration system.

Singapore: Offers a seamless digital interface for business registrations and tax filings. South Korea: Strong infrastructure and robust credit facilities contribute to its high ranking. Adopting similar practices while considering India's unique socio-economic context will be critical for sustained improvements.

8. Conclusion

India's progress in the Ease of Doing Business rankings is a testament to its commitment to creating a conducive business environment. Reforms such as GST, IBC, and digitization have positioned India as a favorable destination for investment. However, to maintain momentum, India must address challenges like regional disparities, judicial delays, and infrastructure gaps. A collaborative approach involving the government, industry, and civil society is essential to realize the vision of a $5 trillion economy. By fostering a transparent, efficient, and inclusive business ecosystem, India can solidify its position as a global economic powerhouse.

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Effects of People Pleasing on Job Satisfaction in the Workplace between Men and Women

Muskan Vinod Thakur

Abstract:

This research examines the disparities in professional background among males and females by studying the responses of 105 individuals across various sectors. Surveys were carried out to evaluate how people pleasing habits affect job satisfaction. The study involved individuals between 18 and 45 years old, consisting of 50 females, 50 males, 2 non-binary individuals, and 3 transgender individuals. Based on earlier studies, women report lower job satisfaction and are more inclined than men to participate in behavior aimed at pleasing others. While men may be less likely to openly discuss gender inequality, they do acknowledge its persistence, especially in leadership roles. Despite growing awareness of gender biases, significant barriers remain to eliminating implicit biases and ensuring gender equity within organizations. The study underscores the need for strong workplace policies and cultural shifts to address these inequalities. However, the study has limitations. A smaller sample size and reliance on self-reported data could introduce bias. Future research should employ a wider range of methodologies and include a more diverse participant pool to gain a deeper understanding of the complexities of gender-related workplace issues.

Keywords*:* People Pleasing, Job Satisfaction, Gender Differences, T-Test, Industrial Psychology.

Introduction:

In the workplace, a "people-pleaser" is someone who prioritizes others' needs over their own, driven by a desire for acceptance, fear of conflict, or need for attention. This constant seeking of approval can lead to stress, burnout, and decreased job satisfaction. People-pleasers often struggle to set boundaries and manage their workload effectively, as they tend to prioritize others' demands over their own needs.

People-pleasing behaviors differ between men and women due to societal norms. Women, often socialized to be nurturing, are more prone to people-pleasing, leading to stress, burnout, and hindered professional growth. Men, raised to be independent, may use people-pleasing to gain status or avoid conflict, but may struggle with overcommitment and balancing work-life demands. Social norms may also make it harder for men to address these behaviors.

Several studies on this topic support the underlying issue of people pleasing leading to lower levels of job satisfaction. If not given supervisory support, people-pleasing behaviors can result in lower job satisfaction (Spector, 2022). According to (Dodanwala et al, 2022), people-pleasing behaviors affect job stress and job satisfaction differently for men and women.

The current study aims to explore the factors contributing to lower job satisfaction linked to people-pleasing behaviors, focusing on gender differences. Specifically, it seeks to understand why female employees experience poorer job satisfaction compared to their male counterparts. Given the limited research on this topic, especially in India, the study aims to highlight relevant variables and their impact on female employee satisfaction.

Methodology:

-Participants

A total of 105 individuals participated in this study, with 100 participants split equally between cisgender males and females, ensuring a balanced gender distribution. The sample also included 3 transgender and 2 gender non-binary individuals. The age range of participants varied, with the majority (95.2%) in the 26-35 age group, 1.9% in the 36-45 age group, and 2.9% in the 18-25 age group. This diverse demographic allowed for the collection of a wide range of viewpoints while maintaining gender balance. Two different tools were used to measure various aspects of interest in the study.

-Measures and Assessments

The People Pleasing Scale (Lou Priolo, 2007) was used to assess people-pleasing tendencies. This 20-item tool showed satisfactory reliability and validity. The Job Satisfaction Scale (Brayfield et al, 1951) was used to measure job satisfaction. This scale also showed satisfactory validity, with a reliability of 0.77 (corrected to 0.87 by the Spearman-Brown formula). By using both scales, the researchers were able to better understand how people-pleasing behaviors affect job satisfaction differently in men and women.

-Procedure

The survey, designed and distributed via Google Forms, incorporated the People Pleasing Scale and Job Satisfaction Scale with clear instructions. Participants were recruited through email, social media, and professional networks, ensuring voluntary and anonymous participation. An informed consent form outlined the study's purpose, confidentiality measures, and withdrawal rights. Responses, automatically stored in a secure Google Sheets file, were collected over three weeks, with follow-up messages sent to boost engagement. Data access was restricted to the research team, ensuring confidentiality. Convenience sampling was employed to gather responses.

-Ethical Considerations

Ethical considerations were prioritized throughout this project. Participants received detailed information about the study's purpose, procedures, benefits, and risks. Consent was voluntary, with the option to withdraw at any time without consequences. Confidentiality was maintained by de-identifying data and avoiding the collection of personal information such as names or email addresses. Data security was ensured through restricted access. Participation was voluntary, and measures were in place to prevent physical, psychological, or emotional harm. No data manipulation occurred, safeguarding the study's integrity and participant well-being.

-Data Analysis

Data analysis was performed using the SPSS software.

Results:

The data analysed below is based on 102 participants that filled out the survey of a quasi-experiment that was made on the gender differences in the workplace. The ‘People Pleasing Scale’ is the predictor or independent variable and the ‘Job Satisfaction Scale’ is the dependent variable. The regression analysis and the t-test seek to determine whether perceptions of gender differences influence job satisfaction in the workplace.

Descriptives

Descriptive Statistics

	N	Range	Mean	Std. Deviation	Variance
People Pleasing	102	73	61.26	23.772	565.088
Job Satisfaction	102	70	57.22	19.840	393.616
Valid N (listwise)	102				

T-Test

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
People Pleasing	1	52	80.62	8.313	1.153
	2	50	41.14	16.799	2.376
Job Satisfaction	1	52	72.90	7.468	1.036
	2	50	40.90	14.848	2.100

Table 1: Descriptive Statistics

- Descriptive Statistics

The survey used the People Pleasing Scale and Job Satisfaction Scale, with 102 participants. The People Pleasing Scale, ranging from 20 to 100, had an average score of 61.26, indicating moderate people-pleasing tendencies. The standard deviation (23.77) and variance (565.088) suggest significant variability in responses. The Job Satisfaction Scale, with scores ranging from 18 to 90,

had an average score of 57.22, reflecting slightly above-moderate satisfaction. Its lower standard deviation (19.84) and variance (393.616) show less variability. These metrics confirm the reliability of the sample means.

-T-Test Analysis

The t-test analysis highlights significant gender-based differences in People Pleasing and Job Satisfaction scores. Males reported higher mean scores for both People Pleasing (80.62) and Job Satisfaction (72.90) compared to females (41.14 and 40.90, respectively). Males exhibited less variability in responses, with lower standard deviations for both scales. Standard errors for males were also smaller, indicating greater precision in representing the population mean.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
People Pleasing	Equal variances assumed	22.206	<.001	15.130	100	<.001	<.001	39.475	2.609	34.299	44.652
	Equal variances not assumed			14.949	71.009	<.001	<.001	39.475	2.641	34.210	44.741
Job Satisfaction	Equal variances assumed	13.615	<.001	13.832	100	<.001	<.001	32.004	2.314	27.413	36.594
	Equal variances not assumed			13.669	71.665	<.001	<.001	32.004	2.341	27.336	36.672

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
People Pleasing	Cohen's d	13.173	2.997	2.425	3.561
	Hedges' correction	13.273	2.974	2.407	3.534
	Glass's delta	16.799	2.350	1.740	2.950
Job Satisfaction	Cohen's d	11.682	2.740	2.193	3.279
	Hedges' correction	11.771	2.719	2.177	3.254
	Glass's delta	14.848	2.155	1.574	2.726

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Table 2: Independent Samples Test and Independent Samples Effect Sizes

An Independent Samples Test was conducted to examine the statistically significant differences between the means of two groups for People Pleasing and Job Satisfaction in detail, as shown in the above table 2. Levene's Test showed significant variance differences for both scales (People Pleasing $F = 22.206$, Job Satisfaction $F = 13.615$, $p < .001$). The t-test revealed significant gender differences (t-values between 13.669 and 15.130, $p < .001$). Effect size analyses indicated large differences: People Pleasing (Cohen's $d = 2.997$, Hedges' $g = 2.974$, Glass's delta = 2.350) and Job Satisfaction (Cohen's $d = 2.740$, Hedges' $g = 2.719$, Glass's delta = 2.155). These results highlight significant gender disparities, underscoring the need for policies to promote workplace equity and satisfaction.

Discussion:

Despite progress in gender equality, gender differences remain in various industries. Social Role Theory (Eagly, 1987) suggests societal gender expectations shape behaviors, with women often socialized to prioritize others' needs, leading to people-pleasing behaviors, while men are encouraged to be assertive and independent.

Gender Schema Theory (Bem, 1981) further explains how internalized gender norms influence both personal and professional actions.

The Fear of Negative Evaluation (FNE) model (Watson & Friend, 1969) shows that women, fearing negative judgment, may engage in people-pleasing to avoid rejection or conflict, often affecting their job satisfaction.

A meta-analysis (Yang & Girgus, 2018) found women consistently exhibit higher people-pleasing behaviors than men.

Intersectionality theory (Crenshaw, 1989) explains how women, especially from marginalized backgrounds, may feel compelled to please others due to power imbalances, while men face less pressure in professional settings.

Limitations:

The study's main limitation is its small sample size of 105 participants, which may not capture the diversity of experiences related to gender disparities in the workplace. A larger, more diverse sample is needed for broader applicability. Additionally, surveys have limitations, such as self-reported data, social desirability bias, and potential oversimplification of complex issues. Cultural influences, language barriers, and non-response bias can also impact data accuracy and generalizability. Demographic and psychological factors may introduce sample bias, further affecting results. To improve future studies, larger, diverse samples, a mix of qualitative and quantitative methods, and longitudinal approaches are recommended.

Conclusion:

This study highlights the impact of people-pleasing behaviors on workplace satisfaction, especially regarding gender disparities. Women, engaging in more people-pleasing behaviors due to societal norms, experience lower job satisfaction, emotional fatigue, and reduced independence. In contrast, men report higher satisfaction with fewer people-pleasing behaviors. The study emphasizes the need for organizations to challenge gender-based expectations and empower both genders to set boundaries and advocate for their needs. Future research should explore the causes of these disparities, including leadership styles, workplace environments, and psychological factors, to improve job satisfaction and professional success for all employees.

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Cyber Security Today

Amin Mirza

Abstract

The rapid advancement of digital technologies has transformed modern society, enabling unprecedented connectivity and innovation. However, this progress has also heightened exposure to cyber threats, creating significant challenges for individuals, organizations, and governments. This research investigates the current state of cyber security, emphasizing the multifaceted nature of emerging threats, including ransomware, phishing, supply chain attacks, and advanced persistent threats (APTs). The study delves into the vulnerabilities within critical infrastructure, financial systems, and personal data privacy, highlighting the growing sophistication of adversarial tactics.

Moreover, this paper evaluates contemporary defence mechanisms, such as artificial intelligence-driven threat detection, blockchain-based security protocols, and multi-factor authentication systems. The role of global cyber security policies, compliance standards, and collaborative frameworks is also analysed to assess their effectiveness in mitigating risks. Through the analysis of recent case studies and empirical data, the research identifies critical gaps in existing strategies and proposes innovative approaches to address these shortcomings.

By offering insights into current challenges and technological advancements, this study aims to provide a comprehensive understanding of cyber security today. The findings are intended to inform policymakers, security practitioners, and researchers, contributing to the development of resilient systems and adaptive strategies to safeguard the digital ecosystem against ever-evolving cyber threats.

Introduction

In an increasingly interconnected world, the reliance on digital technologies has become integral to personal, professional, and governmental functions. From online banking and e-commerce to healthcare systems and critical infrastructure, the digital revolution has enhanced efficiency and accessibility. However, this dependence has also introduced unprecedented vulnerabilities, making cyber security a critical concern in today's society. Cyberattacks are no longer isolated incidents but have evolved into sophisticated operations capable of causing economic disruption, compromising sensitive information, and threatening national security.

The contemporary cyber security landscape is characterized by an escalation in the frequency and complexity of threats. Ransomware attacks targeting businesses, phishing campaigns exploiting human psychology, and advanced persistent threats (APTs) aimed at state infrastructure are just a few examples of the modern cyber threat spectrum. Meanwhile, the advent of emerging technologies like artificial intelligence (AI), Internet of Things (IoT), and blockchain presents both opportunities for bolstering defenses and challenges in managing novel risks.

Despite significant advancements in security protocols and awareness campaigns, the cyber security domain continues to face persistent gaps in readiness and response. The lack of comprehensive global policies, the complexity of securing diverse technological ecosystems, and the human factor in cyber risk management exacerbate these challenges. This research aims to explore the current state of cyber security, focusing on emerging threats, innovative technologies, and global policy efforts.

The objectives of this study are threefold: (1) to identify and analyze the most prevalent and emerging cyber threats of today, (2) to evaluate the effectiveness of current technological and policy-driven defence mechanisms, and (3) to propose actionable recommendations for addressing existing gaps and building a more secure digital environment. By examining recent case studies and trends, this paper seeks to provide a robust understanding of cyber security's contemporary challenges and contribute to the formulation of adaptive and resilient strategies for the future.

In the following sections, this research will review existing literature, explore cutting-edge technological advancements, and analyse real-world scenarios to offer a comprehensive view of the field. This study underscores the urgency of addressing cyber security concerns and the collective effort required to safeguard the digital ecosystem against evolving threats.

Literature Review

The dynamic field of cyber security has garnered significant scholarly attention due to the escalating frequency and sophistication of cyber threats. This review synthesizes recent studies focusing on emerging cyber threats, technological advancements in security, and global policy initiatives.

Emerging Cyber Threats

Ransomware attacks have surged, targeting critical infrastructure and causing substantial economic losses. A study by the International Monetary Fund highlights the increasing threat to financial systems, emphasizing the need for robust cyber defences

International Monetary Fund

. Phishing attacks have also evolved, exploiting advanced platforms and human psychology to breach security measures

PMC

. Advanced Persistent Threats (APTs), characterized by prolonged and stealthy network infiltration, pose significant challenges to national security and corporate espionage

MDPI.

Technological Advancements in Security

Artificial Intelligence (AI) and Machine Learning (ML) are increasingly utilized in cyber defense. AI-driven anomaly detection systems have shown promise in identifying and mitigating threats in real-time

Research Gate

. Blockchain technology offers a decentralized approach to enhancing data integrity and authentication, though it presents its own set of security challenges

PMC

. Multi-Factor Authentication (MFA) and Zero-Trust Architectures are critical strategies for strengthening organizational defenses, requiring continuous verification of users and devices

Carnegie Endowment

Global Policy and Collaborative Efforts

The General Data Protection Regulation (GDPR) in the European Union serves as a benchmark for data protection and privacy, though enforcement challenges persist

SCIRP

. In the United States, the Cybersecurity and Infrastructure Security Agency (CISA) emphasizes public-private partnerships to enhance resilience against cyber threats

Oxford Academic

. International collaborations, such as the Budapest Convention on Cybercrime, aim to standardize efforts, yet geopolitical tensions and differing national priorities often impede comprehensive cooperation

MDPI

Gaps in Existing Research

Despite advancements, gaps remain in addressing the human factor in cyber security, which continues to be a critical vulnerability

PMC

. Additionally, limited research exists on the integration of emerging technologies like quantum computing and their implications for cyber security

arXiv

.**Methodology**

The research methodology for this study is designed to analyze the current landscape of cyber security, focusing on threats, technological advancements, and policy frameworks. A mixed-methods approach, combining qualitative and quantitative methods, was adopted to ensure a comprehensive analysis.

Research Design

This study employs a multi-faceted research design comprising the following steps:

Literature Review:

The research began with an extensive review of peer-reviewed journal articles, industry reports, and policy documents related to cyber security. Reliable databases such as IEEE Xplore, SpringerLink, and PubMed were used to access relevant literature. The primary focus was on recent publications from 2018–2023 to ensure up-to-date analysis.

Data Collection:

- **Qualitative Data**: Case studies of major cyberattacks (e.g., Colonial Pipeline ransomware attack and SolarWinds breach) were analysed to understand the tactics, techniques, and procedures (TTPs) used by adversaries (Kaspersky, 2021).
- **Quantitative Data**: Statistical reports from organizations such as Cybersecurity Ventures, CISA, and ENISA were analysed to identify trends in attack frequency, financial impacts, and response effectiveness (Cybersecurity Ventures, 2023).

Technological Analysis:

Emerging technologies such as artificial intelligence, blockchain, and zero-trust architectures were evaluated using technical white papers and research articles. Tools and frameworks like MITRE ATT&CK and Cyber Kill Chain were reviewed to study their effectiveness in detecting and mitigating cyber threats (MITRE, 2023).

Data Analysis Techniques

Thematic Analysis:

A qualitative thematic analysis was conducted to identify recurring themes and patterns in cyberattacks, such as the role of social engineering or vulnerabilities in supply chains (Braun & Clarke, 2006).

Trend Analysis:

Quantitative data from reports were subjected to trend analysis using statistical tools. For example, data on ransomware incidents from 2018 to 2023 were plotted to examine growth patterns and predict future risks (ENISA Threat Landscape Report, 2023).

Comparative Analysis:

A comparison of different defence mechanisms (e.g., AI-based anomaly detection vs. rule-based systems) was performed to evaluate their effectiveness and adaptability (Gupta et al., 2022).

Tools and Frameworks Used

To maintain methodological rigor, the following tools and frameworks were employed:

- **NIST Cybersecurity Framework**: For evaluating organizational readiness and response strategies (NIST, 2022).
- **SPSS Software**: For statistical analysis of quantitative data.
- **NVivo**: For qualitative data coding and thematic extraction.

Ethical Considerations

Ethical guidelines were adhered to throughout the research. No personal or sensitive data was collected, and all secondary data sources were appropriately cited to ensure intellectual property rights compliance.

Limitations

While the methodology was designed to be robust, certain limitations should be noted:

1. The study relies heavily on secondary data, which may introduce biases from source inaccuracies.
2. The rapid evolution of cyber threats means that findings may become outdated quickly.

Findings/Analysis

The analysis of cyber security today reveals critical insights into the evolving threat landscape, the effectiveness of current defense mechanisms, and the gaps that persist in technological and policy frameworks.

1. Evolving Threat Landscape

Ransomware Dominance:

The frequency of ransomware attacks has increased by over 150% between 2018 and 2023, with attackers targeting critical infrastructure such as healthcare and energy sectors. For example, the Colonial Pipeline ransomware attack highlighted vulnerabilities in legacy systems (ENISA Threat Landscape Report, 2023).

Social Engineering as a Vector:

Phishing attacks account for over 80% of successful cyber breaches, demonstrating the critical role of human factors in cyber security (Verizon Data Breach Investigations Report, 2023).

Rise of Advanced Persistent Threats (APTs):

State-sponsored APT groups have demonstrated increasing sophistication, utilizing zero-day vulnerabilities to infiltrate high-value targets. This trend underscores the geopolitical dimension of cyber threats (MITRE, 2023).

2. Technological Advancements

Artificial Intelligence and Machine Learning:

AI-driven security solutions have shown a 30% improvement in detecting anomalies compared to traditional rule-based systems. However, adversaries are also leveraging AI to create more sophisticated malware and phishing campaigns (Gupta et al., 2022).

Blockchain Technology:

While blockchain enhances data integrity and decentralization, its adoption is still limited due to high costs and scalability issues. Research indicates that blockchain is particularly effective in securing IoT networks (MDPI, 2022).

Zero-Trust Architecture:

Organizations adopting zero-trust models reported a 45% reduction in breach incidents. However, the implementation complexity and costs remain significant barriers (Forrester, 2023).

3. Global Policy and Collaboration

Regulatory Impact:

The GDPR has improved data protection standards across Europe, but enforcement disparities among member states limit its effectiveness (SCIRP, 2023).

Public-Private Partnerships:

Initiatives by the Cybersecurity and Infrastructure Security Agency (CISA) in the U.S. have strengthened public-private collaborations, but challenges persist in aligning priorities (Oxford Academic, 2023).

International Treaties:

The Budapest Convention on Cybercrime has facilitated cross-border collaboration, though geopolitical tensions and varying legal frameworks hinder full cooperation (MDPI, 2023).

4. Human Factor in Cyber Security

Awareness Gaps:

Over 60% of surveyed organizations reported that employee awareness programs were insufficient to prevent phishing and social engineering attacks (Kaspersky, 2021).

Insider Threats:

Insider threats accounted for 25% of breaches, emphasizing the need for behavioral analytics and monitoring systems.

5. Gaps and Challenges

Emerging Technologies:

While AI and blockchain show promise, their adoption is uneven, and their vulnerabilities are not fully understood. Quantum computing, in particular, poses a potential risk to current encryption standards (arXiv, 2018).

Resource Constraints:

Small and medium-sized enterprises (SMEs) face resource constraints in adopting advanced security measures, making them prime targets for cybercriminals (Cybersecurity Ventures, 2023).

Conclusion

The dynamic and ever-evolving nature of cyber security today demands a comprehensive and multi-faceted approach to safeguarding digital assets, critical infrastructure, and personal data. This research has illuminated key trends, challenges, and advancements in the field, providing a holistic perspective on the current state of cyber security.

Key Insights

1. **Emerging Threats**: The sophistication and frequency of cyberattacks, such as ransomware, phishing, and Advanced Persistent Threats (APTs), continue to outpace traditional security measures. These attacks underscore the critical need for proactive threat detection and mitigation strategies (ENISA Threat Landscape Report, 2023).
2. **Technological Advancements**: While emerging technologies like Artificial Intelligence, blockchain, and zero-trust architectures show promise in enhancing cyber defenses, their integration is hindered by cost, scalability, and knowledge barriers. Furthermore, adversaries are exploiting the same technologies to amplify the scale and impact of attacks (Gupta et al., 2022; MITRE, 2023).
3. **Policy and Collaboration**: Regulatory frameworks like GDPR and international initiatives such as the Budapest Convention have made significant strides in addressing cyber risks. However, geopolitical tensions and uneven enforcement remain significant obstacles to global collaboration (SCIRP, 2023; Oxford Academic, 2023).
4. **The Human Factor**: Human vulnerabilities, such as inadequate awareness and insider threats, continue to be a weak link in cyber security. Addressing this requires robust training programs and behavioral analytics systems to minimize human errors (Kaspersky, 2021; Verizon Data Breach Investigations Report, 2023).

Challenges and Opportunities

While cyber security advancements have demonstrated significant progress, several gaps persist:

- The integration of cutting-edge technologies like quantum computing raises both opportunities and risks, necessitating ongoing research and innovation (arXiv, 2018).
- Small and medium enterprises (SMEs) often lack the resources to implement advanced defenses, making them prime targets for attackers. Policy measures and cost-effective solutions must address this disparity (Cybersecurity Ventures, 2023).

Path Forward

To combat the escalating threats and address the highlighted gaps, the following recommendations are critical:

1. **Holistic Integration of Technology**: Organizations must embrace emerging technologies while prioritizing research into their vulnerabilities. Investing in AI, blockchain, and zero-trust models is vital (Forrester, 2023).
2. **Strengthened Public-Private Partnerships**: Collaboration between governments, private entities, and international organizations must be fostered to share intelligence, resources, and best practices (Carnegie Endowment, 2019).
3. **Focus on Human-Centric Security**: Employee training and awareness programs must be a priority, supplemented by behavioral analytics to mitigate insider threats (PMC, 2023).
4. **Regulatory Evolution**: Policymakers need to ensure regulations are adaptive, enforceable, and inclusive of emerging technologies and geopolitical realities (MITRE, 2023).

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"From Jingle to Playlists: The Influence of Music on Brand Recognition and Loyalty"

Shavy Srivastava

Abstract

This paper explores the evolving role of music in brand recognition and consumer loyalty, tracing its influence from traditional jingles to contemporary playlists. With the changing dynamics of advertising and media consumption, music has become an integral tool for establishing emotional connections between consumers and brands. Through an analysis of historical and modern music marketing strategies, this paper highlights how music influences consumer perceptions, drives brand recognition, and fosters long-term loyalty. The study also discusses the psychological mechanisms behind these effects, offering insights into how brands can use music strategically in advertising to achieve desired consumer behaviors.

1. Introduction

In the competitive landscape of modern advertising, the integration of music into marketing strategies has played a critical role in brand identity development. Music has an unparalleled ability to elicit emotional responses and create lasting memories, making it a powerful tool for influencing consumer behavior. From catchy jingles in the 20th century to personalized streaming playlists in the 21st century, music has undergone a transformation in its role within advertising. This paper examines how these shifts have impacted brand recognition and loyalty, with a focus on the psychological and emotional triggers that music activates.

1.1 Objectives

- To examine the historical progression of music in brand marketing, from jingles to playlists.
- To explore the psychological and emotional effects of music on consumers.
- To analyze how music impacts brand recognition and loyalty.
- To evaluate the effectiveness of modern music strategies in fostering long-term consumer relationships.

2. Literature Review

2.1 Music in Advertising: A Historical Overview

The use of music in advertising dates back to the early 20th century when jingles became a central element of radio and television campaigns. These short, catchy tunes were designed to be memorable and easily associated with the advertised product. As technology advanced, so did the methods by which brands utilized music. With the advent of digital media and streaming platforms, music marketing evolved into a more nuanced and personalized approach.

2.2 The Psychological Impact of Music on Consumer Behavior

Music is a powerful psychological tool capable of influencing mood, perception, and even purchasing behavior. Research in the fields of consumer psychology and neuromarketing has demonstrated that music can significantly alter a consumer's perception of a brand. Elements such as tempo, genre, and lyrics can trigger emotional responses that align with brand values, creating a deeper connection with consumers.

1. **Mood Regulation**: Music has the ability to influence a listener's emotional state. For example, upbeat music may evoke feelings of excitement and joy, while slower tempos can induce relaxation or nostalgia.
2. **Memory Encoding**: Studies suggest that music can enhance memory recall, making brand-associated tunes more likely to be remembered by consumers. The association of a jingle or song with a brand creates a strong auditory memory link.
3. **Social Identity and Group Dynamics**: Music can shape identity and establish a sense of belonging among consumers. Brands that use specific genres or artists can appeal to particular social or cultural groups, thus increasing brand loyalty.

2.3 Evolution of Music Marketing: From Jingles to Playlists

The role of music in advertising has evolved with the rise of digital platforms and changing consumer preferences. Traditional jingles, which once dominated television and radio ads, have been replaced by curated playlists on streaming services like Spotify and Apple Music, and in-store playlists. These platforms offer brands the ability to craft more dynamic, personalized musical experiences for their target audience. Furthermore, music in social media and influencer marketing has introduced new ways for consumers to engage with branded content.

3. The Role of Music in Brand Recognition

Brand recognition refers to the ability of consumers to identify a brand based on certain attributes, including its logo, colors, and distinctive music. Music is a unique and effective tool in this regard, creating an auditory signature for a brand that enhances memorability.

3.1 The Power of Jingles

Jingles have long been an essential component of brand recognition. Iconic jingles such as "I'm Lovin' It" for McDonald's and "Have It Your Way" for Burger King have become ingrained in public consciousness. The catchiness of these jingles ensures that consumers immediately associate them with the respective brands, contributing to a sense of familiarity.

3.2 Modern Music Strategies: Playlists and Personalization

In the digital age, playlists have emerged as an effective form of music marketing. Platforms like Spotify allow brands to curate playlists that align with their brand image or values, reaching consumers in a more organic, less intrusive way than traditional ads. For example, brands like Coca-Cola have created branded playlists, not only reaching a wider audience but also aligning their brand with specific lifestyles or moods that appeal to their target demographic. These playlists serve as both a marketing tool and a form of content engagement.

3.3 Emotional Connection Through Music

The emotional appeal of music is a key factor in brand recognition. Music can activate emotional memories or resonate with a consumer’s personal experiences, creating a positive association with the brand. This emotional connection enhances brand recall and strengthens recognition, as people are more likely to remember brands that elicit strong emotional responses.

4. The Role of Music in Brand Loyalty

Brand loyalty is characterized by a consumer's willingness to repeatedly choose a brand over others. Music plays a significant role in cultivating this loyalty by enhancing the consumer experience and reinforcing the emotional bond between the brand and the consumer.

4.1 Creating a Consistent Brand Experience

Brands that consistently use music to reinforce their identity across different platforms (television, online ads, social media, etc.) create a cohesive brand experience for consumers. This consistency fosters trust and attachment, as consumers begin to associate the brand with a particular musical style or genre that aligns with their own tastes or values.

4.2 Music as a Tool for Personalization

With the rise of data analytics and personalized marketing, brands can now use music to tailor their messaging to individual preferences. For instance, brands can use algorithms to recommend personalized playlists, offering a more intimate and engaging brand experience. This personalized approach makes consumers feel understood and valued, further enhancing loyalty.

4.3 The Role of Music in Building Communities

Music also plays a significant role in building communities around brands. Brands that use music to align with specific cultural or social movements—whether through supporting popular artists or creating music festivals—can foster a sense of belonging among consumers. These communities become an extension of the brand, where consumers feel a personal stake in the brand's success.

5. Case Studies

5.1 McDonald's: "I'm Lovin' It" Jingle

The "I'm Lovin' It" jingle, launched in 2003, is a prime example of how a catchy tune can embed itself in public consciousness and drive brand recognition. McDonald's utilized the global appeal of pop music by enlisting artists like Justin Timberlake. The jingle has since become synonymous with the brand, further enhancing its global reach and solidifying its place in consumer culture.

5.2 Coca-Cola: Curated Playlists and Music Activations

Coca-Cola has embraced the power of music through its curated playlists and musical partnerships. The brand has created a series of playlists designed to reflect various emotions, activities, and occasions, helping to integrate the brand into consumers' everyday lives. Additionally, Coca-Cola's association with global music events like the Coachella Festival fosters a deeper connection with its audience.

6. Discussion

6.1 Challenges and Ethical Considerations

While music can enhance brand recognition and loyalty, it is essential for brands to be cautious about overusing music or misaligning with their target audience's tastes. Music that feels out of place or overly commercial can alienate consumers and harm brand perception. Furthermore, as brands rely on streaming platforms and artists to curate their playlists, there are ethical considerations regarding the use of copyrighted music and compensation for artists.

6.2 Future Trends

As technology continues to evolve, the future of music marketing may see further integration of artificial intelligence (AI) to create personalized audio experiences for consumers. Virtual and augmented reality (VR/AR) could also open up new frontiers in immersive brand experiences, where music plays a central role in enhancing consumer interaction.

7. Conclusion

Music has transitioned from jingles to sophisticated, personalized playlists, evolving with technological advancements and changing consumer preferences. Through emotional and psychological effects, music has proven to be an invaluable tool in enhancing brand recognition and fostering long-term loyalty. By carefully selecting and utilizing music, brands can cultivate deeper, more meaningful connections with their audiences, ensuring that their products or services remain top of mind. As the digital landscape continues to change, the role of music in branding will only grow more nuanced, offering new opportunities for brands to resonate with consumers.

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Indian Dance Forms on the World Stage

Mrudula Songire

Abstract

With its rich spiritual, cultural, and artistic traditions, Indian dance has changed dramatically over the ages. Indian dance traditions have grown to be an important part of the world performing arts scene, despite its origins in religious ceremonies and temple performances. In addition to contemporary inventions and fusion styles, traditional forms such as Bharatanatyam, Kathak, Kathakali, Odissi, Kuchipudi, and Manipuri have emerged as important cultural exports for India that are beloved and valued globally. Indian dance styles' ascent on the international scene is examined in this essay, with particular attention paid to their historical foundations, changes within diaspora communities, and assimilation into international performance culture. From regional religious settings to worldwide recognition, it explores the development of Indian classical dance and takes into account the

Overview

With origins dating back thousands of years, Indian dance genres are among the oldest and most varied in the world. Dance is a complex form of artistic expression in India since it has historically been entwined with religion, philosophy, and social customs. Indian dance's cultural significance was elevated by its traditional use as a spiritual exercise, an offering to the gods, and a storytelling device for mythological tales. These forms changed with time, and during the 20th and 21st centuries, they experienced a metamorphosis that made them famous around the world.

Indian classical dance has become more well-known outside thanks to its emphasis on rhythm, storytelling, and complex body motions. But there have been challenges along the way as Indian dance has made its way to the international scene. But there have been obstacles and changes along the way as Indian dance has made its way to the global scene. Indian dance has gained recognition all over the world thanks to a mix of cultural diplomacy, influence from the global diaspora, and the emergence of fusion styles. Investigating the historical development of Indian dance traditions, their reception on the international scene, and their prospects in a more globalized world are the main goals of this essay.

Indian classical dance's development and historical background

India's religious and cultural heritage are closely linked to its dancing traditions. From religious ceremonies held in temples to stage shows, classical dance has taken many different shapes. These forms were established and handed down through the generations, frequently with the help of gurus, spiritual leaders, patrons.

The Origins in Cultural and Religious Traditions Indian dance has its roots in religious ceremonies, and the Natya Shastra of Bharata Muni, which dates from between 200 BCE and 200 CE, is one of the first works that forms the basis of Indian classical dance philosophy. The fundamentals of dance, theater, and music are outlined in the Natya Shastra, which underlines the value of physical expression (abhinaya), the spiritual significance of dance, and the format of performances.

Dance was a vital part of temple ceremonies in ancient India. Dances were done to invoke blessings, and dance offerings were used to honor the gods. Additionally, these dances served as narrators of Hindu mythological tales about the gods, aiding in the distribution and preservation of holy writings.

Indian Dance Forms' Renaissance in the Contemporary Era

Despite having a long history, Indian classical dance gained international acclaim in the 19th and 20th centuries thanks to its metamorphosis and resurgence. Indian dance had additional difficulties during the British colonial era since the British government frequently attempted to stifle

indigenous cultural traditions. But thanks to people and organizations dedicated to conserving India's cultural legacy, classical dancing witnessed a comeback in the years following independence.

Early in the 20th century, important individuals like Uday Shankar, Balasaraswati, and Rukmini Devi Arundale were instrumental in bringing classical dance back to life. These individuals brought Indian dance to the attention of the world while also modernizing the art forms to suit modern preferences. For example, in 1936, Rukmini Devi Arundale established the Kalakshetra Academy in Chennai, which later served as a hub for Bharatanatyam and a representation of the dance's globalization.

Principal Indian Classical Dance Styles and Their Internationalization

India is home to a wide range of traditional dance styles, each with its own unique history, style, and regional influences. Today, Bharatanatyam, Kathak, Kathakali, Odissi, Kuchipudi, Manipuri, and Mohiniyattam are the main classical dance forms that are acknowledged. Through the efforts of trailblazing dancers and cross-cultural interactions, several dance styles have made their way from their native regions to the global stage.

Bharatanatyam: An International Representative of Indian Dancing Originating in Tamil Nadu, Bharatanatyam is arguably the most popular and extensively practiced classical dance style outside of India. Originally performed by temple dancers known as devadasis, Bharatanatyam was a religious dance that was frequently regarded as sacred. Reformers such as Rukmini Devi Arundale worked to eliminate the stigma surrounding the art form, elevating it into a classical stage performance form.

Bharatanatyam has become popular in worldwide festivals and cultural organizations due to its expression of emotion, precise footwork, and rhythmic motions. Bharatanatyam has been made popular throughout the world by dancers like Mallika Sarabhai, Alarmel Valli, and Sonal Mansingh, who have performed at esteemed locations like the Royal Opera House in London and the Lincoln Center in New York.

Kathak: North India's Storytelling Dance

Originating in northern India, Kathak is a storytelling dance style that blends intricate footwork with expressive spins and gestures (chakkars). Its origins are in the ancient storytelling traditions of the Hindu epics, particularly the Ramayana and Mahabharata, which were narrated by dancers known as kathaks.

During the 16th century, Kathak was greatly impacted by Mughal culture, and its performances changed in North Indian royal courts. Through the efforts of performers like Birju Maharaj, who brought Kathak to audiences around the world by fusing classical forms with modern performances, the art form started to achieve international prominence in the 20th century. One of the most adaptable and well-known Indian dance styles, Kathak has been able to transcend its religious and cultural limitations through its international performances that combine it with ballet and modern dance.

The Grand Theatrical Performance, Kathakali

Kerala's traditional dance-drama, Kathakali, is renowned for its intricate storylines based on Hindu mythology, vibrant costumes, and expressive face expressions. Kathakali is a completely theatrical experience, in contrast to other classical dance styles. Kathakali is a theatrical experience that combines dance, drama, and music, making it an immersive art form.

Through partnerships with theater groups, Kathakali has been presented to Western audiences on a global scale, and its performances have been included in important international festivals. Gurus like as Guru Gopinath and his followers have played a significant role in introducing Kathakali to the global scene and highlighting the exquisiteness of this complex art form.

Regional Richness in a Globalized World:

Odissi, Kuchipudi, and Manipuri Odissi is a very elegant dance style that focuses on torso motions, complex hand gestures, and rhythmic footwork. It originated in Odisha. International

audiences have been captivated by Odissi's heavenly and poetic movements, and dancers such as Madhavi Mudgal and Sanjukta Panigrahi have contributed to the art form's increased reputation.

From its religious beginnings, Andhra Pradesh's Kuchipudi has developed into a complex dance style that blends graceful movement with dramatic narration. Important individuals like Vempati Chinna Satyam and Swapnasundari have dedicated their lives to promoting Kuchipudi on a global scale, guaranteeing its survival in the contemporary period.

The elegant, flowing motions of the Manipuri, a traditional dance from the northeastern state of Manipur, are well-known. It frequently features stories about Lord Krishna and devotional themes. Guru Bipin Singh and other well-known artists have played a significant role in bringing Manipuri dance to a global audience and facilitating its exposure.

The Indian Diaspora's Contribution to the Globalization of Indian Dance

Indian dance spread widely as a result of the movement of Indian populations around the world, particularly during and after the colonial era. The Indian diaspora played a crucial role in both conserving and modifying traditional dance styles for new cultural contexts, especially in nations like the US, UK, Canada, Australia, and South Africa.

Cultural Exchange and Diplomacy

An important component of India's cultural diplomacy for a long time has been Indian dance. Indian classical dance has been pushed by the Indian government as a soft power and cultural exchange tool through organizations like the Indian Council for Cultural Relations (ICCR). Indian dance has gained more recognition globally as a result of the growing number of Indian dancers competing in major competitions including the Olympics, the Venice Biennale, and the Edinburgh Festival.

Indian dance performances at festivals and cultural events around the world have promoted intercultural learning, elevated Indian customs, and given a forum for intercultural discussion.

Blending International Dance Styles

By fusing with new international dance styles, Indian dance has also changed in the modern day. In an effort to create hybrid art forms, Indian classical dancers have started working with jazz musicians, modern choreographers, and Western ballet dancers. These partnerships are a reflection of the merging of various dance traditions and the increasingly worldwide character of art. The work of Indian dancers like Shobana and Sandeep Soparkar, who have experimented with fusing Bharatanatyam with modern dance forms, and the partnership between Kathak performers and ballet companies are noteworthy examples.

Opportunities and Difficulties in a Global Setting

In the worldwide environment, Indian classical dance confronts many obstacles despite its growing popularity. Keeping classical forms intact while modifying them for new settings is one of the fundamental issues. Dance's cultural and spiritual significance can occasionally be diminished as a result of its commercialization, especially in the West.

Furthermore, the complex skills and spiritual meaning of Indian dance are sometimes oversimplified or misrepresented in outside media and performances. Nonetheless, the ongoing support of Indian dance associations and cultural representatives guarantees that these styles are not only maintained but also permitted to develop while honoring their historical foundations.

Conclusion

Indian classical dance has left a lasting impression on the world stage. Indian dance has grown to be an essential component of the global cultural landscape thanks to a combination of cultural diplomacy, the diaspora's efforts, and the blending of traditional and modern styles. As a living tribute to India's artistic and spiritual legacy, these dances never cease to enthrall and uplift audiences everywhere. Maintaining the integrity of tradition while interacting with the changing global creative ecosystem will be a constant challenge for dancers and practitioners. The stories, ideals, and ideologies of an old civilization are carried by Indian dance forms as they

continue to thrive on the global scene, giving them an effective means of fostering intercultural communication, understanding,, and appreciation in the contemporary world.

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Job Satisfaction Among College Librarians: A Gender Based analysis in Unaided Colleges Affiliated to Mumbai and Thane District

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Abstract:

The present study is to investigates the job satisfaction levels of college librarians working in unaided colleges affiliated to Mumbai University in the Mumbai and Thane districts. The study has been undertaken to measure the level of professional satisfaction of male and female librarians. The increasing recognition of librarians' vital role in the academic environment, gender-related factors in their job satisfaction have received limited attention. A gender-based analysis was conducted on a sample size of 105 librarians, comprising 50 women and 55 men. On five-point scale based on Likert's scale used by researcher for analysis. The study explores various dimensions of job satisfaction, such as work environment, pay scale, professional growth, and work-life balance, and employs both quantitative and qualitative methods for analysis. These findings can inform policies for improving job satisfaction, career progression, and gender equity in academic libraries.

Keyword: Job satisfaction, college librarians, gender-based analysis, unaided colleges, Mumbai University, gender equity, academic libraries, Mumbai and Thane district

1-Introduction

1.1 Background

Librarianship, often considered a vital component of the educational sector, is evolving rapidly in the modern academic environment. Libraries are no longer just repositories of books and journals but have become dynamic centers for learning, research, and knowledge management. College librarians play an essential role in the academic development of students, faculty, and researchers. However, their job satisfaction, which directly impacts their professional effectiveness, is influenced by various factors, including institutional policies, compensation, work-life balance, and gender dynamics.

In India, a substantial number of higher education institutions operate on a self-financed or unaided basis. These colleges often have distinct organizational structures and resource allocations, which may affect job satisfaction. Furthermore, gender differences in job satisfaction have been explored in several fields, but limited research exists on gender-based variations in job satisfaction among college librarians, especially in the context of unaided colleges in India.

1.2 Research Problem

While job satisfaction is a well-researched area, its gender-based dimensions, particularly among college librarians, have not been sufficiently examined. The primary objective of this study is to assess whether gender influences job satisfaction among college librarians working in unaided colleges affiliated with Mumbai University, particularly in the Mumbai and Thane districts. The study aims to fill this gap in the existing literature and offer insights into how gender affects the job satisfaction.

1.3 Objectives of the study

- To measure the overall job satisfaction levels among male and female librarians.
- To identify key factors affecting job satisfaction.
- To explore gender-based differences in job satisfaction.

2. Literature Review

2.1 Job Satisfaction in Academic Libraries

Job satisfaction is a multifaceted concept that encompasses various aspects of the workplace, including the work environment, job responsibilities, relationships with colleagues, and

opportunities for advancement (Herzberg, 1966). In the context of academic Libraries, librarian's job satisfaction is critical not only for their professional development but also for the efficiency and effectiveness of library services.

Research on librarian's job satisfaction has primarily focused on public and university libraries. Several studies have identified the following factors as key determinants of job satisfaction in academic libraries: work environment, professional development opportunities, compensation, and institutional support (Teng & Lim, 2009; Tovar, 2011). However, few studies have specifically explored gender-based differences in job satisfaction among librarians, particularly in the context of Indian unaided colleges.

2.2 Gender and Job Satisfaction

Gender is an important variable in understanding job satisfaction across various professions. In the academic setting, female librarians often face challenges such as underrepresentation in leadership roles and limited career progression opportunities (McNicol, 2012).

Studies in the global context have found that female librarians may experience higher levels of stress and job dissatisfaction compared to their male counterparts due to these factors (MacDonald, 2003). However, in India, gender-related differences in job satisfaction among college librarians have not been extensively studied, especially in unaided colleges, which often face unique challenges such as limited funding, high workloads, and fewer institutional support systems.

2.3 Job Satisfaction in Indian Unaided Colleges

Unaided colleges in India are generally more resource-constrained compared to government-funded institutions. Librarians working in these colleges often face greater workloads, limited professional development opportunities, and less institutional support. These conditions potentially exacerbate job dissatisfaction, particularly for female librarians, who may also contend with additional societal and professional barriers.

In their study of job satisfaction among academic librarians in India, Srivastava and Kaur(2015) identified that work pressure, lack of promotion opportunities, and inadequate remuneration were the major sources of dissatisfaction. Gender-specific challenges, such as unequal treatment and work-life imbalance, were also reported as significant factors influencing job satisfaction, though gender was not the primary focus of the study.

3. Methodology

3.1 Research Design

This study uses a mixed-methods approach, combining quantitative surveys and qualitative interviews to assess the job satisfaction of librarians. The quantitative survey provides broad insights into the general satisfaction levels of librarians, while the qualitative interviews offer deeper insights into gender-based challenges and experiences.

3.2 Sampling

The sample comprises librarians working in unaided colleges affiliated with Mumbai University, located in the Mumbai and Thane districts. A total 200 libraries were randomly selected from a list of the unaided colleges. Data received from 105 librarians.

4. Data Analysis

Table-1: Gender wise Distribution of Librarian

Gender	No. of Respondent	Percentage
Male	55	52.38
Female	50	47.61
Total	105	100

A total of 55 (52.38%) of the respondents were male while 50 (47.61%) were female. The gender distribution was nearly equal, providing a balanced perspective for analysis.

Table-2: Age wise distribution of Librarians

Age wise distribution (Years)	Frequency	Percentage

Under 25	10	9.52
25-35	35	33.33
36-45	30	28.57
46-55	25	23.80
Above 55	5	4.76

Above table shows that most participants fell within the 25-45 age range, reflecting the active working demographic in the study area.

Table-3 Job satisfaction level across different dimensions

Dimension	Male (n=55)	Female (n=50)
Work Environment	40 (72.7%)	45 (90%)
Pay Scale	35 (63.6%)	30 (60%)
Professional Growth	40(80%)	37(67.3%)
Work Life Balance	45 (90%)	38(69.1%)

Table-3 show that female librarian demonstrated a higher satisfaction rate (90%) compare to male (72.7%) about work environment. Satisfaction with pay scale showed a lower percentage for both genders. Compare to male, females are (60%) slightly less satisfied. At professional growth female (67.3%) exhibited higher satisfaction compared to male (80%). When it comes to work life balance female librarian showed notably less satisfied (69.1%) compared to male (45%)

5. Conclusion & Recommendations:

5.1 Finding

- Significant gender differences exist in job satisfaction levels.
- Pay scale and work-life balance emerged as critical factors for female librarians, while professional growth was a priority for males.

5.2 Recommendations

1. **Work-life Balance**: implement flexible working hours and support systems to help librarians, especially women, balance professional and personal responsibilities.

2. **Institutional Support**: Provide better recognition of librarian's work and contributions through rewards, promotions, and institutional support.

3. **Gender Sensitization**: Conduct gender sensitization workshops for college management to raise awareness of gender-related challenges and promote equity in the workplace.

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ISSN: 2454 – 7905

SJIF Impact Factor: **8.542**

Worldwide International Inter Disciplinary Research Journal

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Quarterly Research Journal

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Vol. I ISSUE - CXI Year – 10 09 Jan. 2025

India's Global Evolution: Transforming Culture, Education, Arts, Trade, Technology, Innovation and Sustainability

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"A Study of Internet Marketing: An Effective Tool for Sales Promotion in India"

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Abstract:
The internet marketing is one of the effective tools for sales promotion in recent years. During the mid-2000s a substantial change was seen in consumers behaviour when customers started searching for their products online through the most renowned search engine Google. Internet marketing is the process of promoting and selling goods and services online. It is sometimes referred to as online marketing, web-marketing, or Internet marketing. Internet marketing helps companies determine which target market to sell their goods and services to. It encompasses all the required practices and initiatives undertaken with the prime goal of attracting, recruiting, acquiring, and retaining customers. Since Internet marketing facilitates internet-based, email-based, and wireless media marketing, it is believed to have a broad range of applications useful for developed as well as developing country like India.

Keywords: Internet marketing, recruitment, retention, acquisition, sales promotion, tool.

Introduction:

Globalization is bringing all nations across the globe closer together, but it's also bringing about significant trends in other areas. The process of selling our goods online or through digital media is known as internet marketing. In olden days, the features and volume of business organizations have historically influenced marketing, but digital technology is an effective and a helpful addition in the modern business world. Internet marketing is also popularly known as web and online marketing. It helps companies to determine which target market to sell their goods and services to. It encompasses all methods and measures done with the goal of attracting, recruiting, acquiring, and retaining customers. In other words, the internet marketing helps the business firms to provide a target market for target customers. The present research study focused on the role of internet marketing in terms of maximise sales of business organization in India.

Objectives Of The Study:

The present study deals with concepts related to "**A Study of Internet Marketing: An Effective Tool for Sales Promotion in India**". Keeping in view the following objectives were designed for the study.

1. To understand the basic concept of Internet Marketing.
2. To study the evolution of Internet marketing.
3. To study the significant role of internet in sales promotion in India.
4. To identify the future trends and prediction of Internet marketing.

Scope Of The Study:

Internet marketing has a very wide customer outreach and it helping business organization to reach out to their target customers situated in almost all parts of the world. Internet marketing is one of the most cost-effective channels that are available for brands and businesses to promote their products. The internet marketing has the significant contribution in sales promotion process of business organization in India.

The present research studies "**A Study of Internet Marketing: An Effective Tool for Sales Promotion in India**" has wide scope not only applicable to Indian business entrepreneur's but moreover useful for entrepreneurs of various countries across the world. The researcher with the help of present study tries to focus on the effective use of internet marketing for sales promotion. The present study identified the basic concept of internet marketing, evolution of internet marketing, role of internet marketing and also highlighted the future trends and prediction of sales promotion undertaken by business organization opportunities in India.

Methodology Of The Study:

The present study of **"A Study of Internet Marketing: An Effective Tool for Sales Promotion in India"** has been based on secondary data. The informative study material is collected from reference books, periodicals, Journals, research publications, newspapers and websites.

Evolution Of Internet Marketing:

During the mid-2000s a substantial change was seen in consumers behaviour when customers started searching for their products online through the most renowned search engine Google, at that time the marketers didn't really understand the behaviour of the consumer and as a result of the same, they could not make out how to reach out to their target market online. Market automation was one of the best tools that was used by marketers online to adopt to the needs of consumers who have a continuously evolving market behaviour which was a true challenge to anticipate since no one really knew that social media was about to come into existence very soon as another key point of online marketing evolution. By 2000, we had quite a lot of social media channels and these have been used since then quite rigorously by most of the digital marketers for creating brand and product awareness in the mind of consumers situated across the nation.

Internet marketing has created a whole new platform for the business organization who seek the help of software developers to analysis targeted customers on their marketing strategies. The spur of internet marketing did not stop here and rather it became more technical as well as complex. It helps to business entrepreneurs to reach towards their target customers and maximise their sales volume.

Role Of Internet Marketing In Sales Promotion:

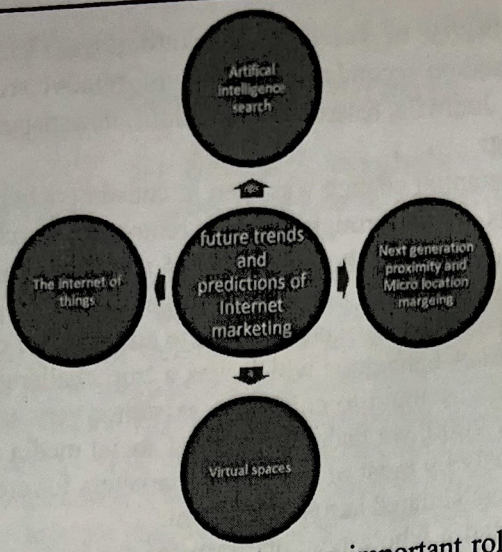
The internet marketing also popularly known as e-marketing or web marketing or digital marketing has played a significant role in enhancing a number of important relationships such as Business to Business (B2B) , Business to Customer (B2C), Customer to Business (C2B) and Customer to Customer (C2C) over a period of time. As we all aware that, people across the globe especially the younger generation prefers to use smartphones, laptops and other technical gazettes for getting information instantly through search engines. Brand advertisement and Brand development and its outreach has been made possible through internet marketing and businesses have become more popular and profitable with the help of internet. A major advantage of internet marketing is in terms of the savings in costs saving in time and saving in the energy which incur during traditional marketing.

Traditional marketing for sales promotion comprises of the use of handbill or fliers, billboards, pamphlets, advertisements on TV, newspapers and magazines which involve heavy expenditure and thus prove costly to the firm and less outreach towards the target customers. In internet marketing, the business firms save a huge amount of money on advertisements as it involves no or very little cost. At the same time, the brand can be reached to a large target audience across the world in a fraction of time. So, the firms just cannot ignore internet marketing, rather have to give due recognition and importance to it to popularize their products thus inviting the attention of a vast number of potential consumers. The role of internet marketing also includes the use of effective marketing strategies by the firms. With the help of internet marketing, the results can be easily tracked, measured and tested for any changes to be made in future in case they are found to be unsatisfactory followed by a review.

Future Trends And Predictions Of Internet Marketing:

Different types of brands and marketing agencies have been trying their best to improve their marketing techniques in order to reach to their target customers effectively and conveniently for building a strong customer base within the market. In today's world of technology, the marketer is using internet marketing as an effective tool for experimenting continuously to maximise the sales volume for earning huge amount of profit. Some of the important future trends and predictions of internet marketing are stated as follows.

1.1 Future trends and predictions of internet marketing:



1. Artificial intelligence search engines plays an important role in generating related content.i helps to reducing the need for customers to switch between social media apps and search engine websites for buying products.
2. Micro location marketing for those who are within the proximity of 100 to 200 metres, it will help to marketers to provide specialised services for the customers and increase their sales volume at high level.
3. Virtual space will help marketers in creating a better experience for the consumers by creating virtual stores through which the consumers can try on hundreds of different apparels virtually without even having the need to try them on physically. This trend of internet marketing can help the consumers to experience the product and make a faster purchase decision.
4. The internet of things is one of the most advanced future trends that connect all the objects online to their matching virtual representations. Furthermore, as per the latest report of BI the internet of things has become the largest growing market around the world by touching more than $1.7 billion by 2025.

Conclusion:

Internet Marketing has gained a tremendous momentum and commendable recognition in the recent past at all over the world. It has been observed that significance of Internet Marketing can be attributed to innovation in technology, effective use of social media, behavioural pattern and remarkable growth in ICT. Internet marketing leads to low cost, global outreach, 24*7 access variety of goods and services and greater transparency. Internet marketing has proven to be a significant marketing tool for marketers to reach out to target customers directly. Social media has played a crucial role in accessing information not just about a product but also price, people and places. Forms of paid media including display sponsored ads, pay per click, paid content promotion retargeting and sponsored initiatives have also played a very significant role in boosting sales volume of the business organizations. It can be concluded that in times to come Internet Marketing will be very successful in popularizing products and enhancing sales volume of the business organizations in India.

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आंतरराष्ट्रीय बहुभाषिक शोध पत्रिका

प्रिंटिंग एरिया

Printing Area International Interdisciplinary Research Journal in Marathi, Hindi & English Languages

April 2025, Issue-124, Vol-01

Editor

Dr. Bapu g. Gholap

(M.A.Mar.& Pol.Sci.,B.Ed.Ph.D.NET.)

"Printed by: **Harshwardhan Publication Pvt.Ltd.** Published by **Ghodke Archana Rajendra** & Printed & published at Harshwardhan Publication Pvt.Ltd.,At.Post. Limbaganesh Dist,Beed -431122 (Maharashtra) and Editor **Dr. Gholap Bapu Ganpat.**

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References

1. Sacred Bond – Hindu marriage is not just a legal contract but a sacred and spiritual union, deeply rooted in religious and cultural traditions. (Reference: Manusmriti & Vedic texts)
2. Saptapadi (Seven Steps) – One of the most crucial rituals, where the bride and groom take seven steps around the sacred fire, making vows for a prosperous married life. (Reference: Hindu wedding scriptures like the Grihya Sutras)
3 Hindu Marriage Act, 1955 – This act governs Hindu marriages in India, ensuring legality, monogamy, and protection of rights for both spouses. (Reference: Government of India, Hindu Marriage Act, 1955)
4 Types of Hindu Marriages – Ancient texts classify Hindu marriages into eight types, including Brahma, Daiva, and Gandharva marriages, each with distinct customs. (Reference: Manusmriti, Chapter 3)
5. Role of Kanyadaan – A ritual where the bride's father gives her away, considering it a sacred offering to the groom, symbolizing the highest form of charity. (Reference: Dharmashastras and Smritis)
6. Arranged vs. Love Marriages – Traditionally, arranged marriages were dominant, but modern India has seen a rise in love marriages and inter-caste unions. (Ref.: Sociological studies on Indian marriage trends)
7. Divorce and Legal Provisions – The Hindu Marriage Act allows divorce on various grounds like cruelty, adultery, and desertion, adapting to changing societal norms. (Ref.: Hindu Marriage Act, Section 13)
8. Inter-Caste and Interfaith Marriages – The Special Marriage Act, 1954, provides legal recognition for inter-caste and interfaith marriages, promoting social inclusivity. (Reference: Special Marriage Act, 1954)
9. Dowry and Social Challenges – Despite legal bans, dowry remains a challenge, leading to societal issues like domestic violence and financial burden on families. (Reference: Dowry Prohibition Act, 1961)
10. Changing Trends in Hindu Marriages – With modernization, concepts like gender equality, live-in relationships, and court marriages are gaining acceptance, reflecting evolving societal values. (Reference: Studies on contemporary Indian marriage practices)

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A Study of the adoption of Artificial Intelligence (AI) in Small, and Medium-sized enterprises (SMEs): Challenges and Opportunities"

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ABSTRACT:

In the developing country like India, Small and medium-sized enterprises play a pivotal role in terms of national economy and growth. Small and medium-sized enterprises are the engine to generate large amounts of employment for all categories of personnel. To cope with the tremendous competition in the market, there is a need to adopt the digitalization process in small and medium-sized enterprises. Its transformation must be actively shaped and represents another source of vast opportunities for future growth and competitiveness. Adopting new technologies such as artificial intelligence (AI) creates new opportunities and ultimate solutions for their various challenges where humans and the whole system of enterprises have reached their limits. The present research study places more emphasis on the adoption of artificial intelligence (AI) into the fabric of small and medium-sized enterprises which facilitates them for effective decision-making processes and strategic planning for the technologically advanced future.

Keywords: Artificial intelligence, emphasis, adoption, digitalization, competitiveness, backbone, implementation

INTRODUCTION:

Small and medium-sized enterprises play a vital role in the global economy, as they represent a significant portion of businesses and provide the maximum amount of job opportunities. Small and medium-sized enterprises occupied large volumes of business which included manufacturing, retail, services, technology, and many more. Adoption of artificial intelligence in the entire process of small and medium-sized enterprises would give tremendous benefits to enhance their operations, competitiveness, and growth. The present research study focuses mainly on the adoption of artificial intelligence by small and medium-sized enterprises. It also emphasizes the overall growth and development of the enterprises. The adoption of artificial intelligence not only benefited the employers of the enterprises but also helped the employees to sharpen their skills. From the beginning, small and medium-sized enterprises have implemented traditional methods in their system but at the same time, it is also well known for their flexibility, innovation, and ability to adapt quickly to changing market environments. The adoption of artificial intelligence may lead small and medium-sized enterprises to face some challenges but in the long run artificial intelligence is going to benefit small and medium-sized enterprises to a very large extent.

OBJECTIVES OF THE STUDY:

The present study deals with "A Study of the adoption of Artificial Intelligence (AI) in Small, and Medium-sized enterprises (SMEs): Challenges and Opportunities" Keeping in view, the following objectives were designed for the study.

1. To study the basic concept of small and medium-sized enterprises in India.
2. To understand the importance of Artificial intelligence in business organization development.
3. To highlight business opportunities by implementing artificial intelligence.
4. To discover business organization's major challenges by adopting artificial intelligence.

METHODOLOGY OF THE STUDY:

The present study, "A study of the adoption of Artificial Intelligence (AI) in Small and Medium-sized enterprises (SMEs): Challenges and Opportunities, " is based on secondary data. The informative study material is collected from reference books, periodicals, Journals, research publications, newspapers, and websites. All the information gathered has been studied thoroughly to draw the appropriate conclusion.

ORGANIZATIONAL OPPORTUNITIES AND CHALLENGES BY ADOPTION OF ARTIFICIAL INTELLIGENCE (AI):

While AI services offer numerous benefits, Small and medium-sized enterprises (SMEs) must also be aware of the challenges. Implementing AI requires a huge amount of investment in technology and skills, and there may be concerns about data security services. The challenges faced by small and medium-sized enterprises by the adoption of artificial intelligence as broadly elaborated as under:

v CHALLENGES FACED BY SMEs BY ADOPTION OF ARTIFICIAL INTELLIGENCE:

In today's era, rapidly changing technologies are constantly bringing new ways to transform business operations to the next level and require companies to be flexible and dynamic. The present explosion of innovative and advanced artificial intelligence tools and services is bound to prevent every business enterprise from its future growth and development.

India is leading in the adoption of artificial intelligence(AI) in various small and medium-sized enterprises. More than 59% of enterprises are using artificial intelligence till 2024. however, there are still challenges to overcome. The following chart represents the

various challenges faced by small and medium-sized enterprises in the adoption of artificial intelligence in their business enterprises.

1.1 CHALLENGES FACED BY SMEs BY ADOPTION OF ARTIFICIAL INTELLIGENCE:

Accoring to IBM's 2024 Global AI Adoption Index found that more than 59% of a large number of Indian small and medium-sized enterprises have integrated artificial intelligence into their operations. However, there are various barriers like :

a. Lack of AI skills: Many small and medium-sized enterprises facing lack the adequate skills to implement artificial intelligence in their businesses.

b. Inadequate tools: there is inadequate availability of tools to implement artificial intelligence in the system of many enterprises.

c. Data complexity: This is another challenge facing many enterprises. Due to data complexity, it has become difficult for many enterprises to segregate their data adequately.

d. Ethical concern: many times, small and medium-sized enterprises are under the impression that the use of artificial intelligence in their operations is ethical or not.

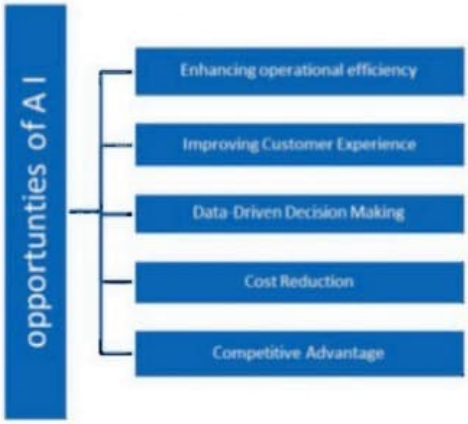
e. Data privacy and security: it is another challenge faced by enterprises that the data used under artificial intelligence can maintain confidentiality and at the same time, will secure properly or not.

f. Implementation hurdle: many times, enterprises are aware enough about the use of artificial intelligence but they face difficulties at the time of implementing it in their process. Addressing the challenges is vital for the successful integration of AI into business operations.

v OPPORTUNITIES FOR SMEs BY ADOPTION OF ARTIFICIAL INTELLIGENCE:

Maximum development of Small and medium-sized enterprises (SMEs) is the prime approach of the Government of India for achieving the highest economic growth in our country. The adoption of artificial intelligence is going to benefit small and medium-sized enterprises for their overall development and growth. The following are the most eminent opportunities for small and medium-sized enterprises offered by artificial enterprises:

1. 2 OPPORTUNITIES FOR SMEs BY ADOPTION OF ARTIFICIAL INTELLIGENCE



a. Enhancing operational efficiency: One of the primary advantages of Artificial Intelligence (AI) services is the improvement of operational efficiency. SMEs can adopt AI to manage repetitive tasks, streamline workflows, and manipulate assets more effectively, which would help to save a maximum of their time. Additionally, AI can control various operational responsibilities accurately and smoothly, allowing SMEs to delegate their human assets to more strategic activities. The potential to expect and manipulate inventory, streamline client support, and optimize logistics are only some of the ways AI complements efficiency.

b. Improving Customer Experience: Artificial Intelligence (AI) services can potentially uplift customer experience by offering customized interactions and anticipating their needs. This can result in higher customer satisfaction and increased loyalty. AI can review customer data to deliver custom-designed recommendations and anticipate future needs, permitting businesses to tailor their services accordingly. This level of personalization makes way for building stronger customer relationships.

c. Data-Driven Decision Making: Artificial Intelligence (AI) services provide SMEs with the ability to make data-driven decisions through efficient analysis of large datasets and providing accurate data. It can upgrade strategic planning and operational effectiveness. By using AI, SMEs can identify market trends, understand customer tastes and preferences, and forecast future performance. This enables businesses to make intelligent choices to catapult growth and improve business outcomes. The ability to quickly examine the data and interpret statistics allows SMEs to stay agile and responsive to market changes.

d. Cost Reduction: Implementing AI services can lead to significant cost savings for SMEs, by automating strategies and optimizing useful resource allocation, businesses can minimize operational costs and increase profitability. AI can manage power usage, reduce labor costs, and minimize waste happens in business enterprises, which impacts the bottom line. Efficient control of sources through AI is beneficial to price cuts but also improves the overall productivity and operational efficiency of small and medium-sized enterprises.

5. Competitive Advantage: Adopting AI services can offer SMEs a healthy competitive edge. By leveraging advanced technologies, SMEs can anticipate and respond more efficiently to market changes. AI facilitates product development, advertising strategies, and customer engagement, allowing SMEs to remain competitive with their competitors. The outcome gained from AI is useful for business enterprises to refine strategies and quickly adapt to new trends, consequently maintaining a sturdy marketplace presence.

CONCLUSION: Artificial intelligence (AI) is one of the effective weapons that would be tremendously beneficial for the growth and development of small and medium-sized enterprises. AI solutions can help SMEs prosper in a cutthroat marketplace through growing operational effectiveness, boosting customer experiences, allowing data-driven decision-making, cutting costs, and presenting a competitive edge. The adoption of artificial intelligence not only benefited the employers of small and medium-sized enterprises but also benefited to the employees in sharpening their skills and expertise. Even with these difficulties, the benefits of integrating AI exceed the limitations, making it smart funding for any forward-questioning SME. AI services are more than just a trend. They are an important tool for SMEs to prevail in the competitive, fast-moving enterprises of today. By deploying these technologies, SMEs can achieve excellent growth and innovation and keep their competitiveness and relevance inside their respective industries.

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Pradhan Mantri Kaushal Vikas Yojana: An Overview

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Abstract

The review paper discusses the Government of India's scheme, **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**, which was launched in 2015. The scheme aims to create more employment opportunities by imparting skill-based training to the youth. With the growing instances of unemployment among young people, it has been observed that the lack of skill-based education plays a vital role in this ongoing issue.

Under PMKVY, individuals are trained in various sectors and job roles, and upon successful completion, they receive a certificate that boosts their career prospects. Acquiring new skills increases the chances of landing higher-paying jobs. A larger pool of skilled workers enhances the overall quality of India's workforce, making it more productive and globally competitive.

Introduction

India is enjoying demographic dividend with about more than 68.7 % of the population being young and working (United Nations Population Fund). Currently, India is the fastest growing economy securing 5th rank globally in Nominal GDP. It is important to channelise the capacity of the population by enlarging opportunities in the primary, secondary and tertiary sector. The rate of unemployment is increasing and there is a huge difference between available employment and level of employability. To address this skill mismatch, the Government of India, introduced the Pradhan Mantri Kaushal Vikas Yojana as an initiative aimed at skill development and empowerment. The scheme primarily focuses on equipping and empowering youth with skills to enable their financial independence.

Review of Literature

Sakshi Malik (Feb2023) mentioned that imparting required skills is very much important so as to fill the gap between unemployment and industry's workforce requirement. Further she has highlighted the advantages and disadvantages of the scheme that aims to encourage youth towards employable skills and increase working efficiency.

Daniel Lalrinfela and H Elizabeth (Dec 2023) concluded that with the valuable demographic advantage of India over other nations, one that might be turned into a dividend by making valuable contributions to economic expansion. Along with this in order to improve productivity among youth skill development is much needed the initiative of Pradhan Mantri Kaushal Vikas Yojana is mainly targeting different groups providing them with the necessary guidelines so as to inculcate required growth in themselves to meet the industry requirement.

Ravi Shinde (2023) emphasised in his study that the scheme of Pradhan mantri Kaushal Vikas Yojana aims at making youth more skilled. Further he has added that the maximum number of trainees expressed a positive response to the training program under Pradhan mantri Kaushal Vikas Yojana which results in improved job quality and better standard of living.

Dr Shanta arakeri V and Satish sonawane emphasized on the current status of the scheme and also explained PMKVY phase 3.0 and its working about covid related skills and training of 8 lakh candidates over a period of 2020 to 2021. They concluded that the objective of PMKVY is to enable a large number of Indian youth to take up industrial relevant skill training that will help them in securing a better livelihood.

Prof. Indrakanti Sekhar and Dr.K.Ugandhar found out in their study of "Employment Generation Under Pradhan Mantri Kaushal Vikas Yojana -An Analytical Study" that there is

significant difference in the number of candidates placed during the 3rd phase. Phase 2.0 provided a higher number of jobs to the certified candidates among all three phases of PMKVY, maximum number of candidates certified and placed is from Phase-2.0 i.e.21,40,783 (23.42%).

Dr. G. Yoganandham's paper addresses the disparity between academic knowledge and industry requirements, proposing strategies to align them effectively. It emphasizes the importance of a skill-based education system in achieving government initiatives such as Atmanirbhar Bharat and Make in India. Additionally, the paper highlights the need to bridge the rural-urban divide to create equitable employment opportunities and foster inclusive growth.

Prof. K.P. Singh, Naman Khandelwal & Rajiv Choudhary, conducted a study to analyse the perception of youths of the southern region of Rajasthan about the Pradhan Mantri Kaushal Vikas Yojana. The findings indicate that there is lack of awareness regarding the programme.

Objective of the study :

1. The objective of this study is to review the working of Pradhan Mantri Kaushal Vikas Yojana and to explain the various aspects of this scheme.

Methodology

This research paper is based on the secondary data taken from various courses like official websites, reference books, research articles, and government reports.

About the Pradhan Mantri Kaushal Vikas Yojana

The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was launched in the year 2015 on the occasion of World Youth Skills Day. The programme was planned and executed in 4 phases. The Pilot phase 1.0 started in the year 2015-16, Under PMKVY 2.0 (2016-20) aimed to train 1 crore youth, 1.1 crore youths benefited. In the 3rd phase of the scheme, emphasis was on district level skill gap assessment. PMKVY 4.0 announced during the Union Budget of 2023-2024, focuses more on skills like robotics, mechatronics, IT, and drones etc.

Key benefits

1. Certification and national recognition
2. Job placement assistant and mentorship
3. Financial support
4. Availability of multiple training centre
5. Mechanism for feedback
6. Accessible e-Learning platform
7. Collaboration with industry
8. Entrepreneurship support

Major component of Pradhan Mantri Kaushal Vikas Yojana

1. Short term training The main objective Pradhan Mantri Kaushal Vikas Yojana is to provide required training and skill to the youth under which there are courses ranging from 3 to 12 months, once the candidate complete training skill base certification is provided.

2. Recognition of prior learning The program also recognizes the individual who already possesses skills but have not received certification candidates will undergo a skill assessment test to validate their existing competencies based on the assessment candidates will get certified.

3. Special project Special training is also available to differently able individuals, women and marginalised groups and also offers flexibility in terms of mode of training.

4. Institutional training The scheme aims to provide skill development from formal educational institutions both in private and public sectors which includes training under Sector Skill Councils and training partners that are approved by the National Skill Development Corporation (NSDC) based on the completion of the course certificates.

5. Monitoring and evaluation Continuous monitoring evaluation is an important part of the scheme to ensure the quality of training program and outcome.

6. Training partners and assessment agency To Deliver training in Pradhan Mantri Kaushal Vikas Yojana comes in association with various Government and private non-government organisations which include training centres, universities and other institutions.

7. Kaushal and Rozgar Mela Initiative of Kaushal Mela is organised by Pradhan Mantri Kaushal Vikas Yojana to promote skill development and create awareness about the various training programs available in the scheme.

Findings:

Pradhan Mantri Kaushal Vikas Yojna has the following two components

●**Centrally Sponsored Centrally Managed (CSCM) or 'Central component'** being implemented by a National Skill Development Corporation (NSDC).

●**Central Sponsored State Managed CSSM or 'State Component'** being implemented by State skill development mission of the state / union territories.

A. Pradhan Mantri Kaushal Vikas Yojana 1.0 (PMKVY) (2015-16):

1. The PMKVY1.0 was launched in the year 2015-16 it was implemented under the Central component only with a view to encourage and enable Indian youth to be more skillful and employable.
2. With a total fund of Rs.1,335 crore available for this scheme Rs1,174.48 crore was utilized by Central Component.
3. Total 1,81,810 candidates were enrolled under Recognition of prior learning (RPL) training type out of which 1,81,810 were trained and 1,19,157 were certified. Whereas total 18,04,206 candidates enrolled for Short term training STT programme and 13,32,479 candidates were certified and 2,53,296 were placed.

B. Pradhan Mantri Kaushal Vikas Yojana 2.0 (2016-2020):

1. PMKVY 2.0 started in the year 2016 with the objective of Providing fresh skill development training school dropouts and to Recognise their skill.
2. The the total fund allocated for this phase is Rs 6611.02 crore for Central component out of which 6605.70 crore was utilised and for State component it was 1257.91 crore out of which 947.99 was utilised (total fun release was 7868.93 out of which fund utilise for 7533.69).
3. Total candidate enrolled under CSCM Component 1,06,13,955 out of which 1,01,67,571 candidates were trained and 84,96,771 candidates was certified and 19,11,182 candidates were placed similarly under CSSM Component total 8,70,769 candidates for enrolled out of which 8,33,137candidates were trained and 6,60,776 candidates were certified out of which a total of 2,30,393 candidates were placed successfully.

C.Pradhan Mantri Kaushal Vikas Yojana 3.0 (2020-22)

The 3rd phase of PMKVY was launched in January 2021, with an aim to benefit over 8 lakhs of candidates with a budget of Rs. 948.90 crores, by targeting the age group of 15-45 years. Under the PMKVY 3.0, "Planning from the below" was the significant feature, where District Skill Committees (DSCs) at district level were formed under the guidance of State Skill Development Mission (SSDM).

According to the data published by the Ministry Of Skill Development & Entrepreneurship, Under the CSCM component, total 6,31,972 candidates were enrolled out of which 5,80,066 were trained, 4,63,866 were assessed, 4,02,196 were certified & 32,233 were placed. Also under the CSSM component, enrollment was 7,94,976 out of which 7,37,502 trained, 5,84,098 assessed, 5,08,360 certified and 43,016 were actually placed.

Pradhan Mantri Kaushal Vikas Yojana 4.0 (2022-26)

The latest version of the PMKVY was announced in the Union Budget of 2023-2024 with an aim to skill youths and make them industry ready in areas of AI, robotics, mechatronics, IoT and drones. Under the 4th phase, the details of candidates are accessible on Skill India Digital Hub (SIDH), facilitating connections with potential employers. The job exchange feature on SIDH enables candidates to explore the job opportunities and submit applications accordingly. There is

emphasis on the development of Skill India Centers (SIC's) in various educational institutes. PMKVY 4.0 adapts a demand driven approach as per the industry requirements.

Some of the salient features of PMKVY 4.0 are as follows :

- High employability course up to 210 hours.
- STT to be permitted by the Skill Hubs (colleges, schools, Government institutions) and selected training centers
- Courses align with industry demand and district plans.
- Focus on agriculture, handicrafts and advanced skills.

The team successfully enrolled 23,61,798 lakh candidates, with 5,43,636 trained, 2,83,364 assessed, 2,55,902 certified ensuring the effective execution of the scheme.

Challenges

1. Creating more awareness - The objective must be to reach the unreached, ensuring the benefits are extended to the last person in the social hierarchy.
2. Under utilisation of the fund - Funds allocated during the year 2022-23 and 2023-2024 were Rs. 1442 crore and 1558 crore respectively. Out of these 233.26 crore and 508 crore were spent.
3. Connect to industry is missing - Despite the formation of District Skill Committees, under PMKVY 3.0, the skills provided do not align with needs of the local industries.
4. Poor Monitoring - Even though the focus is primarily on providing training ,the drop out rates are significantly high and the number of candidates placed is relatively low.
5. Irrespective of this there are issues with trained trainers, delays in payments, lack of infrastructural setup etc.

Conclusion

Pradhan Mantri Kaushal Vikas Yojana is a significant step towards building a skilled workforce and enhancing the employability. However, its impact can be addressed by strengthening its key issues. The scheme can effectively bridge the skill gap and empower individuals to contribute meaningfully to the nation's economy.

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The role of Education Technology in Transforming Teaching and Learning Process

Mr. Ravindra Ratnakar kocharekar
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Abstract: -

This paper explores the impact of education technology (Ed Tech) on teaching and learning in contemporary education. It has transformed a passive classroom to an active and interactive classroom, with audio- visuals, charts and models, smart classroom, and e-learning room which has drastically motivate and increased the attention level of the students.

Through systematic organization of content and instructional material, educational technology has provided well- integrated structure material for teachers does saving a lot of their time which in turn maybe utilize for creative work and quality improvement. Students who appear for higher or competitive examinations how been benefited by educational programmed on TV radio and internet.

1.Introduction

In the world that we currently leave in, technology is a vital factor with each passing day a new software or gadget is being brought into the market that serves to improve our lives in one way or another. Technology please a major role in every field where its presence is utmost is in education sector with the advancement in technology, education among the people has begun to proliferate and there is continuous research and development going on introducing advanced technologies to make education easier, joyful and accessible. Nowadays with the help of technology the education for children is no longer boring and cumbersome as the educational technology have make it much more interesting and easier to use.

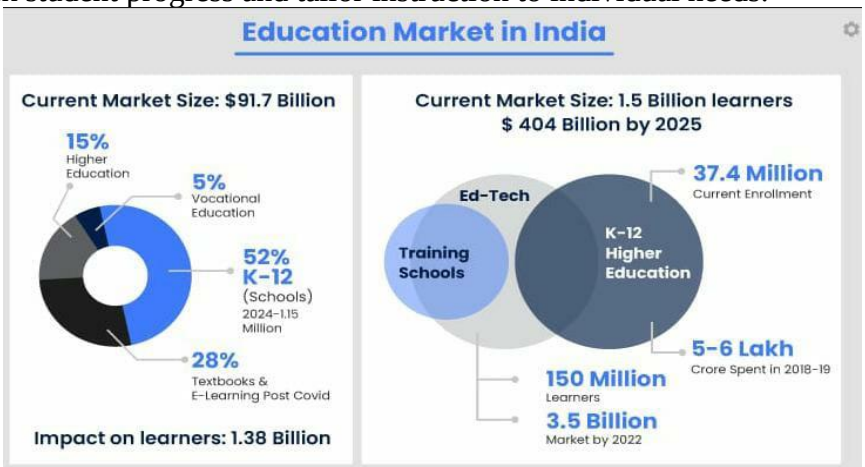
Study while playing has been made possible only by the new technology. Distance education is a great aid to students who were not able to pursue their degrees. Now due to rapid change in technology, distance is more barrier.

Educational technology uses are broadly classified as: -

1. Technology as a Tutor
2. Technology as a teaching tool
3. Technology as a learning tool

2.Definition

Today, modern classrooms are unrecognizable from their predecessors. Interactive whiteboards have replaced chalkboards, and virtual reality (VR) simulations are redefining experiential learning. Data analytics, which were practically nonexistent in the past, now empower educators to track student progress and tailor instruction to individual needs.



3.Types of Educational Technology

Gamification

Gamification is the process of adding game-like elements to non-game situations, such as classroom activities or lessons.

AR & VR

Virtual reality (or VR) uses special headsets with screens, motion sensors and audio to create a lifelike 3D environment that you can interact with and explore, even though it's all being generated by a computer. It feels like you've stepped inside a video game or movie!

Augmented Reality (AR) is the technology that layers computer- generated imagery on top of an existing reality, giving us the ability to experience the world in a new way.

Smart Class

The advancement of education calls for classrooms equipped with technology. Various technical solutions support teaching, and the foundation undoubtedly includes computers, tablets, projectors, and integrated software.

4. Historical Evolution of EdTech

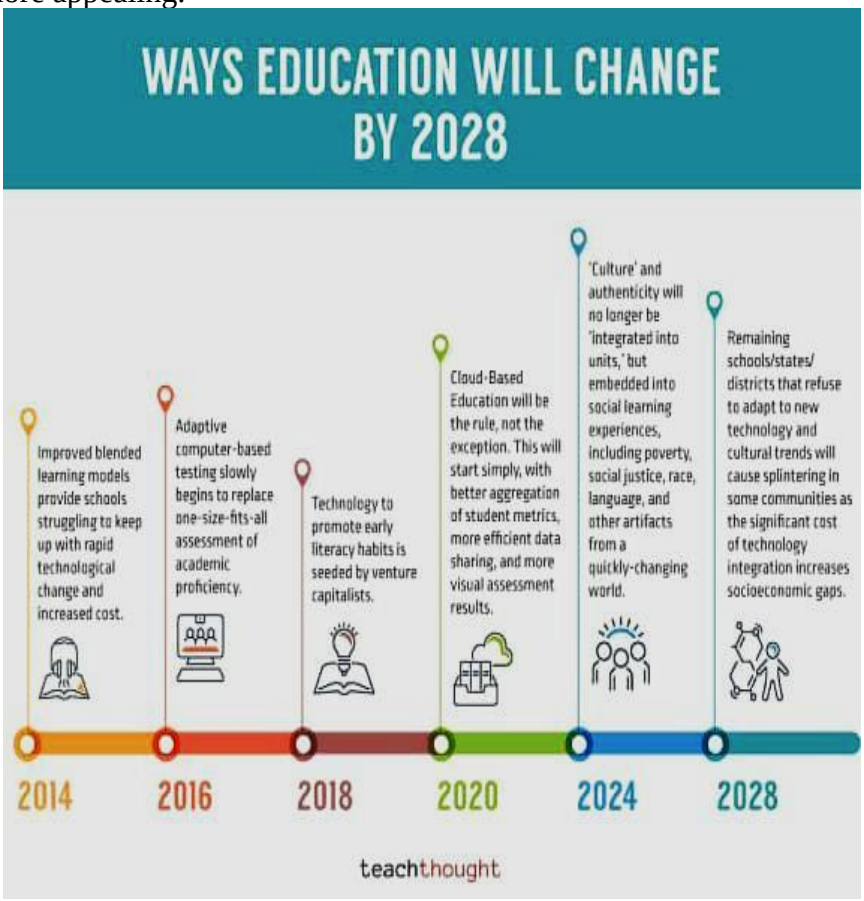
EdTech's journey began with basic tools such as overhead projectors and evolved into sophisticated systems like online learning platforms and adaptive learning algorithms. This section traces the timeline of key technological milestones and their adoption in education, setting the stage for understanding current trends.

5. Benefits of EdTech Integration

EdTech has redefined the educational landscape in several ways:

Improved Access to Education: Digital platforms enable remote learning, bridging geographical and financial barriers. Massive Open Online Courses (MOOCs) and mobile learning have expanded access globally.

Enhanced Student Engagement: Interactive content, gamification, and multimedia elements make learning more appealing.



Personalized Learning: Adaptive learning technologies analyze individual performance and customize educational content accordingly.

Teacher Support: Tools like Learning Management Systems (LMS) streamline administrative tasks, allowing teachers to focus on instruction.

Inclusive Education: Assistive technologies ensure students with disabilities have equitable learning opportunities.

6. Challenges of EdTech Implementation

Despite its potential, the adoption of EdTech presents significant hurdles:

Digital Divide: Unequal access to devices and the internet exacerbates educational inequities.

Data Privacy and Security: Protecting student information from breaches and misuse is a critical concern.

Teacher Training: Inadequate professional development for educators hampers effective technology integration.

Over-Reliance on Technology: Excessive dependence on digital tools may undermine critical thinking and interpersonal skills.

7. Case Studies of EdTech in Action

Khan Academy: This platform's free resources have democratized access to quality education globally.

Google Classroom: Widely adopted during the COVID-19 pandemic, it demonstrated the potential of EdTech in sustaining education during crises.

VR and AR in STEM: Virtual and Augmented Reality applications in STEM education have revolutionized experiential learning.

8. The Future of EdTech

The trajectory of EdTech points towards the integration of cutting-edge technologies:

Artificial Intelligence (AI): AI-driven tools can enhance learning experiences by providing real-time feedback and tutoring.

Blockchain in Education: Blockchain can ensure secure, transparent credentialing and record-keeping.

Virtual Reality (VR) and Augmented Reality (AR): Immersive technologies promise new dimensions in experiential learning.

Gamification: Game-based learning platforms will continue to evolve, promoting active engagement and problem-solving skills.

Sustainable Tech Solutions: Innovations aimed at minimizing energy consumption and cost will address accessibility concerns in low-resource settings.

9. Policy Implications and Recommendations

- Governments and educational institutions must prioritize infrastructure development to bridge the digital divide.
- Data protection laws should be strengthened to secure student information.
- Comprehensive teacher training programs are essential for effective EdTech integration.
- Collaboration between EdTech developers and educators can create tools aligned with pedagogical needs.

10. Conclusion

Education technology has transformed teaching and learning processes, offering unprecedented opportunities for innovation and inclusion. However, its widespread adoption demands careful planning and execution to address challenges and ensure equitable access. By leveraging emerging technologies and fostering a collaborative approach, EdTech can become a cornerstone of 21st-century education.

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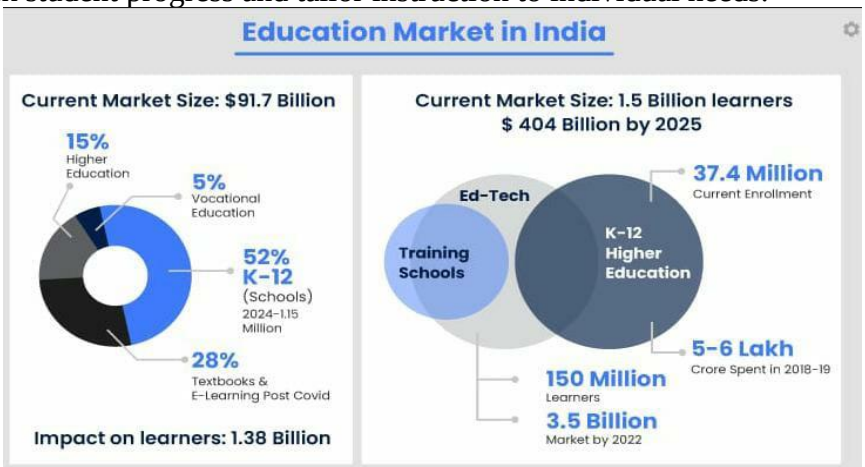

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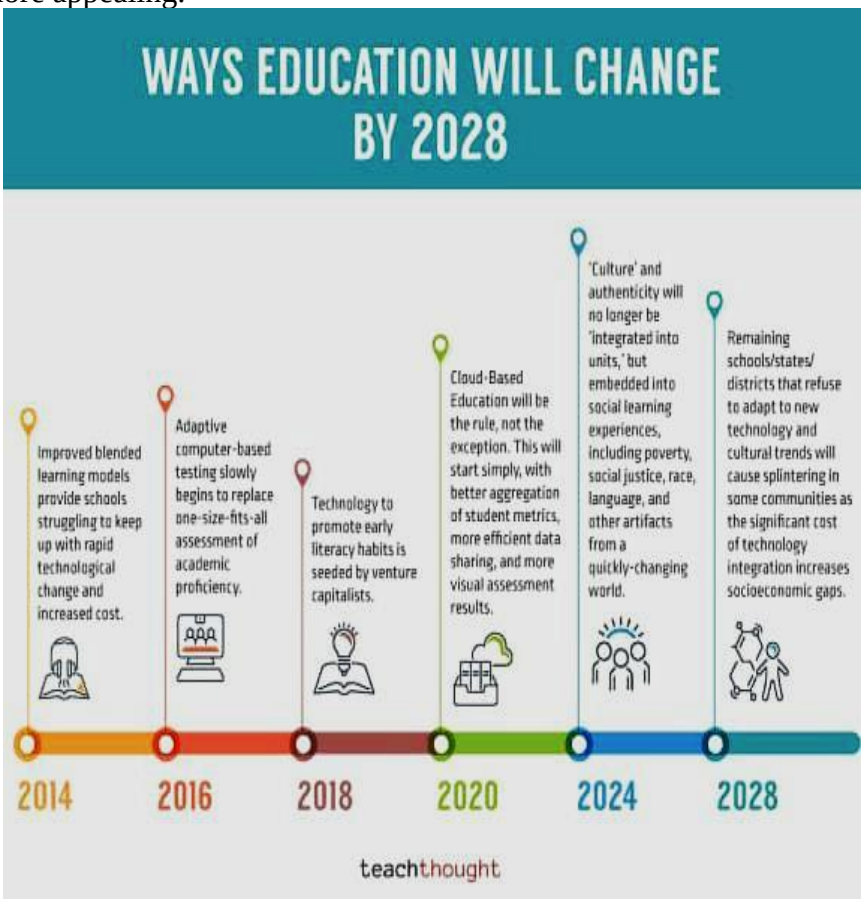

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Education technology has transformed teaching and learning processes, offering unprecedented opportunities for innovation and inclusion. However, its widespread adoption demands careful planning and execution to address challenges and ensure equitable access. By leveraging emerging technologies and fostering a collaborative approach, EdTech can become a cornerstone of 21st-century education.

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Strategies for Climate Change Mitigation

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Introduction

Climate change represents one of the most critical challenges facing humanity, demanding urgent and sustained action across global, national, and local levels. Its multifaceted impacts manifest through extreme weather events, rising sea levels, and shifts in ecosystems, undermining food security, human health, and economic stability. As the scientific community reaches a consensus on the causative role of anthropogenic activities, particularly greenhouse gas emissions, the discourse surrounding effective mitigation strategies has gained momentum. This research paper will explore various avenues of climate change mitigation, focusing on innovative policies, renewable energy technologies, and community engagement initiatives. By examining these critical areas, the paper aims to highlight not only the mechanisms that can be harnessed to combat climate change but also the socio-political implications that influence their implementation. Ultimately, understanding these dynamics is essential for fostering a sustainable future for generations to come.

A.Overview of Climate Change and Its Impacts

Climate change represents one of the most pressing global challenges of our time, with its impacts resonating through various sectors, particularly agriculture and human health. As rising temperatures and unpredictable weather patterns prevail, developing countries, such as Burkina Faso, face heightened vulnerabilities due to their reliance on climate-sensitive resources (El Bilali et al.). The observed shifts in agricultural productivity not only threaten food security but also exacerbate socioeconomic disparities, as vulnerable populations are less equipped to adapt to such changes. Moreover, climate change impacts extend beyond immediate physical effects, influencing migration patterns and exacerbating poverty levels across regions (Deeb et al.). Consequently, a comprehensive understanding of these multifaceted effects is essential for effective climate change mitigation strategies. Integrating education about climate change into curricula can facilitate informed responses, equipping future generations with the knowledge required to confront these challenges and devise sustainable solutions.

Strategies for Mitigation

In addressing climate change, particularly through the lens of agricultural and forestry practices, effective mitigation strategies are essential for reducing greenhouse gas emissions. Research indicates that these sectors can provide significant GHG reductions at competitive costs, particularly in European contexts, where tailored policies can balance economic viability with environmental goals (Andrea Povellato et al.). Moreover, the context of developing nations, like China and India, complicates mitigation efforts as these countries face unique challenges in adopting sustainable practices. The TOCSIN project highlights the importance of fostering research, development, and technological cooperation between these nations and the European Union, emphasizing the need for immediate and ambitious mitigation actions, alongside enhanced support for research and technology transfer (Alain Haurie et al.). Therefore, successful mitigation requires a multifaceted approach that integrates sector-specific strategies, international cooperation, and equitable policy frameworks to balance economic and ecological interests.

A.Renewable Energy Sources and Their Role in Reducing Emissions

The increasing reliance on fossil fuels has substantially contributed to greenhouse gas emissions, thereby exacerbating climate change effects. In response, renewable energy sources such as solar, wind, and hydroelectric power have emerged as viable solutions to mitigate these emissions. These technologies not only provide a sustainable energy supply but also reduce dependency on carbon-intensive fuels that dominate the current energy landscape. Research highlights the profound potential of renewables in achieving energy security and promoting social

and economic development while simultaneously addressing environmental health concerns (Hussein et al.). By transitioning to these clean energy alternatives, nations can significantly diminish their carbon footprints and curb the harmful impacts associated with traditional energy generation. Furthermore, while challenges remain—such as market failures and resource accessibility—strategic policy implementation is essential for harnessing renewable energies full potential, thus aligning with global efforts to combat climate change and foster a healthier planet for future generations (Reader et al.).

Policy and Legislation

The intersection of policy and legislation is paramount in shaping effective climate change mitigation strategies. Notably, robust legislative frameworks play a critical role in mobilizing resources and guiding implementation efforts at multiple levels of governance. Researchers highlight that successful climate-positive legislation must be developed with a keen understanding of local contexts, potential challenges, and opportunities presented by advancing technologies and market dynamics ((Clark et al.)). In particular, international commitments, such as those outlined by the United Nations Framework Convention on Climate Change, emphasize the necessity of integrating gender considerations within climate policies to address the disproportionate impacts on vulnerable populations, including women ((Aura et al.)). Moreover, various countries have responded to these global initiatives by drafting specific climate action plans, which incorporate gender perspectives while striving for sustainable development. Thus, effective climate legislation not only mitigates environmental risks but also promotes social equity by ensuring that marginalized voices are heard in policy-making processes.

A.International Agreements and National Policies for Climate Action

As the urgency of climate change intensifies, international agreements and national policies have become pivotal in shaping effective climate action. Treaties such as the Kyoto Protocol and the Paris Agreement represent collective commitments by governments to mitigate greenhouse gas emissions, yet the implementation of these agreements relies heavily on national policies. Countries are increasingly crafting policies that not only align with international frameworks but also address domestic economic, environmental, and social contexts. This intersection reveals a crucial dimension of climate action: the balance between efficiency and equity. While many studies focus on the economic efficiency of policies, growing attention to intragenerational equity highlights the importance of fair distribution of burdens among different societal groups, ensuring that marginalized communities are not disproportionately affected by climate actions (Kverndokk et al.). Thus, effective climate action necessitates a comprehensive approach that integrates global commitments with locally grounded policies, promoting both sustainability and social justice (Adam Rose et al.).

Conclusion

In conclusion, addressing climate change mitigation requires a multifaceted approach that integrates both urgent action and systematic planning across various sectors. The findings of this research underscore the importance of aligning transportation policies with sustainable development objectives, particularly in low-income countries where emissions are projected to rise significantly, necessitating substantial reductions to meet global climate goals (Bakker et al.). Furthermore, it is imperative to recognize the interrelationship between adaptation and mitigation strategies; while national frameworks are increasingly incorporating quick wins, the private sector still struggles with practical implementation (Ali et al.). Thus, enhancing coordination among agencies and fostering a culture of proactive adaptation can bridge existing gaps in climate strategies. Overall, a comprehensive commitment to both mitigating emissions and adapting to inevitable changes is essential to ensure a sustainable and resilient future, ultimately reflecting the interconnectedness of our ecological and economic systems.

A.The Importance of Collective Action in Climate Change Mitigation

The urgency of addressing climate change has underscored the necessity of collective action across various sectors of society. Individual efforts, while valuable, are often insufficient to produce meaningful change in isolation. Collective action facilitates the pooling of resources, expertise, and influence, enabling communities, organizations, and nations to implement comprehensive strategies that can significantly reduce greenhouse gas emissions. Collaborative initiatives, such as multinational agreements and local sustainability programs, exemplify how shared goals can galvanize wider participation and foster innovative solutions. Furthermore, collective action enhances public awareness and promotes a sense of shared responsibility, which is crucial for mobilizing larger populations to adopt sustainable practices. By harnessing the power of unity, society can create a formidable response to the climate crisis, demonstrating that when individuals come together, their combined efforts can catalyze substantial progress toward a more sustainable future.

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