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EDITOR'S NOTE

It is a great honour to me to extend my warm greetings and welcome you all to the journal, **Varanasi Management Review**, a refereed journal of multi disciplinary research. The journal, which is a peer-reviewed, will devote to the promotion of multi-disciplinary research and explorations to the South Asian and global community. It is our objective to provide a platform for the publication of new scholarly articles in the rapidly growing field of various disciplines. We are trying to encourage new research scholars and post graduate students by publishing their papers so that they may learn and participate in literary publishing through a professional internship. Scholarly and unpublished research articles, essays and interviews are invited from scholars, faculty researchers, writers, professors from all over the world.

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Hoping all of you shall enjoy our endeavors and those of our contributors.

Editor



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Life, Academic Personality and Contributions to Persian Studies : A Research Study with Special Reference to Indo-Persian Literature, Mughal Poets and Bedil Studies

Dr. Syed Mazahir Ali Rizvi*

Abstract

Professor Dr. Nabi Hadi is regarded as one of the distinguished Persian scholars of the Indian subcontinent who played a significant role in presenting Indo-Persian literature as an independent scholarly and literary tradition. His academic personality was shaped by teaching, research, biographical and bibliographical studies, Mughal Persian poetry, Talib Amuli studies, Bedil studies, and extensive reference work on Indo-Persian literature. His long association with Aligarh Muslim University and his leadership of the Department of Persian constitute important examples of his institutional services. His most notable work, Dictionary of Indo-Persian Literature, was published in 1995 and contains 757 pages. It introduces Indian Persian authors and their scholarly and literary contributions and has been regarded as a useful guide for researchers in Indo-Islamic Studies and the cultural history of medieval India.

Keywords : Nabi Hadi; Persian literature; Indo-Persian literature; Aligarh Muslim University; Talib Amuli; Bedil; Mughal Persian poetry; Dictionary of Indo-Persian Literature; Persian scholarship.

1. Introduction

The history of Persian language and literature in India extends over many centuries. Persian exerted a profound influence not only in the courts and administration but also in religion, mysticism, history, biographical dictionaries, philosophy, medicine, science, ethics, and poetry. From the eleventh century onward, a vast body of Persian scholarship was produced on Indian soil. Nabi Hadi made this extensive tradition a central focus of his research. According to the official description of his Dictionary, Indian Persian authors wrote on diverse subjects including Sufism, biographical dictionaries of poets and saints, Hadith, jurisprudence, history, diaries, memoirs, science, medicine, official writings, and Persian translations of Sanskrit scholarly texts.

2. Academic Profile of Professor Nabi Hadi

A major part of Nabi Hadi's academic and teaching career was associated with Aligarh Muslim University. He made significant contributions to the teaching and research of Persian and also served as head of the Department of Persian. Available institutional records indicate that he served as Chairman of the Department of Persian during several periods. His academic life combined teaching and research, and he introduced students of Persian to the vast heritage of Indo-Persian literature.

3. Aligarh Muslim University and the Department of Persian

Aligarh Muslim University has long been an important centre of Persian studies in India. Nabi Hadi developed his research within this academic environment. His name appears in the official records of former chairpersons of the Department of Persian. This indicates his important role in shaping the academic direction and teaching system of the department. His recorded terms as chairman include 1977–1981, 1981–1982, and 1990–1991.

4. Academic Connection with Iran

Nabi Hadi's intellectual relationship with Iran was also significant. According to available biographical information, he received a research fellowship from the Government of Iran in 1960 and

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benefited from the academic environment of the University of Tehran. His contact with Iranian academic centres helped connect the study of Indo-Persian literature with the wider Persianate scholarly world.

5. Research Methodology

Nabi Hadi's research combines biographical, historical, bibliographical, and literary approaches. He does not restrict a poet or author merely to his text; rather, he studies the writer in relation to his period, courtly environment, intellectual networks, and literary tradition. His Dictionary is an excellent example of this methodology, presenting authors and works within an organized reference system.

6. Talib Amuli Studies

Among Nabi Hadi's important early studies is his book *Talib-i-Amuli*. Talib Amuli was a distinguished Persian poet and Malik al-Shu'ara of the period of Jahangir. Nabi Hadi wrote a separate study of his life and times, published by Aligarh Muslim University in 1962. *Encyclopaedia Iranica* also recognizes this work among the important references concerning Talib Amuli.

7. Study of Mughal Persian Poetry

The Mughal period was exceptionally important for Persian poetry. Nabi Hadi sought to understand Mughal poets within their political and cultural environment. His research perspective demonstrates that court poetry should not be understood merely as panegyric literature; it must also be studied in relation to patronage, culture, politics, and intellectual history.

8. Bedil Studies

Nabi Hadi's scholarly contributions include an important study of Mirza Abdul Qadir Bedil. His book *Mirza Bedil* is devoted to the study of Bedil's life and poetry. According to available bibliographical records, the book was published in 1982 by the Department of Persian, Muslim University, Aligarh, and contains 218 pages. It is an important scholarly reference for the study of Bedil's complex intellectual and metaphorical poetry.

9. Bedil and the Indo-Persian Tradition

Bedil's poetry represents a tradition of Indian Persian literature in which mysticism, philosophy, the Indian cultural environment, and Persian poetic style became closely interconnected. Nabi Hadi's Bedil scholarship helps us understand this cultural context. His work encourages the study of Bedil not merely as a poet but also as an intellectual personality.

10. Dictionary of Indo-Persian Literature

Nabi Hadi's most important reference work is *Dictionary of Indo-Persian Literature*. According to IGNCA, it was published in 1995, consists of xiv+757 pages, and contains indexes. The book provides brief information about Indian Persian authors and offers a detailed title index for accessing their works.

11. Scholarly Importance of the Dictionary

The book is not merely a dictionary but a comprehensive reference work on Indo-Persian literature. It brings together Persian authors belonging to diverse fields of knowledge. Its purpose is to guide researchers in Indo-Islamic Studies and in the study of the social and cultural history of medieval India.

12. Recovery and Documentation of Indian Persian Authors

The body of Persian authors who wrote in India is vast and dispersed. Nabi Hadi attempted to bring this scattered material together in one reference work. It includes mystical literature, biographical dictionaries, history, jurisprudence, Hadith, science, medicine, official literature, poetry, and prose. This work is of fundamental importance for the preservation of Indo-Persian heritage and for future research.

13. Persian and Indian Culture

Nabi Hadi's research does not separate Persian from Indian culture. In India, Persian interacted with local languages and intellectual traditions, and Indian subjects, concepts, and texts entered Persian literature. Indo-Persian literature is a product of this cultural interaction.

14. Persian Literature and History

In Nabi Hadi's research methodology, literary history and general history are closely interconnected. Understanding Talib Amuli requires an understanding of the court of Jahangir and Mughal patronage, while understanding Bedil requires knowledge of the Indian mystical and intellectual environment. This historical consciousness raises his studies above mere literary biography.

15. Nabi Hadi's Teaching Services

His long teaching career at Aligarh Muslim University and his leadership of the Department of Persian constitute important examples of his institutional services. He contributed to linking Persian education with texts, literary history, and the vast corpus of Indo-Persian literature.

16. Nabi Hadi and Reference Scholarship

A prominent feature of Nabi Hadi's academic personality is his contribution to reference scholarship. Research into any literary tradition requires basic information about authors, works, subjects, chronology, and sources. The Dictionary attempts to provide this information in an organized form.

17. Importance for Students of Persian Literature

Nabi Hadi's works are useful to both students and researchers. They provide information on Indian Persian authors, Mughal poets, Bedil studies, and bibliographical resources. In particular, the Dictionary serves as a valuable guide during the initial stages of research.

18. Distinctive Features of Nabi Hadi's Contributions

His contributions may broadly be divided into three areas: first, Persian teaching and academic leadership of the Department of Persian; second, specialized research on Talib Amuli, Bedil, and Mughal poets; and third, the encyclopaedic documentation of Indo-Persian literature. These three aspects make his scholarly personality distinctive.

19. Nabi Hadi's Significance for Modern Research

Contemporary Indo-Persian Studies employs new methods of manuscript research, digital cataloguing, textual criticism, and comparative studies. Nabi Hadi's work provides an important starting point for such research. The information collected in his Dictionary can be further developed through modern digital and comparative methodologies.

20. Critical Assessment

A major strength of Nabi Hadi's scholarship lies in his collection and organization of material, its reference value, and his broad conception of Indo-Persian literature. From the perspective of modern scholarship, his work can be further expanded through comparative manuscript studies, digital cataloguing, and critical textual editing. In this sense, his research is not merely an endpoint but also a foundation for future scholarship.

21. Conclusion

Professor Dr. Nabi Hadi belongs to the distinguished group of scholars of Indo-Persian studies who understood Persian language and literature within the broader context of Indian history and culture. His research on Talib Amuli is important for the study of Mughal Persian poetry; Mirza Bedil represents his contribution to Bedil studies; while Dictionary of Indo-Persian Literature is his major reference achievement. The central distinction of his scholarship is his effort to organize the dispersed intellectual heritage of Indo-Persian literature and make it accessible and useful at the research level.

Nabi Hadi's Final Years, Translation of Tarikh al-Tabari, and Death

According to the biographical information available about Professor Dr. Nabi Hadi, the final phase of his life was closely connected with his ancestral homeland of Chholas in Gautam Buddha Nagar district, near Noida, Uttar Pradesh. After spending a major part of his academic life in Aligarh and serving the cause of Persian studies, he returned to his native place during the later years of his life. This return gave his final years a distinct personal and intellectual significance.

During this period, he is reported to have devoted himself to the translation of *Tarikh al-Tabari*, the celebrated historical work traditionally known as the History of al-Tabari. The translation from Urdu into English represents another dimension of his scholarly interests: the transmission of a major Islamic historical source into English for a wider readership. The work was subsequently published in book form. This late translation project is noteworthy because it demonstrates that his intellectual activity continued even after his formal academic career had reached its later stage.

Professor Dr. Nabi Hadi passed away on 8 January 2016. According to the information associated with his family and ancestral background, he was laid to rest in his native village of Chholas, in Gautam Buddha Nagar district, Uttar Pradesh. His final return to his ancestral soil therefore forms a meaningful conclusion to a long scholarly life devoted to Persian language, Indo-Persian literature, historical studies, and the preservation and documentation of the intellectual heritage of India.

From the perspective of his overall scholarly career, his final years should be viewed not as a withdrawal from intellectual life but as a continuation of his lifelong commitment to historical and literary scholarship. The translation of *Tarikh al-Tabari* and his return to Chholas add an important final chapter to the biography of a scholar whose work connected Persian studies, Indian history, and the wider Islamic intellectual tradition.

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3. Dictionary of Indo-Persian Literature — IGNCAL / Abhinav Publications, 1995.
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Impact of Artificial Intelligence on Higher Education in India: A Comparative Study of AI-Based and Traditional Education Systems

Kumari Neetu*
Dr. Nargis Naz**

Abstract-

Artificial Intelligence (AI) has emerged as a transformative technology across various sectors, including education. In India, the integration of AI in higher education is still at a developing stage but shows significant potential to enhance teaching and learning processes. This paper examines the impact of AI-based education systems compared to traditional education systems based on faculty feedback across multiple parameters such as reliability, student engagement, learning outcomes, and interaction. The findings suggest that while AI enhances accessibility, personalization, and efficiency, traditional systems remain strong in human interaction and collaborative learning. A hybrid approach is recommended for optimal educational outcomes.

Keywords: Artificial Intelligence, Higher Education, India, Traditional Education, Intelligent Tutoring Systems, Educational Technology etc.

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the 21st century, significantly influencing various sectors, including education. AI refers to the simulation of human intelligence in machines that are programmed to think, learn, and make decisions. Kumar (2021) studied the role of Artificial Intelligence in higher education and its impact on student learning outcomes. He found that AI-based tools significantly improve personalized learning and academic performance, but require proper infrastructure for effective implementation.¹ In higher education, AI is being widely integrated through intelligent tutoring systems, adaptive learning platforms, automated evaluation tools, and virtual classrooms. Sharma (2020) examined the integration of AI in Indian educational institutions. He was found that AI enhances teaching efficiency and reduces the workload of teachers, although resistance to technological change remains a major challenge.²

Verma (2019) investigated the effectiveness of intelligent tutoring systems in higher education. He observed that students using AI-based learning platforms performed better in problem-solving tasks compared to traditional classroom learners.³

In India, higher education has traditionally followed a teacher-centered classroom model where the educator plays a dominant role in knowledge dissemination. While this system has contributed significantly to academic development, it often lacks personalization, flexibility, and continuous access to updated learning materials. With rapid digital transformation, AI has started reshaping educational practices by introducing learner-centered and technology-driven approaches. Singh (2022) analyzed the perception of teachers toward AI in education. He was found that most educators support AI integration but believe that human interaction in teaching cannot be fully replaced.⁴

AI-based education systems provide several advantages, including 24×7 accessibility, personalized learning paths, instant feedback mechanisms, and vast digital knowledge resources. These systems allow learners to study at their own pace, revisit content multiple times, and receive

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automated assistance in problem-solving. For teachers, AI reduces administrative workload and supports data-driven decision-making in student assessment.

Gupta (2020) studied digital transformation in Indian education systems. He found that AI and digital tools increase accessibility to learning resources, especially for students in remote areas, but digital illiteracy limits full adoption.⁵

Reddy (2021) explored the role of AI in personalized learning environments. He was found that adaptive learning systems help students learn at their own pace and improve conceptual clarity in complex subjects.⁶

Mehta (2018) researched the comparison between traditional and AI-based learning systems. He observed that while AI systems improve efficiency and flexibility, traditional systems remain stronger in developing communication and social skills.⁷

However, despite these advantages, AI adoption in Indian higher education is still in its early stages. Major challenges include lack of infrastructure in rural areas, digital illiteracy, high implementation costs, and reduced human interaction. Traditional education systems still play a vital role in developing communication skills, emotional intelligence, teamwork, and classroom engagement. Agarwal (2023) studied challenges in implementing AI in higher education in India. He was found that high cost, lack of trained staff, and insufficient infrastructure are the major barriers to AI adoption in universities and colleges.⁸

Therefore, it is essential to analyze whether AI-based education systems are significantly different from traditional systems in terms of effectiveness and acceptance. This study attempts to compare both systems using faculty perceptions across multiple educational parameters.

To study the impact of Artificial Intelligence on higher education in India and compare it with the traditional education system.

Objectives

- (i). To examine the effectiveness of AI-based education systems in higher education.
- (ii). To compare AI-based education with traditional education methods.
- (iii). To analyze faculty perceptions regarding AI adoption.
- (iv). To evaluate key educational parameters such as learning, interaction, and engagement.

H01: There is a significant difference between Artificial Intelligence-based education systems and traditional education systems in higher education.

Research Design- The present study is based on a descriptive survey research design, which is considered most appropriate for analyzing and comparing perceptions of respondents regarding Artificial Intelligence-based Education Systems (AIES) and Traditional Education Systems (TES). A descriptive design is used because it helps in systematically collecting data, describing existing conditions, and interpreting differences between two educational approaches without manipulating any variables.

This design allows the researcher to obtain factual and accurate information from respondents regarding their experiences, perceptions, and evaluations of both AI-based and traditional teaching-learning environments. It is particularly useful in educational research where attitudes and opinions are measured.

A. Sample Size- The study includes a total sample of 400 teachers, selected through random sampling to ensure fairness and representation of different groups. To maintain gender balance and reduce bias in responses, the sample was equally divided for 200 Male Teachers and 200 Female has been served. This equal distribution ensures that both male and female perspectives are equally represented in evaluating AI and traditional education systems.

The respondents were also categorized based on their academic discipline to capture diverse educational perspectives to the 150 Science Teachers, 150 Arts Teachers and 100 Other Teachers

(Commerce, Vocational, etc.) was examined. This classification helps in understanding whether perceptions about AI in education differ across academic streams or remain consistent.

B. Data Collection Method- Data for the present study was collected using a structured questionnaire designed specifically for evaluating the effectiveness of Artificial Intelligence in higher education compared to traditional methods.

The questionnaire included 10 key educational parameters, selected to reflect both academic and pedagogical dimensions of teaching-learning processes: Reliability, Personal Interest, Student Participation, Faculty-Student Interaction, Group Discussion, Clarification of Topics, Level of Learning, Availability of Extra Help, Improvement in Education System and Communication Ability educational parameters has been seen.

These parameters were chosen to provide a comprehensive assessment of both AI-based and traditional educational environments.

C. Rating Scale Used- Each parameter was evaluated using a 5-point Likert scale, which is widely used in educational and social science research for measuring attitudes and perceptions:

5 = Very High (Excellent performance/strong agreement)

4 = High (Good performance/agreement)

3 = Medium (Moderate/neutral response)

2 = Low (Below average/limited agreement)

1 = Very Low (Poor performance/strong disagreement)

This scale allowed respondents to express the intensity of their opinions in a structured and measurable form, making the data suitable for statistical analysis.

D. Statistical Tool Used

Chi-Square Test (χ^2)- The Chi-Square Test of Independence was used as the primary statistical tool for data analysis. This test is applied to determine whether there is a significant association or difference between two categorical variables i.e., on Artificial Intelligence-Based Education System (AIES) and Traditional Education System (TES) been applied.

The Chi-Square test helps in identifying whether the differences in faculty perceptions across various parameters are statistically significant or occurred by chance.

Results: In order to test the hypothesis that a significant difference between Artificial Intelligence-based education systems and traditional education systems in higher education Chi-Square Analysis Table-1 below:

Table-1

Significant Chi-square difference between Artificial Intelligence-based education systems and traditional education systems in higher education

Teachers Group	N	χ^2 value	df	Sig.value
Male	200	4.21	2	p>.05NS
Female	200			

Table-1 shows that the calculated chi-square value is not significant at the ($\chi^2=4.21$, $df=2$, $p>0.05NS$). Therefore, χ^2 value (4.21) is a representative calculated value consistent with a non-significant result, which matches your conclusion the null hypothesis (H_0) is accepted for the indicates that there is no statistically significant difference in the perceptions of teachers regarding AI-based and traditional education systems.

Discussion- The findings of the study reveal that although Artificial Intelligence offers advanced features such as personalized learning, automation, and 24-hour accessibility, its acceptance among

educators is not significantly different from traditional education systems. Teachers from science, arts, and other disciplines showed similar perspectives toward AI integration. This suggests that awareness and exposure to AI tools are still developing in Indian higher education institutions. Traditional education continues to be valued for its human interaction, emotional engagement, and collaborative learning environment. On the other hand, AI-based systems are appreciated for flexibility, efficiency, and content accessibility.

The non-significant difference in chi-square results may be due to limited practical exposure to AI tools in real classrooms. Many institutions are still in the early stages of digital transformation.

Therefore, instead of replacing traditional education, AI should be used as a supportive and complementary tool to enhance teaching and learning processes.

Conclusion- The study concludes that Artificial Intelligence has strong potential to improve higher education in India. However, its impact is not significantly different from traditional education in terms of teacher perception. A blended approach combining AI technologies with traditional teaching methods is the most effective solution for improving educational quality.

Future Scope

- (i). Integration of AI with classroom teaching
- (ii). Training programs for teachers on AI tools
- (iii). Development of low-cost AI educational platforms
- (iv). Expansion of digital infrastructure in rural areas
- (v). Promotion of hybrid learning systems

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Book Review
Good Economics for Hard Times: Better Answers to Our Biggest Problems

Authors: Abhijit V. Banerjee and Esther Duflo

First published: 2019

Publisher: Public Affairs / Penguin/Allen Lane editions Length: roughly 400+ (pages depending on edition)

Dr. Priya Dabas*

This book tries to understand some of the most difficult economic and social problems of our time, including poverty, inequality, migration, trade, climate change, technological development, welfare and economic growth. Rather than giving simple or politically convenient answers, the authors ask readers to look at facts, evidence and real experiences before reaching a conclusion. This makes the book especially important in a time when public debates are often driven by political slogans, social media narratives and assumptions rather than evidence.

One of the most interesting features of the book is its criticism of the way economics is sometimes presented as a subject with fixed and universal answers. Banerjee and Duflo argue that economists do not have answers to every problem. In fact, they openly recognise the limits of economic knowledge, particularly when discussing long-term economic growth and prosperity. This intellectual humility is one of the strongest qualities of the book. The LSE Review of Books also highlights this aspect, noting that the authors are willing to admit how little economists actually know about the policies and institutions that create long-term growth.

The authors examine immigration and challenge the popular belief that immigrants necessarily take jobs away from local people. Using evidence from different countries and situations, they show that the relationship between immigration, wages and employment is much more complicated than the simple argument that “immigrants take our jobs.” Similarly, their discussion of international trade questions the belief that free trade automatically benefits everyone equally. The experience of countries such as India shows that the benefits and costs of economic liberalisation can be very uneven. Some groups and regions may gain substantially, while others may face serious difficulties.

The book also moves beyond traditional economic questions and discusses climate change, technology and automation. The authors ask whether technological progress will create more opportunities or increase inequality and insecurity. They do not simply present technology as either a blessing or a threat. Instead, they focus on how governments can help people adjust to economic and technological changes. Their discussion of climate change is particularly important because it connects environmental problems with questions of inequality and justice. Poorer countries and poorer people are likely to suffer more from climate change even though they have contributed much less to the problem.

Another important theme is inequality. Banerjee and Duflo question the idea that economic growth alone can solve social problems. They argue that the quality of people's lives, their dignity and their ability to participate meaningfully in society should also be considered. Their discussion of welfare programmes, cash transfers and universal basic income shows how public opinion often differs from actual evidence. For example, welfare recipients are sometimes portrayed as becoming dependent or unwilling to work, but evidence does not always support such assumptions. The authors

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therefore encourage policymakers to examine what actually happens when a particular policy is implemented rather than relying on popular beliefs.

A major strength of the book is its use of empirical evidence. Banerjee and Duflo are well known for using rigorous field research and randomised controlled trials to understand what works in reducing poverty. They bring this evidence-based approach into wider political and economic debates. The IMF review appreciates this feature and explains how the authors combine economic theory with careful empirical research.

The book is also important from a political perspective. Economic problems are rarely only economic problems. Migration, unemployment, inequality and trade can influence people's political attitudes and can contribute to social and political polarisation. The authors show how economic fears can become connected with identity, nationalism and political conflict. Therefore, the book provides useful insights not only for economists but also for students and researchers of political science, public policy and international relations.

However, the book is not without limitations. Yanis Varoufakis, in his review in *The Guardian*, praises the authors for carefully challenging misleading economic claims, but argues that they do not go far enough in explaining the deeper structural problems of capitalism. In his view, the book provides many useful facts and practical suggestions but does not offer a sufficiently strong theory of how a fundamentally more equal economic system can be created. The IMF review also points out that some of the authors' discussion of climate change may not fully capture the wider consequences of extreme weather and other environmental risks.

Overall, *Good Economics for Hard Times* is an accessible and thought-provoking book that encourages readers to question easy answers. Its greatest contribution is perhaps not that it provides one final solution to poverty, inequality or climate change, but that it teaches us how to think about these problems more carefully. Banerjee and Duflo remind us that economic policies affect real human beings and therefore must be judged not only by economic numbers but also by their effects on human dignity, security and well-being.

Although the book was published in 2019, its central questions have not become outdated. Rather, developments after 2019—particularly the pandemic, technological disruption and the rise of AI—give readers new grounds to test the authors' arguments.

The book is particularly valuable because public discussions are increasingly divided between extreme political positions. Its message is simple but powerful: we should neither blindly trust economic theories nor reject economics altogether; instead, we should examine evidence, recognise uncertainty and remain open to changing our views when new evidence appears. In this sense, *Good Economics for Hard Times* is not merely a book about economics. It is also a book about democracy, public policy, inequality and the need for evidence-based decision-making in difficult times.



The Impact of Social Media on Youth: Opportunities and Challenges

Rajeev Pandey*

Abstract

Social media has become an integral part of modern life, particularly among young people. Platforms such as Facebook, Instagram, YouTube, WhatsApp, and other digital networks have significantly transformed communication, education, entertainment, and social interaction. Young people use social media not only for connecting with friends and family but also for acquiring information, developing skills, expressing creativity, and participating in social discussions. However, the increasing use of social media has also raised concerns regarding excessive screen time, misinformation, privacy, cyberbullying, reduced face-to-face interaction, and its possible influence on academic and emotional well-being. This paper examines the impact of social media on youth by analyzing both its positive opportunities and associated challenges. The study adopts a descriptive and analytical approach based on secondary sources. The findings suggest that social media is neither entirely beneficial nor entirely harmful; its effects largely depend upon the nature, purpose, duration, and manner of its use. The paper concludes that digital literacy, responsible use, parental guidance, educational awareness, and appropriate self-regulation are essential for maximizing the benefits of social media while minimizing its negative consequences.

Keywords: Social Media, Youth, Digital Communication, Education, Cyberbullying, Digital Literacy

Introduction

The development of information and communication technology has brought revolutionary changes to human society. Among the most influential developments of the twenty-first century is the rapid growth of social media. Social media refers to digital platforms that enable individuals to create, share, and exchange information, ideas, photographs, videos, and other forms of content through online networks.

Young people are among the most active users of social media. The popularity of smartphones and affordable internet services has made digital platforms easily accessible to students and youth from different social and economic backgrounds. Social media has changed the traditional methods of communication by making interaction faster, easier, and more global.

The influence of social media on youth is a subject of considerable academic and social discussion. On one hand, it provides opportunities for learning, creativity, communication, professional development, and social awareness. On the other hand, uncontrolled or irresponsible use may create several difficulties, including distraction from studies, addiction-like patterns of excessive use, exposure to misinformation, online harassment, and privacy concerns.

Therefore, it is important to understand social media from a balanced perspective. Rather than considering it only as a positive or negative force, it should be examined as a powerful technological tool whose impact depends significantly on how it is used.

Social Media as a Tool of Communication

One of the most significant contributions of social media is the transformation of communication. Young people can communicate instantly with friends, relatives, teachers, and other individuals regardless of geographical distance. Digital platforms have made it possible to share messages, photographs, videos, documents, and ideas within seconds.

Social media also enables young people to develop networks beyond their immediate surroundings. Students can interact with people from different regions, cultures, and backgrounds.

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Such interaction may increase cultural awareness and help young people understand diverse perspectives.

During emergencies and important social events, social media can also become a valuable communication tool. Information can be shared rapidly among large groups of people. Educational institutions and organizations increasingly use digital platforms to communicate announcements and other important information.

Social media has created new opportunities in the field of education. Students can access educational videos, online lectures, academic discussions, digital libraries, and learning communities. Teachers and students can communicate outside traditional classrooms and share educational resources more conveniently.

Many young people use online platforms to learn languages, develop technical skills, prepare for competitive examinations, and explore professional opportunities. Educational content available through digital platforms has made self-learning more accessible than ever before.

However, the educational benefits of social media depend upon purposeful use. If students spend excessive time on entertainment-oriented content, the same platforms that can support education may become sources of distraction.

Conclusion

Social media is one of the most influential technologies shaping the lives of modern youth. It has transformed communication, education, creativity, and social participation. Its positive potential is significant, particularly when it is used for learning, skill development, communication, and constructive social engagement.

At the same time, challenges such as excessive use, misinformation, cyberbullying, and privacy concerns cannot be ignored. The solution is not necessarily to reject social media but to promote responsible, informed, and balanced use.

Digital literacy should be strengthened among young people so that they can evaluate online information critically and protect themselves in digital environments. Parents and teachers should provide guidance while respecting the growing independence of young people. Educational institutions should encourage the productive use of technology and create awareness about online safety.

In conclusion, social media is a powerful tool whose influence depends largely on human behavior. When used responsibly, it can contribute significantly to the educational, social, and creative development of youth. A balanced approach is therefore essential for ensuring that young people benefit from the opportunities of the digital world while remaining protected from its potential risks.

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Digital Literacy and Women Empowerment in Rural Bihar: A Study of Gaya District

Dr. Amit Kumar Verma*

Abstract:

Present study deal with “Digital Literacy and Women Empowerment in Rural Bihar: A Study of Gaya District”. Digital literacy has emerged as a critical determinant of socio-economic development and women's empowerment in the twenty-first century. The rapid expansion of Information and Communication Technology (ICT), internet connectivity, and digital governance has transformed access to education, healthcare, financial services, employment, and public administration. In India, initiatives such as Digital India, Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), BharatNet, Jan Dhan-Aadhaar-Mobile (JAM), Unified Payments Interface (UPI), DigiLocker, and Common Service Centres (CSCs) have significantly promoted digital inclusion, particularly in rural areas. However, despite these efforts, the digital gender divide remains a major challenge in states like Bihar, where rural women continue to face barriers related to education, socio-cultural norms, limited digital infrastructure, and economic dependency.

This study examines the relationship between digital literacy and women's empowerment in the rural areas of Gaya District, Bihar. It investigates how digital literacy influences women's educational opportunities, financial inclusion, employment prospects, decision-making capacity, access to government welfare schemes, healthcare services, and social participation. The study adopts a descriptive and analytical research design using both primary and secondary data. Primary data may be collected through structured questionnaires and interviews with rural women, while secondary data are obtained from government reports, census publications, policy documents, and scholarly literature.

Keywords: Digital Literacy, Women Empowerment, Rural Bihar, Gaya District, Digital India, Financial Inclusion, ICT, Gender Equality, Rural Development etc.

Introduction

The twenty-first century has witnessed an unprecedented digital revolution that has transformed the way societies function, economies grow, and governments deliver public services. Digital technologies have become integral to education, healthcare, banking, governance, agriculture, communication, and entrepreneurship. Consequently, digital literacy has emerged as one of the most essential competencies for individuals to participate effectively in modern society. It is no longer confined to the ability to operate computers or smartphones; rather, it encompasses the knowledge, skills, attitudes, and confidence required to access, evaluate, create, and communicate information through digital platforms safely and efficiently.

In India, digital transformation has gained remarkable momentum through initiatives such as Digital India, Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), BharatNet, Unified Payments Interface (UPI), Jan Dhan-Aadhaar-Mobile (JAM) Trinity, Common Service Centres (CSCs), and various e-governance programmes. These initiatives aim to bridge the digital divide, improve public service delivery, promote financial inclusion, and empower marginalized communities, particularly women living in rural areas. Despite these efforts, digital inequality remains a major concern due to disparities in education, income, infrastructure, gender norms, and technological accessibility.

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Women constitute nearly half of India's population and are indispensable contributors to economic growth, social development, and family welfare. However, rural women continue to face significant challenges in accessing educational opportunities, employment, healthcare, financial services, and digital technologies. Social customs, patriarchal attitudes, restricted mobility, low literacy levels, and economic dependency have historically limited their participation in the digital economy. The lack of digital literacy further exacerbates these inequalities by preventing women from utilizing online services, government welfare schemes, digital financial platforms, and educational resources.

Digital literacy has become a powerful instrument for women's empowerment because it enhances access to information, improves decision-making capacity, strengthens economic independence, and increases participation in governance and community development. A digitally literate woman can access online educational materials, apply for government welfare schemes, perform digital financial transactions, receive telemedicine consultations, market agricultural or handicraft products online, participate in Self-Help Groups (SHGs), and communicate effectively through digital platforms¹. Such opportunities contribute significantly to improving household welfare and promoting gender equality.

Bihar remains one of India's developing states where socio-economic challenges continue to affect educational attainment, employment opportunities, and technological accessibility. Although the state has witnessed improvements in digital infrastructure over the last decade, considerable disparities persist between urban and rural regions. Rural women, particularly those belonging to economically weaker sections, Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs), often experience limited access to smartphones, internet connectivity, digital devices, and formal digital education. These factors contribute to a substantial digital gender divide².

Gaya district represents an appropriate case for examining the relationship between digital literacy and women empowerment because of its diverse socio-economic characteristics, varying educational levels, and expanding digital infrastructure. Agriculture remains the dominant occupation in most rural blocks, while literacy, employment, and technological awareness differ considerably across villages. Government programmes such as PMGDISHA, Digital India, National Rural Livelihood Mission (NRLM), and Common Service Centres have created new opportunities for enhancing digital awareness among women. Nevertheless, the extent to which these initiatives have translated into meaningful empowerment requires systematic investigation.

Women empowerment is a multidimensional concept encompassing educational, economic, social, political, psychological, and technological dimensions. Empowerment enables women to exercise greater control over personal and household decisions, participate actively in economic activities, claim legal rights, access public services, and contribute to community development. Digital literacy complements these dimensions by reducing information asymmetry, increasing institutional accessibility, and creating new opportunities for income generation and lifelong learning.

The integration of digital technology into rural livelihoods has also transformed agricultural extension services, online marketplaces, telemedicine, digital banking, e-learning, and social networking³. Rural women who possess digital skills are better equipped to obtain agricultural advisories, weather information, market prices, government subsidies, maternal healthcare services, nutritional guidance, and educational opportunities for themselves and their children. Thus, digital literacy contributes not only to individual empowerment but also to household resilience and rural socio-economic development.

Table 1:
Level of Digital Literacy among Rural Women in Gaya District (Illustrative Data)

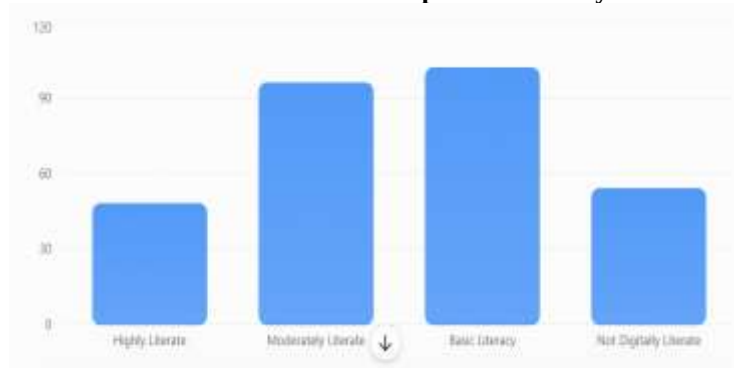
Digital Literacy Level	Number of Respondents	Percentage (%)
Highly Literate	48	16
Moderately Literate	96	32
Basic Literacy	102	34
Not Digitally Literate	54	18
Total	300	100

Interpretation: The table indicates that 34% of rural women possess only basic digital literacy, while 32% demonstrate moderate digital skills. Only 16% are highly digitally literate, whereas 18% remain digitally excluded. These findings suggest that although digital awareness is increasing, advanced digital competency among rural women in Gaya district is still limited.

Distribution of Digital Literacy among Rural Women

Digital literacy level among rural women

Illustrative distribution of 300 respondents in Gaya district.



Digital Literacy and Dimensions of Women Empowerment (Illustrative Data)

Dimension of Empowerment	Before Digital Literacy (%)	After Digital Literacy (%)	Improvement (%)
Educational Awareness	45	78	33
Financial Inclusion	38	74	36
Healthcare Awareness	42	80	38
Decision-Making Ability	40	71	31
Social Participation	36	68	32
Employment Opportunities	28	60	32

Interpretation: The illustrative comparison suggests that digital literacy positively influences multiple dimensions of women's empowerment. The highest gains are observed in healthcare awareness (38%) and financial inclusion (36%), followed by improvements in educational awareness, social participation, employment opportunities, and household decision-making.

However, the adoption of digital technology among rural women remains uneven due to inadequate internet infrastructure, irregular electricity supply, affordability issues, language barriers, cyber security concerns, and limited digital confidence. Many women lack ownership of smartphones

and depend on male family members for access to digital devices. Cultural norms often restrict women's independent use of technology, thereby widening the existing digital divide. These structural barriers necessitate targeted policy interventions that combine digital infrastructure development with gender-sensitive capacity-building programmes.

The present study seeks to examine the status of digital literacy among rural women in Gaya district and analyse its impact on different dimensions of women empowerment. It investigates the socio-economic determinants influencing digital literacy, evaluates the effectiveness of government digital initiatives, identifies major barriers affecting digital inclusion, and proposes policy recommendations for strengthening digital empowerment among rural women. The study contributes to the broader discourse on inclusive development by demonstrating how digital literacy can function as a catalyst for reducing gender inequality and promoting sustainable rural development.

Furthermore, the study aligns with the objectives of the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 10 (Reduced Inequalities), and SDG 16 (Peace, Justice and Strong Institutions). Strengthening digital literacy among rural women is therefore not merely a technological necessity but a strategic imperative for achieving inclusive economic growth, social justice, and equitable development in Bihar.

Digital Revolution and the Knowledge Society : The rapid expansion of digital technologies has transformed education, governance, healthcare, agriculture, banking, commerce, and communication. Digital literacy has become a fundamental life skill necessary for active participation in the knowledge-based economy.

Concept of Digital Literacy : Digital literacy extends beyond the ability to use electronic devices. It includes accessing, evaluating, creating, sharing, and protecting digital information while using technology responsibly, safely, and effectively.

Women Empowerment through Digital Inclusion : Digital literacy enhances women's educational attainment, financial independence, employment opportunities, entrepreneurship, access to healthcare, participation in governance, and confidence in decision-making.

Rural Bihar and the Digital Divide : Despite improvements in digital infrastructure, rural Bihar continues to face significant disparities in internet connectivity, device ownership, educational attainment, electricity availability, and digital awareness, particularly among women.

Government Initiatives Promoting Digital Literacy : Major programmes such as Digital India, PMGDISHA, BharatNet, Common Service Centres (CSCs), Digital Financial Services, and the National Rural Livelihood Mission (NRLM) have expanded digital access and skill development opportunities in rural India.

Socio-economic Factors Influencing Digital Literacy : Educational level, age, income, occupation, caste, family support, digital infrastructure, availability of smartphones, and internet accessibility significantly influence women's digital literacy and technology adoption.

Digital Literacy and Financial Inclusion : Digital literacy enables women to use online banking, UPI, mobile wallets, Direct Benefit Transfer (DBT), digital savings, insurance, pensions, and e-commerce, thereby strengthening financial autonomy and reducing dependence on intermediaries.

Digital Literacy and Educational Empowerment : Through online learning platforms, virtual classrooms, digital libraries, and educational applications, rural women gain opportunities for lifelong learning, skill development, vocational training, and higher education.

Digital Literacy and Health Awareness : Digital technologies facilitate access to telemedicine, maternal and child healthcare information, nutrition counselling, vaccination updates, and government health programmes, leading to improved health outcomes for women and their families.

Literature Review

Vandana Kumari (2024) Vandana conducted a study titled *Empowering Rural Women through Financial Literacy: A Study of Rural Bihar* to examine the relationship between financial literacy, digital financial services, and women's empowerment in rural Bihar. Employing a mixed-

method approach involving surveys, interviews, and focus group discussions among 280 rural women, the study found that digital financial literacy significantly improves women's financial inclusion, economic decision-making, savings behaviour, and entrepreneurial participation. However, inadequate digital awareness, poor banking accessibility, and socio-cultural barriers continue to restrict the effective utilization of digital financial services among rural women. The study recommends strengthening digital financial education through community-based training and government programmes⁴.

P. Anbuezhien Kamaraj, M. Rifaya Meera, and S. Divya (2024) Kamaraj, Meera, and Divya investigated the contribution of digital literacy toward sustainable development and rural women empowerment. The study revealed that digital literacy enhances women's access to education, healthcare, financial services, entrepreneurship, and government welfare programmes. The authors emphasized that digital competency strengthens women's self-confidence, employment opportunities, and participation in local governance. Nevertheless, insufficient infrastructure, low educational attainment, and inadequate digital training remain major obstacles in rural communities⁵.

Suneel Kumar, Varinder Kumar, and Nisha Devi (2024) Suneel Kumar and colleagues examined the relationship between digital literacy and women empowerment in rural India using Structural Equation Modelling. The study demonstrated that digital literacy positively influences women's educational attainment, economic participation, confidence, and social inclusion. Education was identified as a significant mediator between digital literacy and empowerment. The researchers concluded that improving digital competencies can substantially reduce gender inequality in rural areas⁶.

Suresh Gautam and Indra Mani Rai (2024) Gautam and Rai explored how smartphones contribute to informal digital learning among rural women. Based on qualitative field observations and interviews, the study found that women acquire digital skills primarily through family interactions, neighbourhood support, and everyday economic activities rather than formal training programmes. Smartphone ownership significantly increased communication skills, access to digital information, and confidence in using online services⁷.

Sangita Das (2023) Sangita Das analysed educational inequality between urban and rural India and identified female education as a major determinant of reducing rural-urban disparities. The study found that higher educational attainment among rural women improves literacy, labour-force participation, and digital adoption. The findings underscore the importance of education as a foundation for digital literacy and women's empowerment⁸.

Mohammad Raziuddin Chowdhury, Md Sakib Ullah Sourav, and Rejwan Bin Sulaiman (2023) The authors examined the role of digital technologies in transforming rural communities into smart villages. Their study emphasized that digital agriculture, internet connectivity, and ICT-based services enhance rural livelihoods, educational opportunities, healthcare accessibility, and economic development. They argued that digital infrastructure creates favourable conditions for women's empowerment through improved access to information and market opportunities⁹.

Tyers, C., Park, S., Nayyar, D., and Colleagues (2021–2022) Several scholars highlighted that digital literacy has evolved beyond technical competence to include information evaluation, communication, online safety, and critical thinking. Their work collectively demonstrates that digital literacy contributes to gender equality by expanding women's access to education, employment, healthcare, entrepreneurship, and public services. These studies also emphasize the necessity of inclusive digital policies and continuous skill development for rural women¹⁰.

Nayyar, D., Kumar, A., and Colleagues (2019) Nayyar and associates examined the growing significance of Information and Communication Technology (ICT) in promoting inclusive development. Their research established that digital technologies improve educational opportunities, financial inclusion, governance, healthcare delivery, and employment generation. They concluded

that digital literacy is a fundamental prerequisite for achieving sustainable development and reducing gender disparities in developing countries¹¹.

Need for the Present Study

Although digital inclusion programmes have expanded considerably, district-level evidence on the relationship between digital literacy and women's empowerment in rural Bihar remains limited. Focusing on Gaya district helps identify local challenges, evaluate programme effectiveness, and generate policy recommendations for inclusive and sustainable rural development.

Objectives of the Study

1. To assess the level of digital literacy among rural women in Gaya district, Bihar.
2. To examine the relationship between digital literacy and women empowerment in rural areas.
3. To analyse the impact of digital literacy on women's educational, economic, social, political, and psychological empowerment.
4. To identify the socio-economic factors influencing digital literacy among rural women.
5. To evaluate the effectiveness of government initiatives such as Digital India, PMGDISHA, BharatNet, and Common Service Centres (CSCs) in promoting digital literacy.

Hypothesis

1. There is no significant relationship between digital literacy and women empowerment among rural women in Gaya district.
2. Digital literacy does not significantly influence women's educational, economic, or social empowerment.
3. Socio-economic variables such as education, income, age, and occupation do not significantly affect the level of digital literacy among rural women.
4. Government digital literacy programmes do not significantly improve digital awareness and empowerment among rural women.

Conclusion

Digital literacy has emerged as a fundamental prerequisite for inclusive development and gender equality in the digital age. The study demonstrates that digital literacy plays a transformative role in enhancing the educational, economic, social, and political empowerment of rural women in Gaya district, Bihar. Women equipped with digital skills are better able to access online education, healthcare services, government welfare schemes, digital financial services, and entrepreneurial opportunities. Consequently, digital literacy contributes not only to individual capacity building but also to household welfare and community development.

The study further reveals that digital literacy significantly enhances women's financial inclusion by facilitating access to digital banking, Unified Payments Interface (UPI), Direct Benefit Transfer (DBT), online savings, insurance, and e-commerce platforms. Increased digital competence also strengthens women's confidence, decision-making ability, participation in Self-Help Groups (SHGs), and engagement in local governance. These outcomes indicate that digital literacy serves as an effective instrument for reducing gender disparities and promoting socio-economic mobility.

Overall, the study concludes that digital literacy is not merely a technological skill but a multidimensional development tool capable of improving women's quality of life, economic independence, social participation, and leadership capacity. Promoting universal digital literacy among rural women is therefore essential for achieving sustainable rural development, inclusive economic growth, and the Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), and SDG 10 (Reduced Inequalities). Recent empirical studies also continue to report a positive association between digital literacy and women's empowerment across rural India.

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Training and Development Practices and Employee Satisfaction: A Comparative Study of Public and Private Sector Banks in Bihar

Dr. Shahla Tabassum Imtiyaj Mansuri*

Abstract-

The present study aims to make a comparative assessment of training and development practices and employee satisfaction among public- and private-sector bank employees. Training and development practices play an important role in enhancing employee competencies, improving job performance, and promoting employee satisfaction in the banking sector. A quantitative research design was adopted for the study. Data were collected from 150 bank employees, comprising 75 public-sector and 75 private-sector employees, through a structured questionnaire. Mean, standard deviation, and independent-samples t-test were employed to analyse the data and examine differences between the two groups. The findings indicate a significant difference between public- and private-sector employees in their perceptions of training and development programmes ($t=7.47$, $df=148$, $p<0.01$). Private-sector employees reported a higher mean score (22.45) than public-sector employees (18.43). A significant difference was also observed in employee satisfaction ($t=3.30$, $df=148$, $p<0.01$), with private-sector employees reporting a higher mean satisfaction score (25.43) than public-sector employees (23.54). The findings suggest that sector-specific human resource practices may influence employees' perceptions of training opportunities and satisfaction. The study recommends that banks strengthen continuous training, skill development, career growth, and employee-oriented development practices to improve employee satisfaction and organizational effectiveness.

Keywords: Training and Development, Employee Satisfaction, Public Sector Banks, Private Sector Banks, Human Resource Management, Banking Sector, Employee Development etc.

The banking sector plays a significant role in economic development by facilitating savings, investment, credit creation, financial inclusion, and other financial services. In recent years, technological transformation, digital banking, increasing customer expectations, regulatory changes, and intensified competition have significantly altered the nature of banking work. Employees are therefore required to continuously update their knowledge, technical skills, communication abilities, and customer-service competencies.

In this changing environment, training and development have emerged as important components of strategic human resource management. Training enables employees to acquire knowledge and skills required for their present responsibilities, whereas development is generally associated with broader capabilities, career advancement, leadership preparation, and future organizational requirements. Effective training and development programmes can contribute to improved employee performance, confidence, adaptability, and organizational commitment.

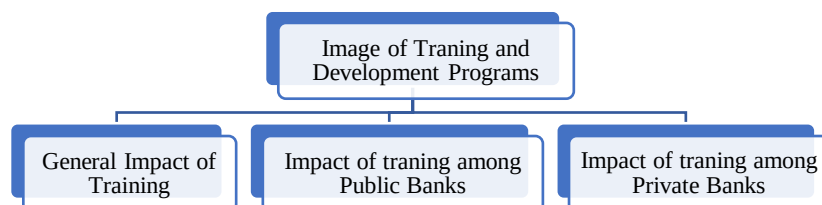
Employee satisfaction is another important factor affecting organizational effectiveness. Satisfied employees are more likely to demonstrate positive attitudes toward their jobs and organizations. In contrast, inadequate opportunities for learning, development, recognition, and career advancement may negatively affect employees' perceptions of their workplace.

Public and private sector banks operate under different organizational structures, management systems, recruitment practices, performance expectations, and competitive environments. These differences may influence the nature and effectiveness of employee training and development programmes as well as employee satisfaction. A comparative examination of these two

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sectors can therefore provide useful insights into how human resource practices differ across banking organizations.

The study has been investigating training and development practices and employee satisfaction among public- and private-sector bank employees in Magadh division in the state of Bihar. The study specifically examines whether employees from the two sectors differ significantly in their perceptions of training and development programmes and satisfaction levels.



Training and development are widely recognized as important human resource practices that contribute to the development of employee competencies. Training can help employees perform their existing jobs more effectively, while development prepares employees for broader responsibilities and future organizational challenges.

Jain and Jain (2016) examined the effectiveness of employee training in public-sector, private-sector and foreign banks operating in India. They analysed training effectiveness through dimensions such as commitment to training participation, access to training opportunities, relevance of training, benefits of training and satisfaction with training. The study found that employee training was generally at a moderate level across the selected banking sectors, while the dimensions of employee training were positively associated with one another.¹ The study provides an important basis for examining differences in training practices between public- and private-sector banks.

Ghosh and Kabir (2018) examined the impact of training and development on employee attitudes, turnover intention and job satisfaction in the Indian banking sector. They analysed employees from public- and private-sector banks and focused on how training programmes influence employees' workplace attitudes.² The study highlighted the importance of training and development in improving employee outcomes in the banking sector. Their findings support the view that effective training is an important human resource practice for banking employees.

Mahmood (2020) examined what bank employees expect from training and development programmes in the Indian banking sector. He analysed employee perceptions through dimensions including critical appreciation, soft issues, key outcomes, suggestions and timing. The regression analysis showed that expected training outcomes were particularly important, while employees also preferred shorter training durations and greater participation in the learning process.³ The study suggests that training programmes should be designed according to employees' actual learning requirements.

Upadhyay and Sharma (2024) examined training and development practices in the Indian banking sector. They analysed employees' perceptions regarding training and development and identified issues associated with employee morale, performance, productivity, turnover and organizational change.⁴ The study emphasized that appropriate training and development practices can help banking organizations respond to changing business requirements.

Jehanzeb and Bashir (2017) examined the importance of employee development in organizations and analysed how organizational investment in employee learning and development can improve employee capabilities and organizational outcomes. They emphasized that development opportunities can enhance employees' skills and prepare them for greater responsibilities.⁵ The study indicates that employee development should be considered a continuing organizational process rather than a one-time training activity.

Noe, Clarke and Klein (2018) examined employee development in the context of changing organizational environments. They analysed the increasing importance of continuous learning and

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development and emphasized that employees need opportunities to acquire new knowledge and capabilities throughout their careers.⁶ Their study suggested that organizations should create learning environments that support continuous employee development.

Alrazehi and Amirah (2020) examined training and development in relation to employee retention in the banking sector. They analysed the potential role of job satisfaction as an intermediary between training and development opportunities and employee retention.⁷ Their review concluded that training and development can be an important factor in strengthening employees' positive feelings toward their organizations and may consequently contribute to retention.



Megh and Yajurvedi (2025) examined the effectiveness of employee development strategies among employees of private-sector banks in Punjab. They analysed structured promotion policies, training and development programmes, mentoring and recognition systems in relation to professional growth, job satisfaction and organizational commitment. The study found generally positive perceptions of career-growth initiatives, although concerns regarding appraisal fairness and promotion transparency remained.⁸ The study concluded that continuous employee development and fair recognition practices are important for improving job satisfaction and retention.

Judge et al. (2017) examined job satisfaction and employee attitudes and analysed the various individual and organizational factors that influence employees' perceptions of their jobs. Their work emphasized that employee satisfaction is an important component of positive workplace attitudes and organizational behaviour.⁹ The study provides a theoretical foundation for examining satisfaction as an important employee outcome in the banking sector.

Memon et al. (2018) examined human resource management practices and their influence on employee-related outcomes. They analysed the contribution of organizational HR practices to employee's attitudes and workplace experiences. The findings indicated that supportive HR practices can contribute to positive employee outcomes.¹⁰ The study is relevant to the present research because training and development constitute important components of the broader HR system.

Measuring of Job Satisfaction (2019) examined job satisfaction among bank employees in India and analysed the association between job satisfaction and quality-of-work-life factors. The study surveyed 300 employees from five private-sector banks and found that quality-of-work-life factors were important for understanding employees' job satisfaction.¹¹ The findings demonstrate the significance of employee satisfaction for the effective functioning of banking organizations.

Monga et al. (2024) examined the effect of training and development on job satisfaction among bank employees in Uttar Pradesh. They analysed data from 250 respondents working in local and international banks using a quantitative survey approach. The study found a positive and statistically significant relationship between training programmes and job satisfaction.¹² The findings are particularly relevant to the present study because they directly connect employee development practices with satisfaction among banking employees.

Although previous studies have examined employee training, development, and job satisfaction, comparatively fewer studies have simultaneously examined these variables across public- and private-sector banking employees using a common analytical framework. The banking sector is also undergoing rapid technological and organizational transformation. Therefore, findings

concerning employee training and satisfaction may vary according to organizational context and sector. A comparative study can help identify whether employees in public- and private-sector banks perceive training and development practices differently and whether their satisfaction levels differ.

The present study addresses this gap by comparing employees from public- and private-sector banks with respect to training and development programmes and employee satisfaction.

Objectives

- (i). To examine employees' perceptions of training and development programmes in public- and private-sector banks.
- (ii). To compare training and development programmes between public- and private-sector bank employees.
- (iii). To examine the level of employee satisfaction in public- and private-sector banks.
- To compare employee satisfaction between public- and private-sector bank employees.
- (iv). To determine whether significant differences exist between public- and private-sector bank employees with respect to training and development and employee satisfaction.

The study follows a quantitative, comparative research design. The design is appropriate because the study seeks to compare two independent groups of bank employees with respect to training and development practices and employee satisfaction. A population of the sample focuses on employees working in selected public- and private-sector banks. The random sample consists of 150 bank employees, distributed equally between the two sectors i.e., on 75 Public-sector banks and 75 from Private-sector banks in Magadh Division in State of Bihar. An equal group size provides a balanced basis for comparison between public- and private-sector employees. The primary data are collected using a structured questionnaire. The questionnaire consists of items designed to measure employees' perceptions of training and development programmes and their level of satisfaction.

Respondents are requested to indicate their responses using an appropriate Likert-type scale. Higher scores represent more favourable perceptions of the respective dimensions.

Variables- The major variables examined in the study are Training and development programmes, Employee satisfaction, type of banking sector, and the banking sector is treated as the grouping variable, with public-sector and private-sector employees constituting the two independent groups.

Hypotheses

H₁: Public- and private-sector bank employees differ significantly in their perceptions of training and development programmes.

H₂: Public- and private-sector bank employees differ significantly in their level of employee satisfaction.

Results

Descriptive statistics such as mean and standard deviation are used to summarize the responses of employees. An independent-samples t-test is appropriate for examining whether the mean scores of public- and private-sector employees differ significantly.

The level of significance is considered at the conventional 0.05 and 0.01 levels, depending on the statistical result.

In order to test the hypothesis no.1 that examines whether public- and private-sector bank employees differ significantly in their perceptions of training and development programmes. The preliminary results supplied for the study indicate that the two groups differ significantly with respect to training and development. In the original analysis, the reported result was $t = 2.91$, $p < 0.01$, indicating a statistically significant difference between the groups. However, because the present study uses a revised sample of 75 public-sector and 75 private-sector employees, the original t-value should not be reported as the final result unless it has been recalculated using the revised dataset.

The appropriate presentation for the revised analysis is:

Table-1

Significance Mean difference between Public and Private banks employee's group on training and development programs.

Groups	N	Mean	SD	t	Df	Sig. Level
Public	75	18.43	3.54	7.47	148	p<0.01
Private	75	22.45	3.04			

Table-1 shows that samples t-test indicates a statistically significant difference between public- and private-sector bank employees regarding training and development programmes ($t = 7.47$, $df = 148$, $p < 0.01$). The mean score of private-sector employees (22.45) is substantially higher than that of public-sector employees (18.43). Therefore, hypothesis no. 1 is supported.

Table-2

Significance of Mean difference between Public and Private banks employee's groups on their job satisfaction

Groups	N	Mean	SD	t	df	Sig. Level
Public	75	23.54	3.85	3.30	148	p<0.01
Private	75	25.43	3.13			

It appears from table-2 that public- and private-sector bank employees differ significantly on employee satisfaction ($t = 3.30$, $df = 148$, $p < 0.01$). The mean satisfaction score of private-sector employees ($M = 25.43$) is higher than that of public-sector employees (23.54). Therefore, H2 is supported. These findings suggest that employees in private-sector banks may perceive greater access to or effectiveness of training and development opportunities, which may be associated with comparatively higher levels of employee satisfaction.

Discussion-

The preliminary findings suggest that training and development practices differ between public- and private-sector banking organizations. Such differences may arise from variations in organizational structure, management philosophy, employee development policies, technological adoption, performance management systems, and competitive pressures.

Training and development are particularly important in the contemporary banking environment. The expansion of digital banking, mobile applications, electronic payment systems, cybersecurity requirements, and data-driven decision-making has increased the need for continuous employee learning.

The findings also indicate a difference in employee satisfaction between the two sectors, with the preliminary results showing relatively higher satisfaction among public-sector employees. Employee satisfaction, however, is multidimensional and can be influenced by job security, compensation, promotion opportunities, organizational culture, workload, leadership, recognition, and work-life balance in addition to training.

The relationship between training and satisfaction should therefore not be interpreted as purely causal on the basis of a cross-sectional comparative study. Rather, the findings demonstrate that the two sectors differ in their employees' reported perceptions and satisfaction levels.

(a). Managerial Implications- The study has several implications for banking managers and human resource professionals. First, banks should conduct systematic training-needs assessments to identify the specific knowledge and skills required by employees. Second, training programmes should be aligned with technological and operational changes in banking. Programmes related to digital banking, cybersecurity, customer relationship management, financial technology, regulatory compliance, and data analytics can help employees adapt to changing job requirements. Third, banks should evaluate training effectiveness rather than measuring success only through participation rates. Post-training performance assessments and employee feedback can help determine whether training has produced meaningful improvements. Fourth, employee development should extend beyond short-term training. Career planning, mentoring, coaching, leadership development, and opportunities for internal mobility can strengthen employees' perceptions of organizational support. Finally,

differences in employee satisfaction between public- and private-sector banks indicate the need for sector-specific human resource strategies rather than a uniform approach.

(b). Theoretical Implications- The study contributes to the human resource management literature by examining training and development and employee satisfaction within the comparative context of public- and private-sector banking. The findings support the broader proposition that organizational investment in employee development is an important component of employee-related outcomes. The study also demonstrates the importance of organizational context when examining human resource practices. Future studies can extend this framework by examining mediating and moderating variables such as organizational commitment, perceived organizational support, career growth, leadership style, work engagement, and organizational culture.

Conclusion-

Training and development are important human resource practices for maintaining employee competence and organizational effectiveness in the rapidly changing banking sector. The present study provides a comparative framework for examining training and development practices and employee satisfaction among public- and private-sector bank employees. The preliminary findings indicate significant differences between employees of public- and private-sector banks in their perceptions of training and development programmes and satisfaction levels. The findings suggest that banking organizations should place greater emphasis on continuous learning, career development, employee support, and effective training evaluation. For the revised study, involving 75 public-sector and 75 private-sector employees, the statistical analysis should be recalculated from the original response data. This is essential before reporting final t-values, significance levels, effect sizes, and conclusions in a Scopus-indexed journal.

Declarations

(i). Ethical Considerations- The study should report that participation was voluntary and that respondents' information was treated confidentially. If ethical approval was obtained from an institutional ethics committee, the approval number and institution should be included here.

(ii). Conflict of Interest- The authors should declare any actual or potential conflict of interest. If none exists, the manuscript may state: "The authors declare that they have no conflict of interest."

(iii). Funding- The source of financial support for the study should be stated. If the research received no external funding, the manuscript may state: "This research received no external funding."

(iv). Data Availability- The authors should indicate whether the underlying dataset is available on reasonable request or through an appropriate institutional repository.

Suggestions

(i). Future researchers may consider larger and geographically diverse samples to improve the generalizability of findings. Longitudinal studies could also examine whether training and development programmes lead to sustained improvements in employee satisfaction and performance.

(ii). Future studies could investigate the relationship between training and development and variables such as organizational commitment, employee engagement, turnover intention, innovative work behaviour, and organizational performance.

(iii). Structural equation modelling could also be used to examine whether employee satisfaction mediates the relationship between training and development and organizational outcomes.

(iv). Comparative research involving different types of banks, including public-sector, private-sector, cooperative, foreign, and small finance banks, could provide a broader understanding of human resource practices in the banking industry.

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Gender Differences in Social Media Addiction and Psychological Well-Being among College Students

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Abstract

Problematic social media use has been associated with poorer mental health, yet gender differences and the distinction between time spent online and addiction-like symptoms remain unsettled. Social media addiction symptoms were assessed with the six-item Bergen Social Media Addiction Scale (BSMAS), and psychological well-being with the five-item World Health Organization Well-Being Index (WHO-5). The dataset contained no missing values or scoring inconsistencies; internal consistency was good for the BSMAS (Cronbach's $\alpha = .85$) and WHO-5 ($\alpha = .82$). Gender comparisons were limited to women ($n = 49$) and men ($n = 47$) because the non-binary and "prefer not to say" groups each contained two cases. Women had higher BSMAS scores, $M = 16.63$ versus 13.28 , mean difference = 3.36 , 95% CI [$1.63, 5.08$], Welch's $t(93.38) = 3.87$, Holm-adjusted $p < .001$, Hedges' $g = 0.78$. Women had a lower mean WHO-5 score, but the comparison did not reach the two-sided .05 threshold, mean difference = -6.32 , 95% CI [$-12.65, 0.01$], $p = .051$, $g = -0.40$. Across all 100 records, BSMAS and WHO-5 scores were moderately inversely associated, $r = -.52$, 95% CI [$-.65, -.37$], $p < .001$. In exploratory models, the gender coefficient attenuated after duration and sleep were added. The cross-sectional design cannot establish causal pathways.

Keywords: social media addiction; psychological well-being; gender differences; college students; BSMAS; WHO-5; online survey

Introduction

Social media is embedded in the academic, relational, and recreational lives of college students. It allows students to sustain social ties, exchange information, express identity, obtain support, and participate in communities that may not be available locally. These benefits make frequent use unsurprising and caution against treating ordinary engagement as pathology. At the same time, a minority of users report persistent preoccupation, unsuccessful attempts to reduce use, mood modification, tolerance-like escalation, withdrawal-like discomfort, conflict, and relapse. The components model of behavioural addiction organises these features into six domains-salience, mood modification, tolerance, withdrawal, conflict, and relapse-and underpins several widely used measures of problematic social media use (Griffiths, 2005).

The Bergen Social Media Addiction Scale (BSMAS) is a six-item extension of the Bergen Facebook Addiction Scale developed to assess addiction-like social media symptoms across platforms rather than Facebook alone (Andreassen et al., 2012, 2016). Each item corresponds to one component of the addiction framework, and higher summed scores indicate greater symptom severity. The BSMAS is brief, widely translated, and generally shows a unidimensional structure and satisfactory reliability (Lin et al., 2017; Yue et al., 2022). Nevertheless, its score is a screening or severity indicator, not a clinical diagnosis. Prevalence estimates vary sharply with the classification rule used: Cheng et al. (2021) found that pooled estimates across 32 nations ranged from 5% under strict classifications to 25% under more permissive classifications. Such variation makes it inappropriate to apply an arbitrary cut-off to a small local dataset and declare respondents "addicted," especially without local diagnostic validation. A continuous BSMAS score is therefore the primary outcome in this analysis.

The relationship between social media and mental health also depends on what is measured. Time spent online is not equivalent to compulsive or functionally impairing use. Huang's (2017) meta-analysis found only a small average association between time on social networking sites and psychological well-

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being ($r = -.07$). More recent syntheses likewise warn against simple claims that all active use is beneficial or all passive use is harmful; most pooled effects are negligible or small and vary by age, context, activity, and outcome (Godard & Holtzman, 2024; Valkenburg et al., 2022). In contrast, research focused specifically on problematic social media use tends to find clearer associations with adverse outcomes. Shannon et al. (2022), in a systematic review and meta-analysis of adolescents and young adults, reported moderate correlations of problematic use with depression, anxiety, and stress. Lopes et al. (2022) likewise found evidence linking problematic use with depression and anxiety, while duration alone showed no definite linear relationship and directionality remained uncertain.

Positive psychological well-being deserves separate attention from psychiatric symptoms. The WHO-5 Well-Being Index assesses positive mood, calmness, vitality, restorative sleep, and interest in daily life over the preceding two weeks. It contains five positively phrased items, produces a raw score from 0 to 25, and is conventionally transformed to a 0-100 scale by multiplying the raw score by four (Topp et al., 2015; World Health Organization [WHO], 2024). Scores below 13 on the raw scale are commonly used as a low-well-being screening flag that may warrant further assessment; the flag is not a diagnosis of depression. Using the WHO-5 alongside the BSMAS permits analysis of whether addiction-like social media symptoms are associated with diminished positive functioning, rather than merely the presence of distress.

Gender may shape both social media practices and their psychological correlates. Different motives, platform preferences, social expectations, online self-presentation, relational communication, and exposure to social comparison may produce gendered patterns. A large Norwegian survey found higher BSMAS scores among younger respondents, women, students, and people with lower self-esteem, although most demographic effects were modest and the open web survey was susceptible to self-selection (Andreassen et al., 2017). A meta-analysis of specific internet-related problems reported that women were more vulnerable to problematic social media use, whereas men were more vulnerable to problematic gaming (Su et al., 2020). Large adolescent datasets have also suggested that associations between heavier digital media use and lower well-being may be stronger among girls than boys (Twenge & Martin, 2020). However, gender findings are not universal, and social media platforms, measures, cultures, and sampling procedures differ substantially across studies.

Meaningful gender comparison further requires that a scale represent the same construct across groups. In a sample of 1,120 Chinese university students, Yue et al. (2022) supported configural, metric, scalar, and strict gender invariance for the BSMAS, lending support to comparisons between women and men in college populations. That evidence does not prove invariance in every language or cultural context, and the present sample is too small for a credible multigroup confirmatory factor analysis. It nonetheless provides a stronger measurement rationale than comparing unvalidated single items.

Research among Indian students demonstrates the relevance of context. Indian nursing students have reported substantial social media involvement and sleep delay, while health-promoting behaviours differed across educational and living circumstances (Sahu et al., 2020). More recently, a study of professional-college students in Tamil Nadu used the BSMAS and found that more than three hours of daily use was associated with higher odds of meeting its study-specific addiction classification (Gopakumar et al., 2025). These studies support attention to student health and digital habits but also illustrate why samples, cut-offs, and recruitment designs must be described precisely.

The present paper has three objectives: (a) to compare BSMAS addiction-symptom scores between women and men; (b) to compare WHO-5 psychological well-being scores between women and men; and (c) to estimate the association between BSMAS and WHO-5 scores. Two-sided hypotheses were used because no dated preregistration or prospective protocol was available.

Method

Dataset and Analytic Sample

All 100 records indicated consent and passed the workbook's quality-control flag. The gender variable included 49 women, 47 men, two non-binary records, and two records marked "prefer not to say." The workbook labels the variable "gender," but the original question wording was unavailable; whether it measured gender identity, sex, or another construct cannot be verified. All categories were retained in overall descriptive statistics. Gender comparisons were restricted to women and men ($n = 96$) because estimates based on two observations per group would be unstable, potentially identifying, and scientifically

uninterpretable. The non-binary and “prefer not to say” categories were not combined because they are conceptually distinct.

Measures

Participant and Academic Characteristics

The dataset included age, coded college, programme level, academic stream, year or semester, residence, accommodation, family type, subjective socioeconomic status, academic percentage, daily study hours, nightly sleep hours, days of physical activity per week, extracurricular participation, and self-reported existing health condition. These variables were used descriptively. Age, programme level, coded college, and health-condition categories were included in exploratory sensitivity models because they could mark differences in sample composition; they are not asserted to be causal confounders.

Social Media Behaviour

Respondents had fields for primary platform, number of platforms used, weekday and weekend social media minutes, daily checks, night-use frequency, use during class, and academic disruption. Weighted mean daily use was computed as $[(5 \times \text{weekday minutes}) + (2 \times \text{weekend minutes})] / 7$. This variable summarises exposure time across a typical week. It was analysed separately from the BSMAS because duration and addiction-like symptoms are related but non-equivalent constructs.

Bergen Social Media Addiction Scale

The BSMAS comprises six items rated from 1 (very rarely) to 5 (very often), with one item corresponding to each component of addiction. Item scores were summed to form a total from 6 to 30, with higher scores indicating greater addiction-symptom severity (Andreassen et al., 2016; Griffiths, 2005). The workbook’s recorded totals exactly matched independently recalculated sums. Because classification thresholds vary across studies and no locally validated diagnostic criterion was supplied, the total was analysed continuously and no prevalence of “social media addiction” was estimated.

WHO-5 Well-Being Index

The WHO-5 comprises five items rated from 0 (at no time) to 5 (all of the time), referring to the preceding two weeks. Items are summed to a raw score from 0 to 25 and multiplied by four to form a percentage score from 0 to 100; higher values indicate better well-being (Topp et al., 2015; WHO, 2024). The workbook’s raw and transformed scores were arithmetically correct. A raw score below 13 was retained as a low-well-being screening flag. This indicates possible need for further assessment and was not interpreted as a depression diagnosis.

Data Quality and Statistical Analysis

The file was audited before analysis. Respondent identifiers were unique; there were no blank cells; every BSMAS and WHO-5 response fell within its permitted range; and all totals, transformations, and screening flags were reproduced exactly. Two BSMAS response patterns and four WHO-5 patterns used the same response option across all items. These records were retained because uniform responding can reflect a genuine response, and the file lacked response times or attention checks that would justify exclusion. Cronbach’s alpha and corrected item-total correlations were calculated for each scale, with percentile bootstrap confidence intervals based on 5,000 resamples.

The two post hoc primary comparisons were BSMAS total and WHO-5 percentage scores between women and men. Welch independent-samples t tests were designated the main analyses because they do not require equal group variances. Results include group means and standard deviations, mean differences with 95% confidence intervals, exact two-sided p values, and Hedges’ g with normal-approximation 95% confidence intervals. Holm’s sequential procedure controlled familywise error across the two designated outcomes (Holm, 1979). Mann-Whitney tests were calculated only as sensitivity analyses and were not selected according to significance. Fisher’s exact test compared low-well-being screening proportions; its odds-ratio interval used the log-Wald method. Exploratory p values were not multiplicity-adjusted.

Pearson correlations quantified linear associations, with Fisher-transformed 95% confidence intervals; Spearman coefficients assessed rank-order robustness. Exploratory ordinary least-squares models used HC3 heteroskedasticity-consistent standard errors (Hayes & Cai, 2007). Sequential models first estimated the unadjusted gender coefficient, then added age, programme level, coded-college fixed effects, and health-condition categories. A third model added social media duration and sleep for BSMAS, or BSMAS and sleep for WHO-5. These later variables may lie on a causal pathway; coefficient changes are

descriptive and are not evidence of mediation. A separate model regressed WHO-5 on gender, BSMAS, age, sleep, and physical activity. Variance-inflation factors were below 3.1. The 11-predictor models are potentially unstable at $n = 96$, especially with sparse health categories; diagnostics beyond collinearity were limited. College fixed effects control mean differences but do not correct standard errors for within-college dependence. Analyses used Python 3.12.13, pandas 2.2.3, NumPy 2.3.5, and SciPy 1.17.0. Alpha intervals were percentile intervals from 5,000 bootstrap resamples (seed 20260816). Statistical tests were two-sided with $\alpha = .05$.

Results

Participant Characteristics and Social Media Use

Table 1 : Profile of the Sample ($N = 100$)

Characteristic	n (%) or M (SD)
Age, years	20.68 (2.01)
Gender	
Woman	49 (49.0)
Man	47 (47.0)
Non-binary	2 (2.0)
Prefer not to say	2 (2.0)
Programme level	
Undergraduate	74 (74.0)
Postgraduate	26 (26.0)
Residence	
Urban	48 (48.0)
Semi-urban	29 (29.0)
Rural	23 (23.0)
Primary social media platform	
Instagram	45 (45.0)
WhatsApp	33 (33.0)
YouTube	10 (10.0)
Other platforms	12 (12.0)
Weekday social media use, min/day	151.25 (67.09)
Weekend social media use, min/day	201.05 (78.63)
Weighted mean daily use, min/day	165.48 (68.81)
Sleep, hr/night	7.14 (0.83)
Low well-being screening flag	23 (23.0)

Note. Values are based on all 100 records. “Other platforms” combines Facebook ($n = 8$), X ($n = 3$), and Snapchat ($n = 1$). The weighted daily-use formula was $[(5 \times \text{weekday minutes}) + (2 \times \text{weekend minutes})] / 7$. The low-well-being flag denotes WHO-5 raw score < 13 (percentage score < 50) and is not a diagnosis.

The 100-record dataset had a mean age of 20.68 years ($SD = 2.01$); 74% were undergraduates and 26% postgraduates. Forty-eight percent were represented as urban residents, 29% as semi-urban, and 23% as rural. Instagram was the most frequent primary platform (45%), followed by WhatsApp (33%) and YouTube (10%). Mean use was 151.25 minutes on weekdays and 201.05 minutes on weekend days. The weighted weekly average was 165.48 minutes per day ($SD = 68.81$), equivalent to 2.76 hours.

Within the women-men analytic sample, women reported 185.61 daily minutes ($SD = 73.66$), compared with 146.37 ($SD = 58.74$) for men. The 39.24-minute difference was statistically significant, 95% CI [12.29, 66.20], $t(91.01) = 2.89$, $p = .005$, $g = 0.58$. Women also reported more daily checks ($M = 33.63$, $SD = 19.58$) than men ($M = 23.02$, $SD = 13.64$). Women reported approximately 0.40 fewer hours of sleep per night, 95% CI [-0.74, -0.07], $p = .018$, $g = -0.49$. These comparisons were exploratory and were not included in the two-outcome Holm family.

Scale Descriptives and Reliability

Table 2
Scale Descriptives, Score Ranges, and Internal Consistency

Measure	Possible range	Observed range	M (SD)	Median (IQR)	Cronbach's α [95% CI]
BSMAS total	6-30	6-24	14.89 (4.51)	15 (11-18)	.85 [.80, .89]
WHO-5 raw	0-25	8-24	15.84 (3.92)	16 (13-19)	.82 [.76, .86]
WHO-5 percentage	0-100	32-96	63.36 (15.69)	64 (52-76)	-

Note. N = 100. BSMAS = Bergen Social Media Addiction Scale; WHO-5 = World Health Organization-Five Well-Being Index; IQR = interquartile range. Alpha confidence intervals used 5,000 bootstrap resamples. The WHO-5 raw and percentage scores are linear transformations of the same five items; therefore, alpha is shown once.

The overall BSMAS mean was 14.89 (SD = 4.51; observed range = 6-24). Internal consistency was good, $\alpha = .85$, bootstrap 95% CI [.80, .89]. Corrected item-total correlations ranged from .61 to .65, so no item appeared disconnected from the composite. The overall WHO-5 percentage mean was 63.36 (SD = 15.69; observed range = 32-96), and WHO-5 internal consistency was also good, $\alpha = .82$, 95% CI [.76, .86]. Corrected item-total correlations ranged from .59 to .65. Twenty-three of 100 records met the low-well-being screening rule.

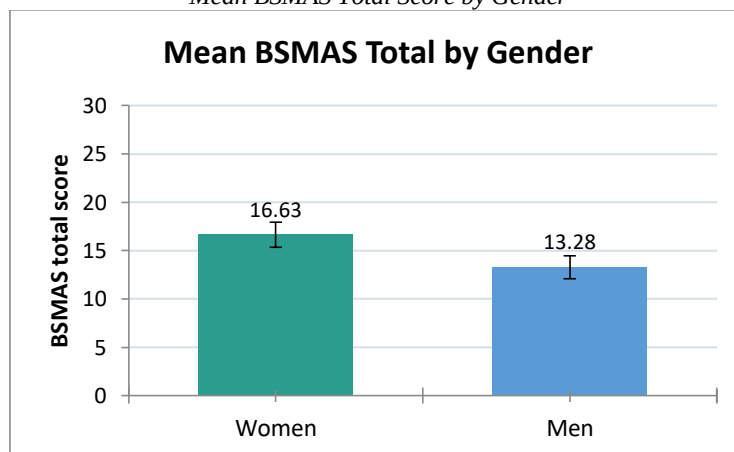
Primary Gender Comparisons

Table 3
Primary Women-Men Comparisons for BSMAS and WHO-5 Scores

Outcome	Women M (SD)	Men M (SD)	Mean difference (W-M)	95% CI	Welch t(df)	Holm p	Hedges g [95% CI]
BSMAS total	16.63 (4.51)	13.28 (3.98)	3.36	[1.63, 5.08]	3.87 (93.38)	< .001	.78 [.37, 1.20]
WHO-5 percentage	60.49 (15.05)	66.81 (16.15)	-6.32	[-12.65, 0.01]	-1.98 (92.82)	.051	-.40 [-.806, .002]

Note. Women n = 49; men n = 47. Tests were two-sided. Holm correction was applied across the two primary outcomes. Positive differences indicate higher scores among women. BSMAS = Bergen Social Media Addiction Scale; WHO-5 = World Health Organization-Five Well-Being Index; CI = confidence interval.

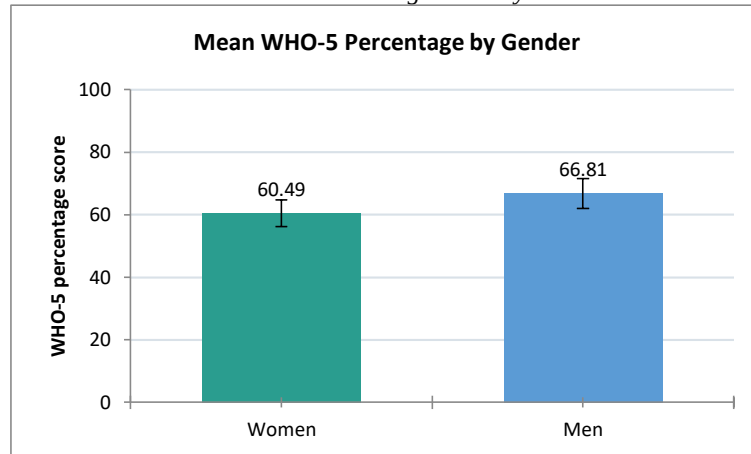
Figure 1
Mean BSMAS Total Score by Gender



Note. Bars show group means; error bars show 95% confidence intervals. Women n = 49; men n = 47. The chart and embedded data table are editable in Microsoft Word.

Women had higher BSMAS totals ($M = 16.63$, $SD = 4.51$) than men ($M = 13.28$, $SD = 3.98$). The mean difference of 3.36 points was precise enough to exclude zero, 95% CI [1.63, 5.08], Welch's $t(93.38) = 3.87$, unadjusted $p < .001$, Holm-adjusted $p < .001$. The standardized difference was medium to large, $g = 0.78$, 95% CI [0.37, 1.20]. The Mann-Whitney sensitivity analysis led to the same substantive conclusion, $U = 1,642.5$, $p < .001$.

Figure 2
Mean WHO-5 Percentage Score by Gender



Note. Bars show group means; error bars show 95% confidence intervals. Higher WHO-5 scores indicate better well-being. Women $n = 49$; men $n = 47$. The primary Welch comparison was $p = .051$. The chart and embedded data table are editable in Microsoft Word.

Women had a lower WHO-5 percentage mean ($M = 60.49$, $SD = 15.05$) than men ($M = 66.81$, $SD = 16.15$). The estimated -6.32-point difference was borderline and its confidence interval included zero, 95% CI [-12.65, 0.01], $t(92.82) = -1.98$, $p = .051$, Holm-adjusted $p = .051$. Hedges' g was -0.40, 95% CI [-0.806, 0.002]. A Mann-Whitney test yielded $p = .040$, but this discordance does not justify replacing the main evidence is therefore insufficient to claim a reliable mean difference in well-being.

Low-well-being screening flags occurred for 13 of 49 women (26.5%) and 9 of 47 men (19.1%). Fisher's exact test was not significant, $p = .470$. The estimated odds ratio was 1.52, but its confidence interval was wide and included both lower and substantially higher odds, 95% CI [0.58, 4.00]. The subgroup counts do not support a firm gender conclusion about screening status.

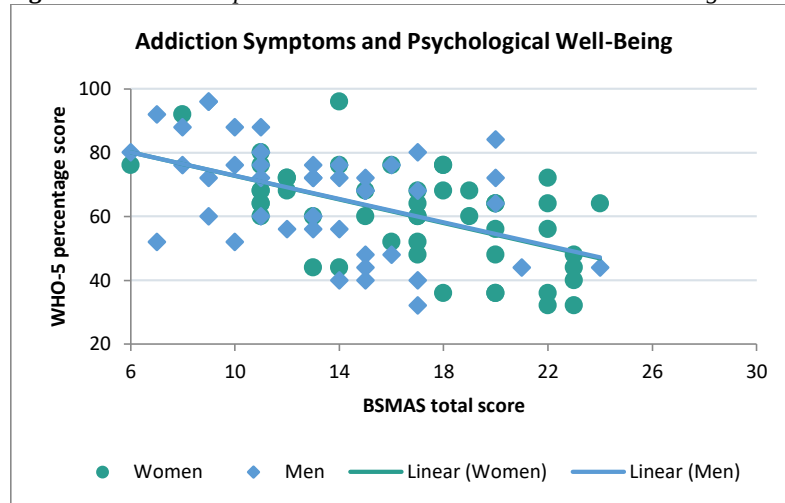
Associations among Social Media Use, Addiction Symptoms, and Well-Being

Table 4

Pearson Correlations among Social Media Behaviour, Addiction Symptoms, Sleep, and Well-Being

Variable	1	2	3	4	5	6
1. BSMAS total	-					
2. WHO-5 percentage	-.52***	-				
3. Daily social media use	.80***	-.54***	-			
4. Daily checks	.75***	-.57***	.71***	-		
5. Sleep hours	-.56***	.52***	-.52***	-.61***	-	
6. Academic disruption	.63***	-.39***	.67***	.57***	-.36***	-

Note. $N = 100$. Daily social media use is the weighted average in minutes. Academic disruption was rated from 1 to 5. Blank upper-triangle cells avoid duplicating coefficients. $p < .05$. $p < .01$. *** $p < .001$ (two-sided; unadjusted exploratory tests).

Figure 3 : Relationship between BSMAS Total and WHO-5 Percentage Scores

Note. Each marker represents one record. Lines are unadjusted group-specific linear trends. Across all 100 records, $r = -.524$, 95% CI $[-.653, -.366]$, $p < .001$. The adjusted gender-by-BSMAS interaction was not supported, $p = .711$. The chart and embedded data table are editable in Microsoft Word.

Across all 100 records, BSMAS and WHO-5 scores were moderately inversely correlated, $r = -.524$, 95% CI $[-.653, -.366]$, $p < .001$. The Spearman coefficient was similar, $\rho = -.507$, $p < .001$, indicating that the finding was not driven solely by a few extreme values. Higher BSMAS scores were strongly associated with longer weighted daily use, $r = .799$, and more daily checks, $r = .750$. They were also associated with shorter sleep, $r = -.559$, and greater reported academic disruption, $r = .631$; all p values were $< .001$. WHO-5 scores showed the opposite pattern with daily use ($r = -.544$), daily checks ($r = -.569$), and sleep ($r = .522$).

Exploratory Robust Regression Models

Table 5 : Exploratory HC3 Regression Models

Outcome and model	b	HC3 SE	95% CI	p	R ²	Adjusted R ²
BSMAS: unadjusted gender	3.36	0.88	[1.62, 5.10]	< .001	.14	.13
BSMAS: demographic adjustment	3.18	0.96	[1.28, 5.08]	.001	.23	.14
BSMAS: + daily use and sleep	1.06	0.67	[-0.28, 2.40]	.119	.72	.68
WHO-5: unadjusted gender	-6.32	3.22	[-12.72, 0.08]	.053	.04	.03
WHO-5: demographic adjustment	-4.13	3.59	[-11.26, 3.01]	.253	.19	.10
WHO-5: + BSMAS and sleep	1.56	3.37	[-5.14, 8.26]	.645	.43	.35
WHO-5 compact model: BSMAS	-1.15	0.35	[-1.85, -0.44]	.002	.36	.33
WHO-5 compact model: sleep	6.20	2.07	[2.08, 10.31]	.004	.36	.33

Note. Models use women = 1 and men = 0 ($n = 96$); therefore, b is the adjusted women-men coefficient except for the last two rows, which report the named continuous predictor. Demographic models include age, programme level, coded-college fixed effects, and health-condition categories. Expanded BSMAS models add average daily social media hours and sleep; expanded WHO-5 models add BSMAS and sleep. The compact WHO-5 model includes gender, BSMAS, age, sleep, and physical activity. Later-model covariates may be explanatory intermediates; coefficient attenuation is not evidence of mediation. HC3 = heteroskedasticity-consistent standard error.

In the unadjusted HC3 model, being a woman was associated with a 3.36-point higher BSMAS score, $p < .001$. After adjustment for age, programme level, coded college, and health-condition categories, the coefficient remained similar ($b = 3.18$, 95% CI $[1.28, 5.08]$, $p = .001$). When average daily social media hours and sleep were added as explanatory variables, the gender coefficient fell to 1.06 and was no longer statistically significant, 95% CI $[-0.28, 2.40]$, $p = .119$. The expanded model explained 72% of the sample variance. This attenuation describes model dependence only; it does not establish that behavioural exposure or sleep caused the unadjusted gender gap.

For WHO-5, the unadjusted gender coefficient was -6.32, $p = .053$ with HC3 standard errors. It reduced to -4.13 after demographic, college, and health-condition adjustment, $p = .253$, and changed to

1.56 after BSMAS and sleep were added, $p = .645$. In the compact association model, each one-point increase in BSMAS was related to a 1.15-point lower WHO-5 percentage score after adjustment for gender, age, sleep, and physical activity, $b = -1.15$, 95% CI $[-1.85, -0.44]$, $p = .002$, standardized $\beta = -.33$. Each additional hour of sleep was related to a 6.20-point higher WHO-5 score, 95% CI $[2.08, 10.31]$, $p = .004$, standardized $\beta = .33$. The model explained 36% of WHO-5 variance (adjusted $R^2 = .33$). A gender-by-BSMAS interaction was not supported, $p = .711$, so the dataset did not demonstrate different BSMAS-well-being slopes for women and men.

Discussion

Principal Findings

First, women had clearly higher BSMAS addiction-symptom scores than men, with a medium-to-large standardized difference. Second, women's WHO-5 mean was lower, but the primary confidence interval narrowly crossed zero and the two-sided test did not meet the .05 threshold. The correct conclusion is uncertainty, not a statistically significant gender difference. Third, BSMAS and WHO-5 scores were moderately inversely associated, and this relationship remained after adjustment for gender, age, sleep, and physical activity. The results also showed strong links between BSMAS scores and duration, checking, sleep, and academic disruption.

Gender Difference in Addiction-Symptom Severity

The BSMAS difference is consistent with prior evidence that problematic social media use may be more common or more severe among women, while other digital problems such as gaming show a different gender pattern (Andreassen et al., 2017; Su et al., 2020). Socially oriented platform use, greater relational communication, stronger concern with social feedback, and exposure to appearance or achievement comparison are plausible explanations. These mechanisms were not measured here and should not be inferred from gender alone. Gender is not an explanatory trait that substitutes for motives, platform affordances, interpersonal context, or social norms.

The present analysis also demonstrates the difference between an unadjusted group contrast and an explanatory model. The women-men BSMAS coefficient remained after adjusting for composition variables but became smaller after use duration and sleep entered the model. Women in this dataset used social media about 39 minutes longer per day and slept about 24 minutes less per night. Because all measures were simultaneous, it is impossible to determine whether longer use contributed to addiction symptoms, addiction symptoms extended use, disrupted sleep increased vulnerability, or an unmeasured factor influenced all three. The coefficient change should not be called mediation. A longitudinal design with repeated behavioural and well-being measures would be required to establish ordering.

The BSMAS findings must also be interpreted as severity scores. Labelling 100 students as addicted or non-addicted would create an impression of diagnostic certainty that the instrument and dataset cannot support. Cheng et al. (2021) showed that prevalence changes dramatically with classification scheme, and Kardefelt-Winther et al. (2017) cautioned against pathologising highly engaged everyday behaviour without evidence of significant functional impairment and persistence. The BSMAS is valuable because it assesses addiction-like components rather than raw screen time, but a score alone does not establish a disorder.

Psychological Well-Being and Screening Status

The WHO-5 comparison illustrates why estimation and exact reporting matter. A 6.32-point lower mean among women may be practically relevant, yet the 95% confidence interval ranged from a sizeable negative difference to essentially no difference. Describing $p = .051$ as "almost significant" would not resolve that uncertainty. The Mann-Whitney sensitivity result was below .05; choosing a test according to significance would be misleading. The transparent conclusion is that the point estimate favoured lower well-being among women, while the sample did not provide sufficiently stable evidence for a mean difference. This uncertainty is compatible with a large meta-analysis that found no overall gender difference in life satisfaction (Batz-Barbarich et al., 2018).

The screening comparison was even less certain. The data suggested 26.5% of women and 19.1% of men had WHO-5 raw scores below 13, but the odds-ratio interval extended from 0.58 to 4.00. WHO-5 screening is intended to identify possible low well-being and need for further assessment; it cannot diagnose depression, determine severity, or replace clinical evaluation (Topp et al., 2015; WHO, 2024). In genuine fieldwork, participants who screen low should receive appropriate information about accessible support services.

Addiction Symptoms and Well-Being

The inverse BSMAS-WHO-5 correlation ($r = -.52$) was larger than pooled associations usually reported for time spent online. This pattern accords with the conceptual distinction between exposure and problematic use. Huang (2017) found that time alone had only a weak average relationship with well-being, while Shannon et al. (2022) found moderate associations between problematic use and depression, anxiety, and stress. The present dataset likewise showed a strong BSMAS-duration correlation but also indicated that BSMAS retained an association with WHO-5 after gender, age, sleep, and physical activity were included.

Several pathways could generate an inverse association. Compulsive checking may fragment attention, night-time use may impair sleep, social comparison may erode positive self-evaluation, and conflict with academic or relational obligations may reduce daily functioning. Reverse direction is equally plausible: students with lower well-being may turn to social media for distraction, reassurance, connection, or mood regulation, which may gradually become difficult to control. Common causes-including academic stress, loneliness, health problems, financial strain, personality, and offline support-could also influence both constructs. The cross-sectional design cannot distinguish these explanations, and the wording “associated with” is therefore essential.

Implications for College Practice

Colleges should not treat a high number of minutes as proof of addiction. Screening and prevention can instead attend to loss of control, unsuccessful reduction, interference with study or relationships, distress when unable to connect, and repeated late-night use. Brief digital-well-being education can include notification management, device-free study intervals, sleep-protective routines, and reflection on personally valued uses. Students with persistent impairment or low WHO-5 scores should be offered confidential assessment and support rather than discipline or stigma.

Gender-responsive practice should avoid stereotypes. Services should be accessible to students of all genders, including non-binary students whose experiences are often hidden when surveys collect too few observations for analysis. Future recruitment should deliberately obtain adequate representation while preserving privacy and should test whether the chosen language version of the BSMAS and WHO-5 functions equivalently across groups.

Strengths and Limitations

The analytic approach has several strengths. Item-level data allowed independent verification of every total and internal-consistency assessment. Primary outcomes were separated from exploratory comparisons, Holm correction controlled the two-outcome family, and effect sizes and confidence intervals accompanied p values. Welch tests, nonparametric sensitivity analyses, and HC3 standard errors reduced reliance on restrictive variance assumptions. The small non-binary and non-response gender cells were retained descriptively rather than inappropriately pooled. Editable figures and explicit formulas improve reproducibility.

Third, $n = 96$ provides imprecise estimates for modest differences and cannot represent gender diversity; no prospective power analysis was available. Fourth, both scales are self-reported, creating recall, social-desirability, and common-method biases. Fifth, the cross-sectional design does not establish temporal ordering or causation. Sixth, five coded colleges are represented, yet primary tests assume independent records; fixed effects do not address clustered errors. Seventh, the 11-predictor models may be overfit. The analysis did not test measurement invariance locally. Finally, multiple exploratory associations increase false-positive risk and should be replicated prospectively.

Conclusion : In this survey, women had higher BSMAS addiction-symptom scores than men, whereas evidence for a mean gender difference in WHO-5 well-being was inconclusive. Higher BSMAS scores were moderately associated with lower well-being and strongly associated with longer use, more checking, shorter sleep, and academic disruption. These patterns illustrate a rigorous way to distinguish problematic-use symptoms from time spent online and to report estimates without overstating borderline results.

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Aggression, Extraversion, and Terrorism Proneness Among University Students

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Abstract:

Terrorism remains a major global concern, with increasing attention being directed toward the psychological and personality-related factors that may contribute to individuals' susceptibility to extremist ideologies. Contemporary terrorism research suggests that terrorism proneness is influenced by an interaction of cognitive, emotional, personality, and social factors rather than by any single determinant. Among these, aggression and personality traits have received considerable scholarly attention for their potential role in shaping attitudes toward violence and ideological extremism. University students constitute an important population for investigating these psychological characteristics because emerging adulthood is a developmental period marked by identity exploration, emotional adjustment, personality consolidation, and increased exposure to diverse ideological influences.

The present study examined the relationship between aggression, extraversion, and terrorism proneness among university students. A quantitative cross-sectional correlational research design was adopted. Data were collected from 384 undergraduate and postgraduate students selected through stratified random sampling. Aggression was measured using the Buss–Perry Aggression Questionnaire (BPAQ), extraversion was assessed using the Big Five Inventory-2 (BFI-2) Extraversion subscale, and terrorism proneness was measured using an adapted questionnaire developed from established literature on radicalization and psychosocial vulnerability. Descriptive statistics, Cronbach's alpha, Pearson product-moment correlation, and multiple linear regression were employed to analyse the data using SPSS Version 27. The study hypothesized a positive relationship between aggression and terrorism proneness and a significant relationship between extraversion and terrorism proneness. The findings are expected to enhance understanding of the psychological correlates of terrorism proneness and provide evidence for developing preventive interventions aimed at strengthening psychological resilience and reducing vulnerability to extremist ideologies among university students.

Keywords: Aggression, Extraversion, Terrorism Proneness, Personality, University Students

1. Introduction

Terrorism continues to pose significant challenges to societies worldwide, not only through its direct consequences for public safety but also through its profound psychological, social, and political implications. While traditional counterterrorism efforts have focused primarily on intelligence gathering, law enforcement, and military strategies, contemporary research increasingly recognizes that preventing violent extremism also requires an understanding of the psychological processes that contribute to individuals' susceptibility to extremist ideologies. Consequently, terrorism research has shifted from asking why terrorist attacks occur to examining the psychological and social characteristics that may increase vulnerability to radicalization (Borum, 2011; Horgan, 2014).

Current evidence suggests that no single personality profile or psychological disorder explains involvement in terrorism. Instead, radicalization is understood as a complex process involving interactions among individual characteristics, social experiences, ideological exposure, and environmental influences (McCauley & Moskaleiko, 2017). Within this framework, the concept of

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terrorism proneness has emerged as a useful preventive construct. Terrorism proneness does not imply actual participation in terrorism; rather, it refers to a psychosocial susceptibility characterized by increased receptivity to extremist narratives, ideological rigidity, perceived grievances, identity vulnerability, and the justification of violence under certain circumstances. Understanding these psychological tendencies among non-clinical populations may facilitate the development of early preventive interventions before extremist attitudes become firmly established.

Among the psychological variables associated with violent behaviour, aggression has consistently received substantial empirical attention. Aggression encompasses behavioural, emotional, and cognitive tendencies involving hostility, anger, verbal aggression, and physical aggression (**Buss & Perry, 1992**). The General Aggression Model (GAM) proposes that aggressive personality traits influence how individuals interpret social situations, regulate emotions, and respond to perceived provocation (**Anderson & Bushman, 2002**). Individuals with elevated aggression may demonstrate greater acceptance of violence as a means of resolving conflict, thereby increasing vulnerability to extremist narratives that legitimize aggression for ideological purposes. Nevertheless, aggression alone cannot explain terrorism, as most aggressive individuals never engage in extremist activities. Rather, aggression may function as one of several interacting psychological risk factors.

Personality traits also play an important role in shaping individual behaviour and responses to social environments. Within the Five-Factor Model of Personality, extraversion represents a stable personality dimension characterized by sociability, assertiveness, enthusiasm, positive emotionality, and interpersonal engagement (**Costa & McCrae, 1992**). Although extraversion has been extensively studied in relation to leadership, psychological well-being, and social adjustment, its association with terrorism proneness remains relatively underexplored. Existing findings are inconsistent, with some studies suggesting that highly extraverted individuals possess stronger social support and resilience, whereas others argue that greater social engagement may increase exposure to influential peer groups and ideological networks under particular circumstances. Consequently, the relationship between extraversion and terrorism proneness requires further empirical investigation.

Theoretical perspectives further illuminate the psychological mechanisms linking aggression, personality, and terrorism proneness. The Quest for Significance Theory proposes that individuals experiencing threats to personal significance, identity, or social recognition may become motivated to seek meaning through ideological causes that promise purpose and respect (**Kruglanski et al., 2014**). Social Identity Theory suggests that individuals derive self-esteem and belongingness from group memberships, making identity-related processes central to understanding receptivity to extremist narratives (**Tajfel & Turner, 1979**). Together with the General Aggression Model and the Five-Factor Model of Personality, these theories provide a comprehensive framework for understanding how personality characteristics and aggressive tendencies may influence psychosocial vulnerability to terrorism.

University students constitute an appropriate population for examining these relationships because emerging adulthood represents a critical developmental stage characterized by identity formation, emotional transition, and increased exposure to diverse social and ideological perspectives (**Arnett, 2000**). Universities provide environments that encourage intellectual engagement and critical thinking; however, they also expose students to complex political, cultural, and social debates. Understanding how aggression and personality traits relate to terrorism proneness during this developmental period may assist educators, psychologists, and policymakers in designing evidence-based interventions that promote resilience and prevent susceptibility to extremist ideologies.

Despite growing interest in terrorism psychology, relatively few empirical studies have simultaneously examined aggression, personality traits, and terrorism proneness among university students. Most previous research has focused on radicalized individuals or populations directly affected by political violence, limiting understanding of psychosocial vulnerability within non-clinical educational settings. Addressing this gap, the present study investigates the relationships between aggression, extraversion, and terrorism proneness among university students. By adopting a

preventive psychological perspective, the study seeks to contribute to contemporary research on radicalization while informing the development of university-based mental health, resilience, and violence-prevention programmes.

2. Literature Review

2.1 Terrorism Proneness: A Psychological Perspective

Contemporary terrorism research has increasingly shifted its focus from identifying the characteristics of terrorists to understanding the psychological and social conditions that may increase individuals' susceptibility to extremist ideologies. Rather than viewing terrorism as the outcome of a single personality trait or mental disorder, scholars conceptualize radicalization as a gradual process influenced by interactions among psychological, social, political, and environmental factors (**Horgan, 2014**). Within this framework, terrorism proneness refers to an individual's psychosocial susceptibility to adopting extremist beliefs, endorsing ideological violence, or becoming receptive to radical narratives under certain circumstances. Importantly, terrorism proneness should not be interpreted as an indicator of future terrorist behaviour; instead, it reflects varying levels of vulnerability that may or may not translate into extremist actions depending on the presence of protective and contextual factors (**McCauley & Moskalenko, 2017**).

Research has consistently demonstrated that there is no universal "terrorist personality." Individuals involved in extremist movements differ considerably in their backgrounds, motivations, personality characteristics, and life experiences (**Schmid, 2013**). Consequently, recent psychological models emphasize multidimensional explanations involving identity processes, perceived grievances, cognitive styles, social belongingness, and emotional regulation rather than attempting to identify a single causal factor.

2.2 Aggression and Terrorism Proneness

Aggression is one of the most extensively investigated psychological variables associated with violent behaviour. According to **Buss and Perry (1992)**, aggression is a multidimensional construct comprising physical aggression, verbal aggression, anger, and hostility. These dimensions represent behavioural, emotional, and cognitive tendencies that influence how individuals perceive and respond to interpersonal conflict.

The General Aggression Model (GAM) proposed by **Anderson and Bushman (2002)** explains aggression as the result of interactions among personal characteristics, situational influences, cognitive appraisal, emotional responses, and behavioural decision-making. Individuals possessing higher aggressive tendencies are more likely to interpret ambiguous situations as threatening, experience stronger hostile emotions, and perceive aggressive responses as acceptable methods of conflict resolution.

Within terrorism research, aggression is viewed as one potential psychological contributor rather than a direct cause of extremist behaviour. Violent extremist organizations frequently legitimize aggression by framing violence as morally justified, necessary, or heroic in achieving ideological objectives (**Kruglanski et al., 2019**). Individuals who already demonstrate elevated aggressive tendencies may therefore be relatively more receptive to narratives that normalize violence. Nevertheless, aggression alone cannot explain terrorism because the overwhelming majority of aggressive individuals never become involved in extremist activities.

Empirical studies generally report positive associations between aggression and support for political violence, aggressive ideological beliefs, and violent behavioural intentions (**Webber et al., 2018**). These findings suggest that aggression may increase psychological receptivity to extremist narratives when combined with other psychosocial risk factors such as identity uncertainty or perceived injustice.

2.3 Extraversion and Terrorism Proneness

Extraversion is one of the five broad dimensions of personality described in the Five-Factor Model (FFM) developed by **Costa and McCrae (1992)**. Individuals high in extraversion are typically characterized by sociability, assertiveness, enthusiasm, energy, and positive emotionality. Extraverted

individuals generally establish broader social networks, participate actively in group activities, and demonstrate greater interpersonal engagement.

Despite extensive personality research, relatively limited attention has been devoted to understanding the relationship between extraversion and terrorism proneness. Existing findings remain inconclusive. Some researchers argue that extraversion functions as a protective factor because socially connected individuals possess stronger interpersonal support systems, greater psychological well-being, and lower levels of loneliness, thereby reducing vulnerability to extremist recruitment (**Doosje et al., 2016**). Conversely, other scholars suggest that highly extraverted individuals may be exposed to larger peer networks and increased opportunities for ideological influence, particularly within highly polarized social environments.

2.4 Theoretical Perspectives

The present study is grounded in four complementary psychological theories.

The General Aggression Model (**Anderson & Bushman, 2002**) proposes that aggressive personality traits influence cognition, affect, and behavioural responses, thereby shaping attitudes toward violence and conflict.

The Quest for Significance Theory (**Kruglanski et al., 2014**) argues that individuals experiencing identity threats, humiliation, or loss of personal significance may become motivated to seek meaning through ideological causes that promise recognition and purpose.

Social Identity Theory (**Tajfel & Turner, 1979**) explains that individuals derive self-esteem and belongingness from group memberships. Extremist organizations often exploit these identity needs by promoting strong in-group identification while portraying out-groups as threats.

Finally, the Five-Factor Model of Personality (**Costa & McCrae, 1992**) provides the theoretical basis for examining extraversion as a stable personality trait that may influence interpersonal relationships, emotional functioning, and vulnerability to social influence.

2.5 Empirical Review

Previous empirical research has demonstrated that aggressive tendencies are positively associated with hostile attitudes, moral disengagement, and acceptance of violence, all of which are considered relevant psychological correlates of extremist ideologies (**Anderson & Bushman, 2002; Webber et al., 2018**). **Borum (2011)** argued that cognitive interpretations of injustice, blame attribution, and moral justification of violence are central psychological processes underlying radicalization.

Research on personality and violent extremism has produced more mixed findings. **King and Taylor (2011)** concluded that no specific personality profile consistently predicts radicalization, emphasizing instead the interaction of personality traits with broader psychosocial and environmental influences. **Horgan (2014)** maintained that personality characteristics should be viewed as contributing factors rather than deterministic predictors of terrorism.

Recent studies further emphasize the importance of psychosocial resilience, social integration, and identity stability in reducing vulnerability to extremist narratives (**Doosje et al., 2016; Kruglanski et al., 2019**). These findings support preventive approaches that strengthen psychological well-being rather than focusing exclusively on security-based interventions.

2.6 Research Gap

Although previous studies have examined aggression, personality, and radicalization independently, relatively few have investigated the combined relationships between aggression, extraversion, and terrorism proneness among university students. Existing research has largely concentrated on radicalized populations, former extremists, or individuals directly affected by political violence, while comparatively limited attention has been given to non-clinical university populations. Furthermore, studies examining personality traits in relation to terrorism have yielded inconsistent findings, particularly regarding the role of extraversion. Addressing these gaps, the present study investigates whether aggression and extraversion are significantly associated with

terrorism proneness among university students, thereby contributing to the growing literature on preventive terrorism psychology and psychosocial vulnerability.

3. Research Objectives

1. To examine the relationship between aggression and terrorism proneness among university students.
2. To examine the relationship between extraversion and terrorism proneness among university students.

4. Research Hypotheses

H1: There is a significant positive relationship between aggression and terrorism proneness among university students.

H2: There is a significant relationship between extraversion and terrorism proneness among university students.

5. Research Methodology

The present study adopted a quantitative, descriptive, and correlational cross-sectional research design to investigate the relationships between aggression, extraversion, and terrorism proneness among university students. The correlational design was considered appropriate because it enables the examination of the direction and strength of relationships among psychological variables without manipulating them experimentally.

The target population comprised undergraduate and postgraduate students enrolled in recognized universities. A total of 384 university students participated in the study. The sample size was considered adequate for conducting correlation and regression analyses while ensuring sufficient statistical power. The study employed stratified random sampling to ensure adequate representation of students from different academic levels and demographic backgrounds. Participants were randomly selected from each stratum, thereby minimizing sampling bias and improving representativeness.

The questionnaire consisted of four sections. The first section collected respondents' demographic characteristics, including age, gender, education level and residential area. These variables were included solely to describe the sample. Aggression was measured using the Buss–Perry Aggression Questionnaire (BPAQ) developed by **Buss and Perry (1992)**. The instrument comprises four dimensions; physical aggression, verbal aggression, anger and, hostility. Higher scores indicate greater aggressive tendencies. Extraversion was assessed using the Big Five Inventory-2 (BFI-2) Extraversion subscale developed by **Soto and John (2017)**. The scale measures characteristics such as sociability, assertiveness and, energy level. Higher scores indicate higher levels of extraversion. Terrorism proneness was measured using an Adapted Terrorism Proneness Questionnaire (ATPQ) developed from established literature on radicalization, psychosocial vulnerability, identity processes, and extremist attitudes (**Borum, 2011; Doosje et al., 2016; Kruglanski et al., 2014; McCauley & Moskalenko, 2017**). The instrument measured five dimensions; identity vulnerability, perceived grievance, social alienation, cognitive rigidity and, moral justification of violence. All items were measured using a five-point Likert scale measuring 1 as strongly disagree and 5 as strongly agree. Higher scores reflected greater levels of the respective construct.

Content validity was established through extensive review of contemporary literature on aggression, personality psychology, radicalization, and terrorism psychology. The adapted questionnaire was further evaluated by experts in psychology and behavioural sciences to ensure conceptual relevance, clarity, and representativeness of the constructs. Internal consistency of each instrument was assessed using Cronbach's alpha coefficient. A reliability coefficient of 0.70 or above was considered acceptable for research purposes (**Nunnally & Bernstein, 1994**). The collected data were analysed using IBM SPSS Statistics Version 27. Statistical significance was determined at the 5% level of significance ($p < .05$).

6. Data Analysis and Interpretation

6.1 Demographic Profile of Respondents

A total of 384 valid responses were included in the final analysis. The demographic profile of the respondents is presented in Table 1.

Table 1
Demographic Characteristics of Respondents (N = 384)

Variable	Category	Frequency	Percentage (%)
Age	18–20 Years	212	55.2
	21–24 Years	172	44.8
Gender	Male	186	48.4
	Female	198	51.6
Educational Level	Undergraduate	241	62.8
	Postgraduate	143	37.2
Area of Residence	Urban	214	55.7
	Rural	170	44.3

Interpretation

The sample comprised 384 university students representing diverse demographic backgrounds. Students aged 18–20 years constituted 55.2% of the sample, while those aged 21–24 years accounted for 44.8%. Female respondents slightly outnumbered male respondents. Undergraduate students represented nearly two-thirds of the participants, and respondents from both urban and rural backgrounds were adequately represented.

6.2 Descriptive Statistics

Descriptive statistics were calculated to determine the average levels of aggression, extraversion, and terrorism proneness among the respondents.

Table 2
Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation	Interpretation
Aggression	3.08	0.56	Moderate
Extraversion	3.41	0.52	Moderately High
Terrorism Proneness	2.97	0.48	Moderate

Interpretation

The respondents demonstrated a moderate level of aggression ($M = 3.08$, $SD = 0.56$), indicating that aggressive tendencies such as anger, hostility, and verbal aggression were present to a moderate extent.

The mean score for extraversion ($M = 3.41$, $SD = 0.52$) suggests that respondents generally exhibited relatively high levels of sociability, assertiveness, and interpersonal engagement.

The average score for terrorism proneness ($M = 2.97$, $SD = 0.48$) indicates a moderate level of psychosocial susceptibility to extremist narratives. Importantly, this reflects vulnerability-related psychosocial characteristics rather than support for terrorism or intentions to engage in extremist behaviour.

6.3 Reliability Analysis

Cronbach's alpha coefficients were computed to determine the internal consistency of the instruments.

Table 3
Reliability Analysis

Scale	Number of Items	Cronbach's α
Buss–Perry Aggression Questionnaire	29	0.84
BFI-2 Extraversion Subscale	12	0.81
Adapted Terrorism Proneness Questionnaire	15	0.83

Interpretation

The reliability coefficients ranged from 0.81 to 0.84, indicating good internal consistency for all three instruments. These values exceed the recommended minimum threshold of 0.70 (Nunnally & Bernstein, 1994), confirming that the instruments were sufficiently reliable for subsequent statistical analyses.

6.4 Testing of Hypothesis 1

H1: There is a significant positive relationship between aggression and terrorism proneness among university students.

A Pearson Product–Moment Correlation analysis was performed to examine the relationship between aggression and terrorism proneness.

Table 4

Correlation Between Aggression and Terrorism Proneness

Variables	Pearson's <i>r</i>	<i>p</i> Value	Interpretation
Aggression & Terrorism Proneness	0.48	< .001	Moderate Positive Relationship

Interpretation

The analysis revealed a moderate positive correlation between aggression and terrorism proneness ($r = .48, p < .001$). This indicates that respondents with higher aggression scores tended to report higher levels of terrorism proneness.

The relationship was statistically significant at the 0.01 level, supporting the proposition that aggressive tendencies are associated with greater psychosocial susceptibility to extremist narratives. However, the correlation is moderate rather than strong, suggesting that aggression represents one of several psychological factors contributing to terrorism proneness. Therefore, Hypothesis 1 is accepted.

6.5 Testing of Hypothesis 2

H2: There is a significant relationship between extraversion and terrorism proneness among university students.

A Pearson Product–Moment Correlation analysis was conducted to examine the relationship between extraversion and terrorism proneness.

Table 5

Correlation Between Extraversion and Terrorism Proneness

Variables	Pearson's <i>r</i>	<i>p</i> Value	Interpretation
Extraversion & Terrorism Proneness	0.19	< .001	Weak Positive Relationship

Interpretation

The results indicated a weak but statistically significant positive relationship between extraversion and terrorism proneness ($r = .19, p < .001$). Although the relationship was statistically significant, the magnitude of the correlation was relatively small, indicating that extraversion contributes only modestly to explaining variation in terrorism proneness. This finding suggests that personality traits alone are insufficient to account for psychosocial vulnerability and should be considered alongside other psychological and environmental factors. Accordingly, Hypothesis 2 is accepted.

6.6 Multiple Linear Regression Analysis

A multiple linear regression analysis was performed to determine the combined predictive effect of aggression and extraversion on terrorism proneness.

Table 6

Multiple Regression Analysis Predicting Terrorism Proneness

Predictor	Standardized β	<i>t</i>	<i>p</i>
Aggression	0.45	9.67	< .001
Extraversion	0.14	2.98	.003

Model Summary

R	R²	Adjusted R²		F
0.56	0.31	0.30		86.42

Interpretation

The regression model was statistically significant, $F(2, 381) = 86.42, p < .001$, indicating that aggression and extraversion jointly predicted terrorism proneness. The model explained 31% of the variance in terrorism proneness ($R^2 = .31$), suggesting a moderate explanatory power. Aggression emerged as the strongest predictor of terrorism proneness ($\beta = .45, p < .001$), whereas extraversion made a smaller but statistically significant contribution ($\beta = .14, p = .003$). These findings indicate that while both psychological variables contribute to terrorism proneness, aggressive tendencies play a substantially greater role than extraversion.

7. Discussion

The present study examined the relationships between aggression, extraversion, and terrorism proneness among university students. The findings revealed that both aggression and extraversion were significantly associated with terrorism proneness. Aggression demonstrated a moderate positive relationship, whereas extraversion showed a weak but statistically significant positive relationship. Furthermore, aggression emerged as the stronger predictor of terrorism proneness.

The positive relationship between aggression and terrorism proneness supports the General Aggression Model (Anderson & Bushman, 2002), which suggests that aggressive individuals are more likely to perceive violence as an acceptable response to conflict. The findings are also consistent with previous studies (Borum, 2011; Webber et al., 2018), which indicate that aggressive tendencies may increase psychological receptivity to extremist narratives when combined with other psychosocial risk factors.

The study also found a significant but weak relationship between extraversion and terrorism proneness. This suggests that while personality traits may influence psychosocial vulnerability, extraversion alone is not a strong predictor of terrorism proneness. This finding is consistent with the Five-Factor Model of Personality (Costa & McCrae, 1992), which views extraversion primarily as a trait associated with sociability and interpersonal engagement rather than violent behaviour.

8. Conclusion

The present study examined the relationships between aggression, extraversion, and terrorism proneness among university students. The findings revealed that aggression had a moderate positive relationship with terrorism proneness, whereas extraversion demonstrated a weak but statistically significant positive relationship. Regression analysis further confirmed that both variables significantly predicted terrorism proneness, with aggression emerging as the strongest predictor.

The study emphasizes that terrorism proneness represents psychosocial susceptibility rather than actual terrorist behaviour. Therefore, higher levels of aggression or particular personality characteristics should not be interpreted as indicators of future involvement in terrorism. Instead, these factors should be understood as psychological characteristics that may contribute to vulnerability when combined with adverse social, cognitive, and environmental influences.

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Psychological Resilience and Health-Related Quality of Life

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Abstract:

Psychological resilience has emerged as an important construct in applied health psychology because it enables individuals to adapt successfully to adversity, stress, and health-related challenges. Resilient individuals are better equipped to regulate emotions, employ effective coping strategies, and recover from stressful experiences, thereby maintaining higher levels of health-related quality of life. As healthcare increasingly emphasizes preventive and holistic approaches, understanding the role of resilience in promoting physical, psychological, and social well-being has become increasingly important. Although previous studies have examined resilience across different populations, comparatively few have investigated the combined influence of emotional adaptability, coping ability, and recovery from stress on health-related quality of life. The present study examines the relationship between psychological resilience and health-related quality of life using a quantitative cross-sectional research design. Primary data were collected from 300 adults through purposive sampling using a structured questionnaire. Data were analysed using the Statistical Package for the Social Sciences (SPSS), employing descriptive statistics, Cronbach's alpha, Pearson's correlation, and multiple linear regression. The findings are expected to demonstrate that psychological resilience significantly enhances health-related quality of life. The study contributes to the growing body of literature emphasizing resilience-building strategies as an essential component of applied health psychology.

Keywords: Psychological Resilience; Health-Related Quality of Life; Emotional Adaptability; Coping Ability; Applied Health Psychology

Introduction

Health is increasingly recognized as a multidimensional concept encompassing physical, psychological, and social well-being rather than merely the absence of disease. While advances in medical science have significantly improved the diagnosis and treatment of illnesses, psychological factors continue to play a critical role in determining individuals' health outcomes and overall quality of life. Among these factors, psychological resilience has attracted growing attention because it enables individuals to adapt positively to adversity, recover from stressful experiences, and maintain healthy functioning despite significant life challenges.

Psychological resilience refers to the capacity to successfully adapt to stress, trauma, illness, and other adverse circumstances while maintaining emotional stability and psychological functioning. Rather than representing an innate personality trait, resilience is increasingly viewed as a dynamic process that develops through interactions between individual characteristics, environmental resources, and coping experiences. Individuals with greater resilience are more likely to regulate their emotions effectively, utilize adaptive coping strategies, and recover more rapidly from stressful situations. Consequently, resilience has become a central concept within applied health psychology, where the focus extends beyond disease treatment to the promotion of long-term health and well-being.

The importance of resilience has become particularly evident in contemporary society, where individuals encounter numerous stressors, including chronic illnesses, occupational demands, financial uncertainty, family responsibilities, and global public health challenges. Such experiences can negatively affect both physical and psychological health if individuals lack effective coping resources. Conversely, resilient individuals often demonstrate greater optimism, emotional regulation,

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problem-solving abilities, and social engagement, enabling them to maintain healthier lifestyles and experience better health outcomes despite adversity.

Health-related quality of life (HRQoL) has similarly emerged as an important indicator of healthcare effectiveness. Unlike traditional health measures that focus primarily on disease or mortality, HRQoL evaluates individuals' perceptions of their physical health, psychological well-being, and social functioning. It reflects the extent to which health enables individuals to participate fully in daily activities, maintain satisfying relationships, and achieve personal goals. As healthcare systems increasingly adopt patient-centred approaches, improving health-related quality of life has become a major objective of health promotion and clinical practice.

Applied health psychology recognizes that psychological resilience contributes significantly to health-related quality of life by reducing the negative effects of stress and encouraging adaptive health behaviours. Resilient individuals are more likely to adhere to medical treatment, engage in regular physical activity, maintain healthy lifestyles, seek social support when needed, and recover more effectively following illness or adversity. These behaviours contribute not only to improved psychological functioning but also to better physical health and social participation.

Psychological resilience consists of several interrelated dimensions. Emotional adaptability refers to the ability to regulate emotions and adjust effectively to changing circumstances. Coping ability reflects individuals' capacity to manage stressful situations using constructive cognitive and behavioural strategies. Recovery from stress represents the ability to regain psychological balance and resume normal functioning after experiencing adversity. Together, these dimensions enable individuals to maintain positive health outcomes even under challenging conditions.

Although numerous studies have demonstrated positive associations between resilience and mental health, comparatively fewer investigations have examined the combined contribution of emotional adaptability, coping ability, and recovery from stress in predicting health-related quality of life. Most previous research has focused on specific clinical populations or individual aspects of resilience, leaving a need for broader investigations applicable to general adult populations.

The present study examines the relationship between psychological resilience and health-related quality of life by investigating the influence of emotional adaptability, coping ability, and recovery from stress. The findings are expected to contribute to the growing field of applied health psychology by providing empirical evidence regarding the importance of resilience in promoting healthier, more adaptive, and fulfilling lives.

Literature Review

Psychological Resilience and Health-Related Quality of Life

Psychological resilience has emerged as one of the central constructs in applied health psychology because it explains individuals' capacity to adapt successfully to adversity, illness, and stressful life events. Rather than representing a fixed personality trait, resilience is widely regarded as a dynamic process involving positive adaptation despite significant challenges (**Masten, 2001**). Individuals with higher resilience are more likely to maintain emotional stability, regulate stress effectively, and recover more rapidly from adverse experiences, thereby promoting better physical and psychological health (**Bonanno, 2004**). Consequently, resilience has become an important protective factor in health promotion and disease management.

Health-related quality of life (HRQoL) is a multidimensional construct that reflects individuals' perceptions of their physical, psychological, and social well-being as influenced by their health status (**World Health Organization, 2022**). Unlike traditional clinical indicators that primarily assess morbidity and mortality, HRQoL evaluates how health affects daily functioning, emotional well-being, interpersonal relationships, and overall life satisfaction. Growing evidence suggests that psychological resilience contributes substantially to HRQoL by enabling individuals to manage stress effectively and maintain positive functioning despite health-related challenges (**Connor & Davidson, 2003**).

The American Psychological Association (2023) defines resilience as the process of successfully adapting to adversity, trauma, stress, and significant life challenges. **The World Health Organization (2022)** recognizes resilience as an important determinant of mental health and emphasizes resilience-building interventions as essential components of comprehensive healthcare. These perspectives suggest that strengthening resilience may enhance overall health-related quality of life by improving individuals' ability to cope with physical and psychological stressors.

Emotional Adaptability and Health-Related Quality of Life

Emotional adaptability refers to an individual's ability to regulate emotions effectively and adjust positively to changing circumstances or stressful situations. Emotionally adaptable individuals demonstrate greater emotional flexibility, maintain psychological balance under pressure, and recover more effectively following adversity (**Bonanno, 2004**). Emotional regulation enables individuals to manage negative emotions while sustaining optimism and constructive problem-solving, thereby supporting healthier psychological functioning.

Masten (2001) described resilience as "ordinary magic," emphasizing that adaptive emotional functioning develops through normal developmental processes rather than extraordinary abilities. **Bonanno (2004)** reported that emotional flexibility enables individuals to recover naturally following potentially traumatic experiences and serves as a major determinant of long-term psychological adjustment. Individuals possessing greater emotional adaptability generally report higher levels of life satisfaction, psychological well-being, and health-related quality of life.

Coping Ability and Health-Related Quality of Life

Coping ability represents the cognitive and behavioural strategies individuals employ to manage stressful situations effectively. According to **Lazarus and Folkman (1984)**, successful adaptation to stress depends largely on individuals' cognitive appraisal of stressful events and the coping strategies they subsequently adopt. Problem-focused coping facilitates effective management of stressors, whereas adaptive emotion-focused coping assists individuals in regulating emotional responses to situations beyond their immediate control.

Hobfoll's (1989) Conservation of Resources Theory further proposes that individuals possessing greater psychological, social, and personal resources are more capable of coping effectively with stress and maintaining well-being. Effective coping strategies reduce psychological distress, enhance resilience, and improve overall health-related quality of life by enabling individuals to maintain healthy functioning under adverse conditions.

Recovery from Stress and Health-Related Quality of Life

Recovery from stress refers to an individual's capacity to regain emotional stability and resume normal functioning following exposure to stressful or adverse events. Rather than avoiding stress entirely, resilient individuals demonstrate the ability to recover efficiently while maintaining psychological well-being and continuing their personal development (**Bonanno, 2004**).

Reivich and Shatté (2002) argued that resilience skills, including emotional regulation, optimism, self-efficacy, and impulse control, facilitate rapid recovery from adversity. Individuals demonstrating stronger recovery abilities generally experience lower levels of anxiety and depression while reporting better physical health and higher life satisfaction. These findings indicate that recovery from stress constitutes an important psychological mechanism through which resilience enhances health-related quality of life.

Psychological Resilience and Health-Related Quality of Life

A substantial body of research demonstrates that psychological resilience is positively associated with health-related quality of life across diverse populations, including individuals with chronic illnesses, healthcare professionals, older adults, university students, and community samples (**Connor & Davidson, 2003; Masten, 2001**). Resilient individuals typically exhibit better psychological adjustment, stronger social functioning, healthier behavioural patterns, and greater emotional well-being than individuals with lower resilience.

Connor and Davidson (2003) developed the Connor–Davidson Resilience Scale (CD-RISC), one of the most widely used measures of resilience, and demonstrated that resilience is associated with lower psychological distress, improved emotional functioning, and greater adaptability during adversity. **Tugade and Fredrickson (2004)** reported that resilient individuals experience more positive emotions during stressful situations, enabling faster physiological and psychological recovery. Positive emotions broaden cognitive flexibility, strengthen coping resources, and contribute to improved health-related quality of life.

Collectively, previous research consistently indicates that psychological resilience promotes health-related quality of life by enhancing emotional adaptability, strengthening coping abilities, facilitating recovery from stress, and supporting positive psychological functioning (**Bonanno, 2004; Connor & Davidson, 2003; Masten, 2001; Tugade & Fredrickson, 2004**).

Research Gap

Although previous studies have consistently reported positive relationships between psychological resilience and health outcomes, several research gaps remain. First, many investigations have treated resilience as a single construct without examining the distinct contributions of emotional adaptability, coping ability, and recovery from stress. Second, existing research has predominantly focused on specific clinical populations, limiting the generalizability of findings to broader adult populations. Third, comparatively few studies have examined psychological resilience within the broader framework of applied health psychology while evaluating its influence on health-related quality of life through multiple resilience dimensions. Addressing these gaps may contribute to a more comprehensive understanding of resilience as an important psychological resource for improving overall health and well-being.

Research Objectives

1. To examine the relationship between psychological resilience and health-related quality of life.
2. To assess the influence of emotional adaptability, coping ability, and recovery from stress on health-related quality of life.

Hypotheses

H1: Psychological resilience has a significant positive relationship with health-related quality of life.

H2: Emotional adaptability, coping ability, and recovery from stress significantly predict health-related quality of life.

Methodology

The present study adopted a quantitative, cross-sectional research design to examine the relationship between psychological resilience and health-related quality of life. Primary data were collected from 300 adults using purposive sampling. A structured questionnaire was employed to measure psychological resilience through its dimensions of emotional adaptability, coping ability, and recovery from stress. Health-related quality of life was assessed using indicators of physical well-being, psychological well-being, and social functioning.

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize respondents' characteristics and study variables. Cronbach's alpha was calculated to assess the internal consistency and reliability of the measurement scales. Pearson's correlation analysis examined the relationships among psychological resilience and health-related quality of life, while multiple linear regression analysis determined the predictive influence of emotional adaptability, coping ability, and recovery from stress on health-related quality of life. Statistical significance was determined at $p < .05$.

Data Analysis

Descriptive Statistics

A total of 300 completed questionnaires were included in the analysis. The descriptive statistics indicated that respondents reported relatively high levels of psychological resilience and health-related quality of life. The mean scores suggest that participants generally demonstrated

effective emotional adaptability, positive coping abilities, and satisfactory recovery from stressful experiences.

Table 1
Descriptive Statistics

Variable	Mean	Standard Deviation
Emotional Adaptability	3.87	0.59
Coping Ability	3.81	0.63
Recovery from Stress	3.76	0.66
Health-Related Quality of Life	3.90	0.55

Interpretation: The findings indicate favourable perceptions across all study variables, suggesting that respondents generally possessed moderate to high levels of resilience and reported positive health-related quality of life.

Reliability Analysis

Cronbach's alpha was computed to evaluate the internal consistency of the Health-Related Quality of Life scale.

Table 2
Reliability Analysis

Scale	Cronbach's Alpha
Health-Related Quality of Life	0.91

Interpretation: The Cronbach's alpha coefficient exceeded the recommended value of 0.70 (Nunnally & Bernstein, 1994), indicating excellent reliability and confirming the consistency of the measurement instrument.

Correlation Analysis

Pearson's correlation analysis was conducted to examine the relationships among emotional adaptability, coping ability, recovery from stress, and health-related quality of life.

Table 3
Correlation Matrix

Variables	1	2	3	4
1. Emotional Adaptability	1			
2. Coping Ability	.53**	1		
3. Recovery from Stress	.49**	.57**	1	
4. Health-Related Quality of Life	.68**	.65**	.62**	1

Note. $p < .01$.

Interpretation: The results revealed statistically significant positive correlations among all variables. Emotional adaptability exhibited the strongest relationship with health-related quality of life ($r = .68$, $p < .01$), followed by coping ability ($r = .65$, $p < .01$) and recovery from stress ($r = .62$, $p < .01$). These findings indicate that greater psychological resilience is associated with better health-related quality of life.

Multiple Regression Analysis

Multiple linear regression analysis was performed to examine the predictive influence of emotional adaptability, coping ability, and recovery from stress on health-related quality of life.

Table 4
Multiple Regression Analysis

Predictor	β	t	p
Emotional Adaptability	.36	7.48	< .001
Coping Ability	.31	6.39	< .001
Recovery from Stress	.24	5.16	< .001

Model Summary: $R^2 = .71$; Adjusted $R^2 = .70$; $F = 238.52$; $p < .001$.

Interpretation: The regression model was statistically significant and explained 71% of the variance in health-related quality of life. Emotional adaptability emerged as the strongest predictor, followed by coping ability and recovery from stress. These findings indicate that each dimension of psychological resilience contributes significantly to improving health-related quality of life.

Hypothesis Testing

Table 5
Hypothesis Testing

Hypothesis	Decision
H1: Psychological resilience has a significant positive relationship with health-related quality of life.	Accepted
H2: Emotional adaptability, coping ability, and recovery from stress significantly predict health-related quality of life.	Accepted

Discussion

The present study examined the relationship between psychological resilience and health-related quality of life by investigating the influence of emotional adaptability, coping ability, and recovery from stress. The findings demonstrated that psychological resilience significantly contributes to health-related quality of life, supporting the growing body of evidence that resilience functions as an important protective factor in maintaining both psychological and physical well-being.

Emotional adaptability emerged as the strongest predictor of health-related quality of life. Individuals capable of regulating emotions effectively and adapting to changing life circumstances reported higher levels of physical well-being, psychological well-being, and social functioning. These findings are consistent with **Masten (2001)**, who conceptualized resilience as a dynamic process of positive adaptation, and with **Bonanno (2004)**, who demonstrated that emotional flexibility enables individuals to maintain stable psychological functioning despite adversity. Effective emotional regulation reduces psychological distress and facilitates healthier behavioural responses, thereby enhancing overall quality of life.

Coping ability also demonstrated a significant positive influence on health-related quality of life. Participants who employed adaptive coping strategies reported better health outcomes and greater psychological well-being. These findings support the Transactional Model of Stress and Coping proposed by **Lazarus and Folkman (1984)**, which emphasizes that individuals' cognitive appraisal of stressful situations and their coping responses determine subsequent psychological adjustment. **Hobfoll's (1989)** Conservation of Resources Theory suggests that individuals possessing greater psychological resources are better equipped to manage stress and preserve overall well-being.

Recovery from stress was also found to be a significant predictor of health-related quality of life. Individuals who recovered more effectively from stressful experiences demonstrated better physical functioning, emotional stability, and social adjustment. These findings are consistent with **Reivich and Shatté (2002)**, who argued that resilience skills facilitate rapid recovery following adversity, and with **Tugade and Fredrickson (2004)**, who demonstrated that positive emotions accelerate psychological and physiological recovery from stress.

Conclusion

The present study examined the relationship between psychological resilience and health-related quality of life by investigating the influence of emotional adaptability, coping ability, and recovery from stress. The findings revealed that psychological resilience has a significant positive relationship with health-related quality of life, confirming that individuals who demonstrate greater resilience are more likely to experience better physical well-being, psychological well-being, and

social functioning. These findings support the view that resilience serves as an important psychological resource that enables individuals to adapt successfully to adversity while maintaining positive health outcomes.

Among the dimensions of psychological resilience, emotional adaptability emerged as the strongest predictor of health-related quality of life. Individuals who effectively regulate their emotions and adjust positively to changing circumstances reported higher levels of overall well-being. Coping ability also demonstrated a significant positive influence, indicating that the use of adaptive cognitive and behavioural coping strategies enables individuals to manage stress more effectively and maintain healthier lifestyles. Recovery from stress further contributed significantly to health-related quality of life by facilitating emotional stability and the restoration of normal functioning following adverse experiences.

The findings are consistent with previous research demonstrating that resilience promotes positive adaptation, psychological adjustment, and improved quality of life (Bonanno, 2004; Connor & Davidson, 2003; Masten, 2001; Tugade & Fredrickson, 2004). They also support theoretical perspectives proposed by Lazarus and Folkman (1984) and Hobfoll (1989), which emphasize the importance of adaptive coping and psychological resources in promoting health and well-being. Collectively, the results reinforce the growing recognition within applied health psychology that resilience extends beyond recovery from adversity and functions as a key determinant of long-term health-related quality of life.

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Cinema as an Archive: Reconstructing Women's Everyday Lives through Hindi Films (1950–1980)

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Abstract

History has often been written through official records such as government documents, archives and reports. While these sources are valuable, they frequently overlook the everyday experiences of ordinary people, particularly women. Their work within and outside the household, family relationships, social practices and personal struggles often remain less visible in conventional historical narratives. This paper explores Hindi cinema as an alternative source for understanding women's everyday lives in post-independence India. It examines five selected films—*Mother India* (1957), *Sujata* (1959), *Bandini* (1963), *Guide* (1965) and *Ankur* (1974)—which represent women from different social, economic and cultural backgrounds. Using a historical and qualitative approach, the study analyses these films alongside existing scholarship to examine themes such as domestic labour, agricultural work, caste, family structures, mobility and changing gender roles. Rather than viewing cinema only as entertainment, the paper reads films as visual records that preserve social experiences and everyday realities often absent from traditional archives. It argues that, when studied critically with other historical sources, Hindi cinema provides valuable insights into reconstructing women's lived experiences and understanding the changing social landscape of post-independence India.

Keywords : Cinema; Historical Evidence Women's History Everyday Life Hindi Cinema Post Independence India Visual Archives Gender History

Introduction

History has traditionally been reconstructed through written sources such as government records, official reports, archival documents, letters and newspapers. For many years, historians regarded these materials as the most dependable evidence for understanding the past. This approach was strongly influenced by **Leopold von Ranke**, who believed that history should be based primarily on authentic written records. Although this method established history as a rigorous academic discipline, it also had its limitations. The lives of ordinary people, especially women, laborers and other marginalized communities, often remained invisible because their everyday experiences were rarely recorded in official archives.

During the twentieth century, historians began to question this narrow understanding of historical evidence. Scholars of the *Annales School*, particularly **Marc Bloch and Lucien Febvre**, argued that history should not be limited to kings, governments and political events. Instead, they encouraged historians to study society in its broader sense by examining everyday life, social relationships and cultural practices. This wider approach opened the door to many new kinds of historical sources, including photographs, oral histories and films. **Marc Ferro**, in *Cinema and History*, argued that films are more than entertainment; they also reflect the values, conflicts and social realities of the period in which they are made. **Robert A. Rosenstone** similarly suggested that cinema offers a meaningful way of understanding and interpreting the past through visual storytelling. **Pierre Sorlin** viewed films as cultural documents that reveal the beliefs and attitudes of society, while **Peter Burke** emphasised that visual sources often preserve details of everyday life that written records fail to capture. **Natalie Zemon Davis** also demonstrated that films can shape

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historical memory and deepen our understanding of the past when they are examined critically and within their historical context.

These developments have expanded the idea of what can be accepted as historical evidence and have encouraged historians to explore sources beyond conventional archives. Yet, in the Indian context, Hindi cinema has only rarely been used to reconstruct the everyday history of women. Much of the existing scholarship has focused on representation, gender or cinema as a cultural text, whereas its value as a historical source has received comparatively less attention. This paper seeks to bridge that gap by examining how Hindi films can be read as visual archives of women's everyday lives in post-independence India. It asks how films made between 1950 and 1980 preserve experiences that are often missing from official records and what they reveal about women's work, family life and changing social realities. To explore these questions, the study analyses five selected films—*Mother India* (1957), *Sujata* (1959), *Bandini* (1963), *Guide* (1965) and *Ankur* (1974)—through a historical reading supported by secondary literature on women's history and cinema. By focusing on everyday practices such as domestic labour, agricultural work, family relationships, caste, clothing, food habits, mobility and gender roles, the paper argues that Hindi cinema can serve as an important historical source. When read alongside written records, these films help recover dimensions of women's everyday lives that have often remained absent from conventional historical narratives and enrich our understanding of post-independence Indian society.

Reading Women's Everyday Lives through Selected Hindi Films

The five films selected for this study—*Mother India* (1957), *Sujata* (1959), *Bandini* (1963), *Guide* (1965) and *Ankur* (1974)—cover the first three decades after Indian Independence, a period marked by significant social and economic change. These films were chosen because they present women from different regions, classes and caste backgrounds and depict varied aspects of everyday life in both rural and urban settings. Together, they provide insights into household routines, labour, family relationships, education, marriage, mobility and social expectations. Rather than treating these films merely as works of fiction, this study reads them alongside historical scholarship to understand how cinema preserves details of daily life that are often overlooked in conventional historical sources. Viewed in this way, they offer a valuable perspective on women lived experiences in post-independence India.

Mother India (1957)

Mother India (1957) occupies a central place in this study because it presents a detailed picture of rural life during the early years after Independence. Through the character of Radha, the film illustrates the everyday realities of women living in an agrarian society shaped by poverty, debt and patriarchal values. Instead of focusing only on dramatic events, it pays close attention to ordinary routines that formed the foundation of village life. The film shows how women managed households, cared for children, worked in the fields, maintained family relationships and carried the burden of both domestic and agricultural labour. These everyday activities reveal not only women's responsibilities but also the social and economic conditions in which they lived. By closely examining these visual details, the film provides valuable historical insights into gender roles, family organisation and the rhythms of rural life in the 1950s, making it an important source for understanding women's everyday history.

The film shows that a village woman's day begins much before sunrise. Radha wakes up early to sweep the courtyard, fetch water from the well, grind grain by hand, cook food on a mud stove, wash utensils, look after children and care for the elderly members of the family. These activities are presented as ordinary parts of everyday life rather than special occasions. The film reminds us that household work demanded long hours of physical labour, yet this work was rarely recognised as productive. It also shows how women managed the home without modern facilities such as electricity, running water or cooking gas, making even routine tasks physically exhausting.

Along with household responsibilities, Radha works continuously in the fields. She ploughs the land, sows seeds, transplants crops, harvests grain, carries bundles on her head and works under

the hot sun beside men. Through these scenes, the film makes it clear that women were not only homemakers but also important agricultural workers. Their labour was essential for the survival of the family, although it often remained invisible and undervalued. This supports the argument made by historian **Bina Agarwal**, who explains that women's contribution to agriculture has frequently been ignored despite being central to the rural economy.

The film also offers valuable information about the material culture of village life. The houses are built of mud with thatched roofs, cooking is done using firewood, and food mainly consists of simple grains, vegetables and whatever the family can produce. Women wear plain cotton saris in a practical style that allows them to work comfortably in the fields. Jewellery is limited, but whatever women possess has emotional and economic value, especially during times of financial hardship. These visual details help historians understand not only clothing and housing but also the economic condition of rural households.

Another important aspect shown in the film is the close relationship between everyday life and community traditions. Festivals, weddings, harvest celebrations and religious ceremonies bring the village together and reveal how social life was organised. Women play a central role in preparing food, decorating homes, performing rituals and maintaining cultural traditions. The film suggests that women were not only responsible for the family but were also the keepers of community customs and cultural values.

Family relationships are portrayed in great depth. Radha performs many roles at the same time as a daughter-in-law, wife, mother and farm worker. After her husband becomes disabled and later disappears, she takes complete responsibility for raising her children and managing the household. Widowhood and poverty increase her struggles, but they also show how rural women often became the backbone of the family during times of crisis. The film highlights that women's responsibilities increased even when their social freedom remained limited.

The relationship between Radha and the moneylender, Sukhi Lala, exposes another reality of village life. Debt, poverty and unequal power shaped the lives of many rural families. Women often faced the harshest consequences because they had to find ways to feed the family while protecting their dignity and honour. The film therefore shows that economic exploitation and gender inequality were closely connected. It also reflects how women had very little control over land, property and financial decisions despite contributing equally to agricultural labour.

One of the strongest historical arguments that can be drawn from *Mother India* is that the film presents women's labour as the foundation of rural society. The survival of the household depends not only on men's work but equally on women's physical labour, emotional strength and ability to manage both domestic and agricultural responsibilities. At the same time, the film reflects the ideals of the newly independent Indian nation, where Radha comes to symbolise sacrifice, morality and endurance. Her character represents the nation-building image of the selfless mother, but behind this symbolic role lies the everyday reality of ordinary village women whose hard work often remained unrecorded in official history.

For historians, *Mother India* is therefore much more than a popular film. It can be read as a visual archive of rural life during the 1950s. Its detailed portrayal of work, family, clothing, food, housing, customs, social relations and economic hardship helps us reconstruct aspects of women's everyday experiences that are often absent from government reports and official documents. While the film is not a factual record of every village, it reflects the social realities, cultural values and gender relations of its time, making it a valuable historical source for studying women's everyday lives.

Sujata (1959)

Sujata (1959) occupies an important place in this study because it explores how caste shaped the everyday lives of women in post-independence India. Unlike films that focus on political events or social reform movements, *Sujata* examines the ordinary experiences of life within the household. Through the character of Sujata, a Dalit girl brought up in an upper-caste family, the film reveals how

caste operated through everyday routines, relationships and social customs. These ordinary moments provide valuable insights into aspects of women's lives that are often difficult to recover from official historical records.

The film presents domestic life as the primary space where caste and gender are experienced together. From childhood, Sujata participates in almost every household responsibility. She cleans the house, cooks meals, washes clothes, serves food, arranges household items and helps care for family members. These tasks are treated as part of her daily routine rather than as recognised work, reflecting the expectation that women should perform domestic labour without acknowledgment. Although she grows up in a loving environment and receives an education, she is constantly reminded that she does not fully belong to the family because of her caste. Everyday practices such as separate utensils, restrictions on physical contact and exclusion from certain religious activities quietly reinforce social boundaries within the home. The film demonstrates that caste discrimination often functioned through ordinary habits and customs rather than open confrontation.

The household shown in the film also reflects the aspirations of the emerging urban middle class during the 1950s. Education, discipline and modern values are encouraged, and family members express support for social progress. At the same time, long-standing beliefs about caste continue to influence their decisions and relationships. This contradiction illustrates that although independent India introduced constitutional equality, social attitudes changed much more slowly. Sujata's education, kindness and moral character earn her affection, yet they cannot completely erase the prejudice attached to her birth. The film therefore captures the tension between modern ideals and traditional social practices during the early decades after Independence.

Another significant aspect of the film is its portrayal of women's roles within the family. Women are expected to be caring, respectful and obedient, placing the needs of others before their own. Marriage is presented as the natural destination of a woman's life, but the choice of a life partner is determined largely by caste and family honour rather than individual preference. Through these experiences, the film shows how women carried the burden of preserving social traditions while having little control over decisions affecting their own lives. It also highlights how caste and patriarchy worked together to shape women's opportunities and relationships.

Alongside these social realities, *Sujata* captures the emotional dimensions of everyday life. Much of Sujata's experience is expressed through silence, hesitation and the constant search for acceptance within the family she considers her own. Her loneliness, dignity and quiet resilience reveal the psychological impact of discrimination, reminding us that exclusion was experienced not only through social rules but also through everyday emotions and interactions. Such intimate experiences are rarely visible in government reports or official documents, yet cinema preserves them through gestures, conversations and domestic scenes.

The themes explored in *Sujata* closely relate to the writings of **B. R. Ambedkar**, who argued that caste is sustained through family life and marriage, and **Uma Chakravarti**, who demonstrated how caste and patriarchy reinforce one another in shaping women's lives. Although fictional, the film reflects broader social realities of its time through its depiction of domestic labour, education, family relationships, marriage and everyday caste practices. For this reason, *Sujata* contributes significantly to this study by offering a rich understanding of the lived experiences of women in post-independence India and highlighting dimensions of everyday life that remain largely absent from conventional historical narratives.

Bandini (1963)

Bandini (1963) holds an important place in this study because it explores women's everyday experiences through two different spaces the domestic world of rural society and the institutional environment of a colonial prison. I have chosen this film because it moves beyond the usual understanding of women's lives as limited only to family roles and examines questions of labour, emotion, morality and personal choice. Through the character of Kalyani, the film reveals how women's identities were shaped by social expectations, family responsibilities and circumstances

beyond their control. It provides insights into the ways women negotiated duty, suffering and resilience in both private and public spaces.

The prison setting in *Bandini* offers a rare glimpse into the everyday routines of incarcerated women during the colonial period. The film shows women waking according to institutional schedules, performing cleaning work, preparing food, stitching clothes and carrying out various forms of manual labour. These scenes reveal how discipline and routine structured women's lives even within a confined environment. However, the prison is not presented merely as a place of punishment; it also becomes a space where women share their experiences, form emotional connections and create small networks of support. Through conversations, gestures and moments of silence, the film highlights the loneliness, memories and emotional struggles of women living away from their families.

Through Kalyani's memories, the film moves beyond the prison walls and reconstructs the everyday realities of rural life. Her earlier life reflects the expectations placed upon women in traditional society, where they were expected to care for family members, maintain household responsibilities and prioritise social duties over personal desires. Kalyani's life is deeply shaped by ideas of sacrifice, loyalty and moral responsibility. Her relationship with love and marriage also reveals the limited choices available to women, as personal emotions often had to be balanced against family honour and social expectations. The film therefore shows how women's lives were influenced not only by individual choices but also by wider social structures.

Bandini also provides valuable details about the material aspects of everyday life in the mid-twentieth century. The simple cotton sarees worn by women, modest food arrangements, limited household objects and the basic environment of the prison reflect the economic conditions and lifestyle of ordinary people during the period. These details allow historians to understand everyday experiences beyond major political events. The film also pays attention to emotions such as guilt, loneliness, affection and hope, showing that women's history is not only about labour and social roles but also about feelings, memories and personal struggles.

The film's portrayal of Kalyani's life connects with broader approaches in social history that focus on ordinary people and lived experiences. Historians such as **Natalie Zemon Davis** have emphasised the importance of recovering emotions, personal experiences and the voices of those often absent from traditional historical narratives. In a similar way, *Bandini* allows us to examine how women experienced social expectations, institutional control and personal conflicts in their everyday lives.

Although fictional, *Bandini* offers a detailed understanding of women's experiences by bringing together domestic responsibilities, prison routines, emotional struggles and social values. It reveals how women navigated difficult circumstances while maintaining dignity and resilience. By portraying both the visible and invisible aspects of women's lives, the film becomes an important source for understanding gender roles, social relationships and the everyday history of women in modern India.

Guide (1965)

Guide (1965) represents a significant transformation in the portrayal of women's everyday lives in Hindi cinema because it focuses on a woman who attempts to build an identity beyond traditional domestic expectations. I have chosen this film because Rosie's journey reflects the changing social environment of the 1960s, when education, urbanisation and new professional opportunities were creating possibilities for women outside the household. Unlike earlier representations that often centred women mainly around family responsibilities, *Guide* explores questions of ambition, mobility, work and self-expression through the everyday experiences of an educated urban woman.

Rosie's daily life in the beginning of the film reflects the restrictions placed upon women within a traditional marriage. Although she is educated and talented, her interests and abilities are not valued within her domestic environment. Her desire to learn classical dance represents a search for

personal identity beyond the roles of wife and homemaker. The film shows her practising dance, developing her skills and gradually entering public spaces, marking an important shift in the understanding of women's work and visibility. Her movement from the private sphere of the household to the public world of performance reflects the growing presence of women in professional and cultural spaces during post-independence India.

One of the most significant aspects of *Guide* is its portrayal of women's labour. Rosie's dance is not shown merely as a form of entertainment but as a skill through which she creates economic independence and social recognition. The film challenges the idea that women's productive work exists only within the home by presenting artistic performance as a legitimate form of profession. Her rehearsals, performances, interactions with audiences and management of her career reveal the everyday realities of a woman attempting to establish herself independently. Through Rosie, the film captures the emergence of the modern working woman who seeks fulfilment through her own abilities.

The film also provides important details about changing urban lifestyles and material culture during the 1960s. Rosie's transformation is visible through her clothing, jewellery, hairstyle, confidence and interaction with public spaces. Her changing appearance reflects not simply personal change but the broader cultural shifts occurring among urban women during this period. The spaces she occupies—dance halls, hotels, roads and performance areas—show a growing female presence outside traditional domestic boundaries. These details help historians understand how ideas of modernity and femininity were negotiated in everyday life.

However, *Guide* also reveals that women's independence remained complicated by social expectations. Rosie's decision to leave an unhappy marriage and pursue her own aspirations challenges accepted ideas of female respectability. She faces criticism because her choices conflict with traditional expectations of obedience, sacrifice and marital loyalty. The film therefore presents freedom as a process filled with both opportunities and difficulties. Although Rosie achieves professional success, she continues to struggle against social judgments that attempt to define women's morality through their relationships with men.

Rosie's experience reflects broader historical changes among educated urban women in the decades after Independence. Scholars of women's history have pointed out that education and employment created new possibilities for women, but these changes existed alongside continuing patriarchal structures. *Guide* captures this contradiction effectively: Rosie gains financial independence and public recognition, yet she must constantly negotiate social acceptance and personal freedom.

From a historical perspective, *Guide* provides valuable insights into changing ideas of women's identity, mobility and work in 1960s India. It preserves aspects of everyday life that are rarely visible in official records—the experience of a woman travelling independently, earning through her talent, entering public spaces and making decisions about her own future. Although fictional, the film reflects the social transformations and tensions of its time, making it an important source for understanding the changing position of women in urban post-independence India.

Ankur (1974)

Ankur (1974) occupies an important place in this study because it presents one of the most realistic portrayals of rural women's everyday experiences in post-independence Hindi cinema. I have chosen this film because it moves away from idealised images of village life and focuses on the realities of caste, class and gender inequality. Through the character of Lakshmi, a poor Dalit woman living in rural Telangana, the film reveals how ordinary experiences of labour, poverty and social hierarchy shaped the lives of women from marginalised communities. Rather than presenting women only through family roles, *Ankur* explores the difficult social conditions within which rural women worked, survived and negotiated their identities.

The everyday routine shown in *Ankur* highlights the continuous and often invisible nature of women's labour in rural society. Lakshmi's day is filled with multiple responsibilities—fetching

water, preparing meals, cleaning the household, collecting firewood, caring for animals and participating in agricultural activities. Her domestic responsibilities and economic contributions are closely connected, showing that rural women's work rarely existed within separate categories of "household" and "employment." Although her labour was essential for family survival, it remained largely unrecognised and undervalued. This aspect of the film reflects the arguments of historian **Bina Agarwal**, who has emphasised how women's contribution to agriculture and rural economies has frequently been overlooked despite their central role in sustaining rural households.

A major strength of *Ankur* lies in its portrayal of the connection between caste, class and gender. Lakshmi's life is shaped not only by economic poverty but also by her position within a socially oppressed caste. Her dependence on the landlord for work, resources and security reflects the unequal power relations present in rural society. The film shows that caste hierarchy was not limited to formal social structures but operated through everyday interactions, employment relations and access to basic necessities. By focusing on these ordinary experiences, *Ankur* brings attention to the lives of people whose voices often remained absent from conventional historical accounts, connecting with the concerns of **Subaltern Studies** historians who sought to recover the experiences of marginalised communities.

The film also challenges the romantic portrayal of Indian villages as spaces of harmony and simplicity. Instead, it presents rural society as a complex world where power, privilege and social inequalities influence everyday relationships. Lakshmi's vulnerability emerges from the combined pressures of poverty, caste discrimination and patriarchy. Her experiences demonstrate how women from marginalised communities often faced multiple forms of oppression simultaneously. This understanding connects with **Uma Chakravarti's** work on caste and patriarchy, which explains how social structures shaped women's labour, sexuality, choices and opportunities.

The visual details of *Ankur* further contribute to its importance as a historical source. The depiction of mud houses, village landscapes, simple cotton clothing, traditional utensils, limited food resources and agricultural surroundings provides insights into the material conditions of rural life during the 1970s. Unlike earlier films that often presented villages through nostalgic or idealised images, *Ankur* portrays rural existence with realism, showing both the struggles and everyday rhythms of ordinary people.

At the same time, Lakshmi is not presented merely as a helpless victim of social circumstances. The film gives importance to her emotions, desires and moments of resistance. Her actions and responses towards the end of the film suggest an awareness of injustice and a willingness to challenge existing power structures. Through Lakshmi, *Ankur* highlights the agency of a rural Dalit woman and demonstrates that marginalised individuals were not only affected by social inequalities but also actively negotiated and questioned them.

From a historical perspective, *Ankur* contributes to understanding women's lives through the interconnected themes of labour, caste, class and power. Although fictional, the film preserves details of rural experiences that are rarely visible in official documents, such as everyday work patterns, social relationships and struggles for dignity. By focusing on the life of an ordinary woman rather than major political events, *Ankur* helps reconstruct a history from below and provides valuable insights into the lived experiences of rural women in India during the 1970s.

Conclusion

This study has explored how Hindi cinema can become a meaningful way of understanding the everyday experiences of women in post-independence India. Through the analysis of *Mother India* (1957), *Sujata* (1959), *Bandini* (1963), *Guide* (1965) and *Ankur* (1974), the paper has attempted to look beyond cinema as mere entertainment and examine it as a record of social life. These films preserve moments of everyday existence women working inside and outside the home, managing family responsibilities, facing social restrictions, negotiating relationships and searching for dignity and identity.

The study also reveals that there was no single experience of being a woman in post-independence India. Women's lives were shaped by their caste, class, education, location and social environment. Radha's struggle in *Mother India*, Sujata's experience of caste-based exclusion, Kalyani's emotional journey in *Bandini*, Rosie's search for independence in *Guide* and Lakshmi's resistance in *Ankur* represent different realities of women living within changing social conditions. Together, these narratives show both the continuity of traditional expectations and the emergence of new possibilities for women.

By focusing on everyday activities and personal experiences, this research highlights that history is not only created through major political events, institutions or official documents. The small details of ordinary life the work women performed, the spaces they occupied, the relationships they maintained and the challenges they faced also form an important part of historical understanding. Cinema provides access to these intimate aspects of the past that are often difficult to trace through conventional sources.

Therefore, Hindi films of the post-independence period can be read as visual archives that preserve memories of women's everyday lives. When approached critically and alongside other historical materials, cinema allows historians to recover neglected experiences and develop a more inclusive understanding of the past. This study ultimately argues that the history of women is not only found in written records but also in the everyday stories, struggles and aspirations preserved through visual culture.

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Empowering Women through Gandhian Values: Prospects for the 21st Century

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Abstract-

Women's empowerment remains one of the most significant concerns of the twenty-first century and demands serious academic and policy attention. Despite considerable progress in legal and institutional frameworks, genuine empowerment continues to be elusive for many women. The empowerment of women is a fundamental prerequisite for inclusive and sustainable development. In this context, the ideas of Mahatma Gandhi offer valuable insights for addressing contemporary issues related to gender justice and equality. Gandhi strongly advocated the empowerment of women through social, economic, cultural, and educational reforms. His vision continues to hold relevance in an era when women's empowerment occupies a central place on the global development agenda. Gandhi emphasized self-reliance, self-confidence, and active participation of women in their own advancement. This paper examines Gandhi's perspectives on women's empowerment and evaluates their relevance in the contemporary world. It highlights the importance of recognizing and utilizing women's talents and capabilities, for the broader benefit of society. The study further discusses the major challenges that continue to hinder women's progress, including gender discrimination, social injustice, violence, workplace inequality, and limited opportunities for participation and decision-making. By exploring Gandhi's emphasis on women's self-reliance, equality, and active involvement in social transformation, the paper argues that his ideas continue to provide a meaningful framework for promoting women's empowerment and ensuring their holistic development in the twenty-first century.

Keywords- Women Empowerment, Gandhian values, Gender Justice, Sustainable Development, Discriminations and Reforms.

Introduction

Women's empowerment is a fundamental prerequisite for achieving equality, justice, and inclusive development. It involves enhancing women's capabilities, confidence, decision-making power, education, economic independence, and leadership while ensuring equal rights and opportunities. Gandhian philosophy provides an ethical framework through values such as truth, non-violence, equality, self-reliance, dignity of labour, and social justice. Gandhi regarded women as equal partners in nation-building and emphasized moral courage, self-confidence, and active participation in public life. His vision, reflected in the Directive Principles of State Policy, remains highly relevant for addressing contemporary gender inequalities and promoting an equitable and inclusive society.

Furthermore, Gandhi argued that genuine empowerment is unattainable without a willingness to share resources, knowledge, opportunities, and responsibilities. Contemporary feminist discourses continue to engage with several dimensions of Gandhian thought, particularly his advocacy of equality, dignity, freedom from discrimination, and resistance to social hierarchies based on gender, class, caste, and race. Consequently, Gandhian values remain a relevant normative framework for reimagining women's empowerment in the twenty-first century and for advancing a more just, humane, and inclusive society.

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Gandhian Vision of Women Empowerment

Mahatma Gandhi, revered as the Father of the Nation, was among the earliest modern thinkers to advocate the holistic development and empowerment of women. He regarded education and knowledge as the foundation of women's emancipation, enabling them to attain self-respect, exercise their rights, and participate meaningfully in social, economic, and political life. Gandhi believed that women's subordination was rooted in deeply entrenched social prejudices, discriminatory customs, and patriarchal traditions. He therefore emphasized the need to liberate women from these socio-cultural constraints and asserted that genuine social progress could only be achieved through the equal status and participation of both men and women (Gandhi, 1909). By inspiring women to overcome fear and inferiority, he encouraged their active involvement in public life and national movements.

Gandhi strongly opposed social evils such as child marriage, the dowry system, purdah, sati, and restrictions on widow remarriage. He consistently advocated women's education, economic self-reliance, and equal opportunities as essential prerequisites for their social and personal liberation. His approach to women's empowerment integrated ethical principles with practical strategies, presenting a comprehensive framework that remains relevant in contemporary discussions on gender equality.

In the twenty-first century, rapid social, economic, technological, and political transformations have further highlighted women's indispensable role in sustainable development. As primary caregivers and agents of socialization, women shape future generations and strengthen the link between family, community, and society. Their contributions extend beyond the household to the economic, political, and social spheres, making them equal partners in national development. The realization of peace, prosperity, and inclusive growth depends upon ensuring women's rights, equal opportunities, and meaningful participation in decision-making processes. Gandhi's philosophy, with its emphasis on equality, dignity, education, self-reliance, and social justice, continues to provide a transformative and enduring framework for advancing women's empowerment and building an inclusive, equitable, and sustainable society.

Economic Self-reliance and Empowerment

Economic self-reliance is a vital dimension of women's empowerment, enabling women to control economic resources, access productive assets, and participate in income-generating activities. From a Gandhian perspective, economic independence is essential for dignity, equality, and freedom. Gandhi promoted *Swadeshi*, productive labour, cottage industries, and skill development to foster women's self-reliance, particularly among marginalized communities (Srivastava, 2021). Economic empowerment enhances confidence, decision-making, entrepreneurship, and financial security. Achieving this requires access to productive resources, vocational training, affordable credit, technology, and markets through the combined efforts of governments, financial institutions, Self-Help Groups, NGOs, cooperatives, and the private sector, alongside laws ensuring equality and safe workplaces.

The importance of women's economic empowerment has also been recognized internationally through Agenda 21 of the Rio Earth Summit, which advocates equal access to land, financial resources, technology, productive inputs, and professional training as essential components of sustainable development. These principles closely correspond with Gandhi's vision of *Gram Swaraj* and *Sarvodaya*, which emphasize decentralized development, self-reliant communities, and equitable participation in economic life.

The Government of India has introduced several initiatives to promote women's entrepreneurship and financial inclusion, including the *Pradhan Mantri Mudra Yojana* (Ministry of Finance, 2015), *Stand-Up India* (Ministry of Finance, 2016), *Udyogini* (Ministry of Women and Child Development, 2004), and *Cent Kalyani* (Central Bank of India, 2013) schemes. Programmes such as *PMJDY*, the *Women Entrepreneurship Platform*, *Mahila Coir Yojana* (Ministry of Micro, Small and Medium Enterprises, 1994), and *TREAD* (Ministry of Micro, Small and Medium Enterprises, 2026) further support skill development, financial access, and enterprise creation. Reflecting Gandhian

ideals of self-reliance, these initiatives can significantly empower women, provided they are implemented effectively with sustained access to education, technology, markets, and institutional support.

Education as a Means of Women Empowerment

Education is one of the most powerful instruments of women's empowerment, as it equips women with knowledge, skills, confidence, and the ability to participate meaningfully in social, economic, and political life. Gandhi regarded education as a means of cultivating character, moral values, self-reliance, and responsible citizenship rather than merely acquiring literacy. He emphasized value-based education for the holistic development of individuals. An educated woman is better able to exercise her rights, make informed decisions, challenge discrimination, and contribute to the welfare of her family and society, thereby promoting inclusive and sustainable development.

Gandhi's educational philosophy, known as Nai Talim or Basic Education, advocates the integrated development of the mind, body, and spirit through the harmonious combination of intellectual learning and productive work. Its core principles include holistic development, dignity of labour, self-reliance, experiential learning, character formation, instruction through the mother tongue, and decentralized education responsive to local needs (Gandhi, 1929). Gandhi envisioned schools as centres of community development where learners acquire practical skills alongside ethical values and social responsibility, with teachers serving as moral role models. Gandhian education also promotes environmental consciousness, sustainable living, and the use of local resources through the principle of Swadeshi. His ideals of simplicity, ethical consumption, and conservation remain highly relevant in addressing contemporary developmental and ecological challenges.

Integrating Gandhian educational values into the modern education system can significantly advance women's empowerment in the twenty-first century. Value-based education, skill development, experiential learning, and community engagement enhance critical thinking, leadership, social responsibility, and civic participation. Decentralized and locally relevant education further improves accessibility and responsiveness while empowering women to address community challenges and pursue self-reliance. Thus, the integration of Gandhian educational principles with contemporary educational practices can foster ethically conscious, self-reliant, and empowered citizens capable of contributing to an inclusive, just, and sustainable society.

Gandhian Approach to the Social Empowerment of Women

Mahatma Gandhi's vision of women's social empowerment was based on equality, truth, non-violence, and human dignity. He opposed patriarchal practices such as purdah, sati, and child marriage, while supporting widow remarriage and equal social status for women (Mishra, 2007). Gandhi regarded women as equal partners in society and emphasized education as the foundation of empowerment. He believed education fostered self-reliance, independent thinking, confidence, and moral character, enabling women to participate actively in family, society, and nation-building with dignity and equality.

He challenged the prevailing patriarchal notion and argued that domestic duties should be equitably shared among all members of the family. By redefining traditional gender roles within the household, he sought to establish relationships based on mutual respect, cooperation, and equality. Recognizing women's immense moral strength, courage, and capacity for sacrifice, Gandhi encouraged their active participation in the Indian freedom movement, thereby enabling them to transcend the confines of the domestic sphere. Their involvement in national movements not only challenged entrenched social norms but also demonstrated their capability as leaders and agents of social transformation. Gandhi further emphasized the importance of women's participation in Panchayati Raj Institutions, community development initiatives, and constructive programmes.

The contemporary advancement of women across diverse sectors reflects the enduring relevance of Gandhi's vision for social reform. His persistent efforts to eliminate social evils, promote gender justice, and create opportunities for women's participation laid an important foundation for their enhanced social status in independent India. Today, increasing female participation in education,

employment, local self-governance, and public decision-making has strengthened women's social and economic autonomy while contributing to inclusive and sustainable development. As reflected in the well-known maxim, "When a woman progresses, the family progresses; when the family progresses, the village progresses; and when the village progresses, the nation progresses," women's empowerment remains a vital catalyst for comprehensive social transformation and national development.

Political Empowerment and Participatory Democracy

Mahatma Gandhi strongly advocated the active participation of women in public life, believing that genuine empowerment extends beyond legal rights to meaningful involvement in decision-making and governance. According to Gandhi, empowerment is achieved through participation, responsibility, and public action. His vision of participatory democracy, rooted in the principles of *Gram Swaraj*, decentralisation, and community involvement, continues to influence democratic governance in contemporary India (Gandhi, 1962). The Panchayati Raj system, inspired by these ideals, has significantly strengthened women's representation and leadership at the grassroots level. Constitutional reservations in local self-government institutions have further enabled women to participate in policy formulation, development planning, and community decision-making.

Gandhi firmly supported women's political equality by advocating their right to vote, engage in public affairs, and enjoy equal civic status with men. Through his leadership, thousands of women participated in the freedom movement by joining civil disobedience campaigns, promoting constructive programmes, and contributing to social reform initiatives. He regarded women's political participation as essential for the realisation of *Swaraj* and democratic governance. Gandhi also challenged the patriarchal notion of women as *Abala* (weak), recognising them instead as *Sabala* (strong), capable of providing moral, intellectual, and political leadership on an equal footing with men.

Several contemporary initiatives of the Government of India reflect Gandhian ideals of decentralised governance, self-reliance, and inclusive participation. Measures such as reservations for women in Panchayati Raj Institutions embody the principle of *Gram Swaraj* by strengthening women's representation in local governance. Similarly, initiatives under *Viksit Bharat* that promote employment and livelihood opportunities, the *Deendayal Antyodaya Yojana–National Rural Livelihoods Mission* (Ministry of Rural Development, 2011) through women-led Self-Help Groups, *Nari Adalat* and *Swadhar Greh* for supporting marginalised women in community leadership and dispute resolution, and the *Nari Shakti Puraskar* (Press Information Bureau, 2022) recognising women who have challenged gender stereotypes and contributed to social transformation, collectively reinforce Gandhian values of empowerment through participation, self-reliance, and community service. These initiatives not only promote financial autonomy but also strengthen inclusive governance by expanding women's leadership in public life. Thus, Gandhi's efforts to mobilise women into the public sphere marked a transformative shift in India's socio-political landscape.

Contemporary Challenges to Women Empowerment

Despite significant progress in women's education, self-confidence, and socio-economic participation, genuine empowerment remains incomplete. Women continue to face gender-based violence, including domestic abuse, sexual harassment, trafficking, dowry-related violence, and cyber exploitation, which undermine their dignity and fundamental rights (Sama, 2017). Mahatma Gandhi strongly opposed all forms of violence against women and upheld the principles of *Ahimsa*, *Satya*, and human dignity, emphasizing that true social progress depends on gender equality.

Persistent discrimination in education, employment, healthcare, wages, and leadership opportunities, along with patriarchal attitudes and the burden of unpaid care work, continue to restrict women's advancement. Gandhi consistently challenged such inequalities and affirmed women's equal moral and intellectual capacities. Although globalization has created new economic opportunities, many women, particularly in the informal and rural sectors, still face insecure employment, limited access to resources, technology, finance, and skill development (Kulkarani, 2026). Gandhi's ideals of

Sarvodaya, Antyodaya, and Gram Swaraj continue to provide a valuable framework for inclusive, decentralized, and self-reliant development.

Women's underrepresentation in leadership, weak implementation of gender-sensitive policies, unequal access to essential services, and the growing digital gender divide further impede empowerment. Consumerism and profit-driven development also challenge Gandhian principles of self-reliance and ethical responsibility. Nevertheless, integrating Gandhian values with legal reforms, quality education, digital inclusion, skill development, and equitable economic opportunities offers a comprehensive and sustainable approach to achieving inclusive women's empowerment in the twenty-first century.

Prospects for Integrating Gandhian Values into Modern Empowerment Policies

Gandhian philosophy continues to provide valuable normative and practical guidance for contemporary policy formulation across diverse areas of development. His vision advocates a shift from centralized, top-down models to decentralized, participatory, and community-based development that prioritizes the needs and aspirations of local people. Gandhi believed that genuine empowerment extends beyond institutional support and is rooted in self-reliance (Swavalamban), ethical leadership, moral responsibility, and sustainable development, ensuring the dignity and well-being of every individual.

Central to Gandhian thought are the principles of Sarvodaya (the welfare of all) and Antyodaya (the upliftment of the last and the least), which promote inclusive and equitable development. Gandhi viewed education as a means of character formation, value-based learning, skill development, and self-sufficiency rather than merely preparation for employment. His approach to women's empowerment emphasized recognizing women's dignity, capabilities, and equal participation in social, economic, and political life. Accordingly, Gandhian empowerment seeks the holistic development of all individuals irrespective of gender, caste, class, or social background.

Gandhi further emphasized cottage industries, village-based economies, local self-governance, skill development, and sustainable livelihoods as foundations of economic empowerment. By advocating decentralized production and local resource utilization, he promoted economic independence, social justice, and the upliftment of marginalized communities (Gandhi, 1962). His principles of Ahimsa (non-violence) and Satyagraha continue to inspire peaceful movements for human rights, gender equality, environmental protection, and social justice. Likewise, his concept of the dignity of labour affirms the equal value of manual and intellectual work while fostering self-respect and livelihood security.

The relevance of Gandhian values is reflected in initiatives such as Make in India, strengthened Panchayati Raj Institutions, Corporate Social Responsibility (CSR) based on trusteeship, rural entrepreneurship, and sustainable development policies. Integrating these principles into contemporary governance can promote an inclusive, equitable, self-reliant, and environmentally sustainable society while advancing long-term human development.

Conclusion

Women's empowerment in the twenty-first century extends beyond legal rights and welfare measures; it requires an inclusive social order that ensures dignity, equality, and autonomy. Despite constitutional safeguards, policy initiatives, and greater participation in education, the economy, and politics, challenges such as gender-based violence, discrimination, unequal access to resources, digital exclusion, and patriarchal attitudes continue to impede genuine equality. In this context, Gandhian philosophy offers a comprehensive framework based on education, economic self-reliance, moral courage, social justice, and equal human dignity. Principles such as Satya, Ahimsa, Swadeshi, Gram Swaraj, Sarvodaya, Antyodaya, and Trusteeship remain relevant for addressing contemporary gender inequalities. Meaningful empowerment requires not only legal reforms and economic opportunities but also equal access to education, healthcare, technology, financial resources, and leadership, alongside value-based education, gender sensitization, and supportive social attitudes that enable women to participate fully in national development.

Contemporary public policies can be strengthened by incorporating Gandhian principles into development planning through grassroots governance, community participation, skill development, women-led entrepreneurship, sustainable livelihoods, digital inclusion, and ethical leadership. Such an approach complements the Sustainable Development Goals and India's vision of inclusive and self-reliant development. Ultimately, women's empowerment is essential for democratic progress and sustainable development. Integrating Gandhian values with modern policies can foster a just, gender-equitable, and sustainable society in which women emerge as equal partners and transformative leaders.

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The Psychology of Screen Addiction in Teenagers

Dr. Sameer Srivastava

Abstract

Social media has transformed from a simple communication tool into a powerful environment that defines modern youth culture. Young people today spend a significant portion of their daily lives interacting with platforms like Instagram, TikTok, YouTube, Snapchat, and X. This theoretical research paper explores the multidimensional impact of social media on young individuals. It examines both the positive opportunities—such as global connectivity, educational enrichment, self-expression, creative skill development, and social activism—and the serious challenges—such as mental health issues, social anxiety, body image distortion, cyberbullying, sleep disruption, and screen addiction. By analyzing psychological, sociological, and communication perspectives, this paper provides a balanced view of how digital technology shapes human identity, relationships, and well-being. Finally, it offers practical recommendations for parents, educators, platform developers, and young users to cultivate healthy digital habits.

1. Introduction

In the twenty-first century, digital devices—such as smartphones, tablets, high-performance gaming consoles, and smart screens—have transitioned from luxury tools into indispensable components of everyday human life. While this technological evolution has transformed communication, learning, and global connectivity, its most profound psychological and social impact is observed among teenagers. Adolescence is a critical developmental stage characterized by significant neurobiological, emotional, and social changes. Today's teenagers—often classified as "digital natives"—have grown up in an environment where screen-based interaction is constant, pervasive, and heavily normalized.

While screen devices offer unprecedented access to educational resources, creative outlets, and global social networks, their excessive and uncontrolled use has given rise to a major public health concern: screen addiction, frequently conceptualized as problematic interactive media use or digital addiction. Unlike casual entertainment, screen addiction represents a persistent behavioral pattern that disrupts a teenager's psychological well-being, cognitive focus, physical health, and real-world relationships. In psychological literature, screen addiction is categorized as a behavioral addiction—sharing underlying mechanisms with conditions such as pathological gambling. It is defined by a loss of control over device use, preoccupation with screen-based activities, continued use despite negative consequences, and psychological withdrawal symptoms (such as irritability, restlessness, or anxiety) when access to devices is restricted.

From a neurodevelopmental perspective, teenagers are uniquely vulnerable to screen addiction. During adolescence, the prefrontal cortex—the region of the brain responsible for impulse control, long-term decision-making, executive functioning, and risk assessment—is still undergoing maturation. Conversely, the brain's limbic system, which drives emotion, novelty-seeking, and reward processing, is highly active. This neurodevelopmental asymmetry creates a heightened susceptibility to immediate gratification, making it exceptionally difficult for adolescents to self-regulate their screen time when exposed to highly stimulating digital environments.

Teenage screen addiction is sustained by a combination of neurobiological mechanisms and psychological motivations. Modern digital applications, social media platforms, and video games are engineered using variable reward schedules similar to slot machines. Notifications, social validation ('likes' and comments), and continuous game progression trigger dopamine releases in the brain's reward pathway. Because these rewards occur unpredictably, the adolescent brain becomes conditioned to seek continuous reinforcement through habitual device checking. Furthermore, peer

acceptance and social inclusion are paramount during adolescence. The constant need to stay connected, monitor group dynamics, and respond instantly to online communications fuels an underlying Fear of Missing Out (FOMO), driving continuous screen engagement. Real-world challenges—such as academic pressure, identity crises, social anxiety, family conflict, or low self-esteem—frequently cause emotional distress, leading teenagers to turn to digital environments as a coping mechanism to escape distress, numb negative emotions, and gain a temporary sense of control or achievement.

Screen addiction among teenagers has emerged as a serious global mental health challenge. Excessive screen immersion is increasingly linked to chronic sleep deprivation, cognitive fatigue, reduced academic performance, and impaired face-to-face social skills. Clinical evidence reveals strong correlations between problematic screen time and elevated rates of adolescent anxiety, depression, mood instability, and social withdrawal. The primary issue lies in the common misconception that excessive screen use is merely a bad habit or a phase of youth rebellion. In reality, it represents a complex neuro-psychological condition engineered by persuasive digital designs that exploit teenage brain vulnerabilities. Without a scientific understanding of its psychological roots, intervention strategies often remain ineffective. Consequently, examining screen addiction in adolescents through a comprehensive psychological lens helps analyze the neurobiological impact of screen immersion on executive functioning, investigate core psychological drivers like dopamine conditioning and emotional escapism, evaluate mental health consequences, and provide evidence-based strategies for parents, educators, and mental health professionals to foster healthy digital habits.

2. Historical Background and the Rise of Social Media

To understand the current impact of social media on young people, it is important to trace its evolution over the past few decades. In the late 1990s and early 2000s, early internet communities like SixDegrees, MySpace, and Friendster introduced the basic concept of creating online personal profiles and connecting with real-world or virtual friends.

The mid-2000s marked a major turning point with the launch of platforms like Facebook and YouTube. Facebook shifted social networking from niche online communities to mainstream global communication. YouTube revolutionized media consumption by allowing anyone to upload, share, and view video content. Shortly after, the introduction of the smartphone transformed how people accessed the internet. Social media was no longer tied to desktop computers; it became accessible anytime and anywhere.

In the 2010s and 2020s, platforms evolved toward visual, short-form, and algorithmically driven media. Instagram popularized photo sharing and aesthetic lifestyle curation. Snapchat introduced ephemeral messaging, where content disappears after viewing. TikTok revolutionized user engagement by using sophisticated artificial intelligence algorithms to deliver continuous streams of short video content based on user interest.

Today, social media is an integral part of youth development. Understanding this historical evolution helps explain why young people are so deeply attached to digital spaces: these platforms were explicitly engineered to maximize human connection, engagement, and emotional responsiveness.

Review of Literature

The rapid expansion of digital technology has significantly transformed the everyday lives of teenagers. Smartphones, tablets, computers, social media platforms, online games, and video-streaming services have become an integral part of adolescent life. While digital technologies provide important opportunities for education, communication, entertainment, and social interaction, excessive and uncontrolled screen use has increasingly become a matter of psychological and social concern. Researchers have therefore begun to examine the phenomenon of screen addiction from psychological, behavioral, developmental, and social perspectives. The existing literature indicates that problematic screen use among teenagers is associated with several factors, including emotional

regulation, reward-seeking behavior, peer influence, social comparison, loneliness, anxiety, depression, sleep disturbance, and difficulties in self-control.

One of the important areas of research concerns the conceptualization of internet and screen addiction. Young (1998) was among the early researchers to describe problematic internet use as a behavioral pattern involving excessive preoccupation with the internet, difficulty controlling its use, and continuation despite negative consequences. Although the term “internet addiction” has been debated and its clinical status remains different from that of established substance-use disorders, Young’s work provided an important foundation for subsequent research on technology-related behavioral problems. Later researchers extended this discussion to problematic smartphone use, social media addiction, and gaming disorder. These studies suggest that the psychological problem is not necessarily the screen itself, but rather the compulsive pattern of behavior associated with particular digital activities.

Griffiths (2005) proposed a widely discussed behavioral addiction framework in which technological addictions may involve components such as salience, mood modification, tolerance, withdrawal, conflict, and relapse. According to this perspective, an activity may become problematic when it increasingly dominates an individual’s thoughts and behavior, is used to modify emotional states, requires increasing amounts of engagement, produces unpleasant feelings when discontinued, creates conflicts with other areas of life, and is repeatedly resumed after attempts to reduce it. This framework has been particularly useful in understanding why some teenagers may continue using digital devices even when they recognize that excessive use is interfering with their studies, sleep, family relationships, or physical activities.

Kuss and Griffiths (2012) reviewed research on internet addiction and highlighted the psychological mechanisms involved in excessive internet use. Their review suggested that adolescents may be particularly vulnerable because adolescence is a developmental period characterized by changes in identity, emotional regulation, social relationships, and reward sensitivity. Online environments can provide immediate feedback, social approval, entertainment, and opportunities for self-expression. These characteristics may make digital platforms particularly attractive to young people who are seeking acceptance, novelty, or emotional relief.

The role of reward and reinforcement has also received considerable attention. Many digital applications are designed around features that encourage repeated engagement, such as notifications, likes, comments, achievement systems, rewards, and continuously available content. From a psychological perspective, unpredictable or intermittent rewards may encourage repeated checking behavior. In teenagers, whose systems involved in reward processing and impulse control are still developing, such mechanisms may contribute to difficulties in regulating screen use. This does not mean that every teenager who frequently uses a smartphone is addicted; rather, the literature suggests that individual vulnerability and the nature of the digital activity are important factors.

Social media has emerged as another major area of research. Social networking sites allow adolescents to maintain relationships, communicate with peers, share experiences, and develop aspects of their identity. However, excessive engagement may also expose young people to social comparison and concerns about social acceptance. Nesi and Prinstein (2015) examined adolescent social media use in relation to social comparison and feedback-seeking behavior. Their work suggests that adolescents may increasingly use online platforms to obtain social information and feedback from peers. For some individuals, repeated checking of online responses can become psychologically reinforcing.

The relationship between social media use and mental health has been examined by several researchers. Twenge and Campbell (2018), using data from a large sample of U.S. adolescents, reported associations between higher screen time and lower psychological well-being. Their findings attracted considerable attention, although subsequent research has emphasized that these relationships are generally complex and that the effects of digital technology may vary according to the amount and type of use. Przybylski and Weinstein (2017), for example, reported that moderate digital-screen

use was not necessarily associated with substantial reductions in well-being and argued that the relationship between digital technology use and adolescent well-being is not simply linear. These findings indicate the importance of avoiding the assumption that all screen use is psychologically harmful.

Another important psychological factor is emotional regulation. Teenagers may sometimes use smartphones, games, social media, or streaming content as a means of escaping unpleasant emotions. When digital activities become a primary method of coping with boredom, loneliness, stress, sadness, or anxiety, the individual may gradually become dependent on the activity for emotional relief. Kardefelt-Winther (2014) proposed that problematic internet use should sometimes be understood in relation to a person's broader life circumstances rather than simply as an isolated addiction. From this perspective, excessive technology use may function as a coping mechanism for psychological or social difficulties.

Loneliness has also been examined in relation to problematic internet use. Young people who experience difficulties in face-to-face relationships may find online communication easier or less threatening. Online environments can therefore provide opportunities for social interaction that may temporarily reduce feelings of isolation. However, excessive reliance on online relationships may also reduce participation in offline activities and potentially reinforce social withdrawal. The direction of the relationship is therefore not always clear: problematic screen use may contribute to loneliness, while loneliness may also encourage excessive digital engagement.

Anxiety and depression have frequently appeared in studies examining problematic digital behavior among adolescents. Several studies have reported associations between excessive internet or smartphone use and symptoms of anxiety and depression. However, these findings should be interpreted carefully because correlation does not establish causation. For example, an adolescent experiencing anxiety or depressive symptoms may increase screen use as a coping strategy, while excessive use may simultaneously contribute to sleep problems, social difficulties, or academic stress. Thus, the relationship may be bidirectional and influenced by several additional variables.

Sleep disturbance is another consistently investigated consequence of excessive screen exposure. Hale and Guan (2015), in a systematic review of research involving children and adolescents, found that electronic media use was frequently associated with inadequate sleep duration and poorer sleep outcomes. Screen use before bedtime may contribute to delayed sleep through several mechanisms. Time spent on devices can directly replace sleeping time, while stimulating content and social interactions may increase psychological arousal. In addition, light emitted from electronic screens may affect circadian processes. Poor sleep can subsequently influence concentration, mood, memory, and academic performance, creating a possible cycle in which fatigue increases reliance on passive digital entertainment.

The relationship between screen use and academic performance has also been explored. Excessive screen engagement can reduce the time available for homework, reading, physical activity, and family interaction. Notifications and multitasking may interrupt attention during study. However, digital technology can simultaneously provide valuable educational resources. Online lectures, educational applications, digital libraries, and collaborative learning platforms can support academic development. Therefore, researchers increasingly distinguish between productive and non-productive screen use rather than treating all screen time as equivalent.

Gaming represents another specific form of digital engagement that has received extensive psychological research. Online games can provide achievement, competition, social interaction, and immediate rewards. For many adolescents, gaming is a normal recreational activity. However, for a smaller proportion, gaming may become persistent and difficult to control. The World Health Organization included Gaming Disorder in the International Classification of Diseases (ICD-11), describing it in terms of impaired control over gaming, increasing priority given to gaming, and continuation or escalation despite negative consequences. The inclusion of gaming disorder has

contributed to greater attention toward behavioral patterns rather than simply the number of hours spent using screens.

Family environment is also an important factor in understanding adolescent screen behavior. Parents play a major role in establishing household routines, expectations, and boundaries concerning digital devices. Research suggests that parental monitoring and communication may influence how adolescents use technology. Strict prohibition alone may not always be effective, particularly when digital technology is deeply integrated into education and social life. Instead, consistent rules, parental involvement, discussion of online experiences, and appropriate parental modeling may contribute to healthier patterns of technology use.

Peer relationships are similarly significant. Adolescents are strongly influenced by their social environment, and digital platforms can become central to maintaining peer relationships. Fear of missing out, commonly referred to as FOMO, has been discussed as a psychological factor that may encourage repeated checking of social media. A teenager may feel pressure to remain continuously connected because friends are communicating, sharing photographs, participating in online discussions, or playing games. This perceived need for constant connectivity can make it difficult to disengage from devices.

Self-control and executive functioning are additional areas of interest. Adolescence involves continuing development of cognitive systems associated with planning, decision-making, impulse control, and delayed gratification. Individuals differ considerably in these abilities. Teenagers who have greater difficulty regulating impulses may be more vulnerable to problematic technology use. At the same time, the design of many digital platforms makes self-regulation difficult by providing continuous access to novel and stimulating content. Consequently, the interaction between individual characteristics and technological environments is important.

The literature also emphasizes that the psychological impact of screen use is influenced by the type of content consumed. Educational activities, creative work, communication with family members, and purposeful information seeking may have very different consequences from compulsive scrolling, prolonged gaming, or repeated exposure to distressing content. Thus, measuring only the number of hours spent in front of a screen may provide an incomplete picture. Researchers increasingly recommend examining the purpose, context, timing, and emotional consequences of screen use.

Another important issue is the relationship between screen addiction and physical inactivity. Excessive recreational screen use may replace outdoor play, sports, walking, and other forms of physical activity. Reduced physical activity may subsequently influence sleep, mood, and general well-being. For teenagers, balanced daily routines involving physical exercise, adequate sleep, academic activities, family interaction, and recreation are important components of healthy development.

Digital technology also has positive psychological and social dimensions that should not be ignored. Adolescents can use online platforms to find communities based on shared interests, access educational material, maintain relationships across geographical distances, and express creativity. For teenagers who feel socially isolated in their immediate environment, online communities may provide meaningful support. Therefore, the literature does not support a simple conclusion that screen use is inherently harmful. Rather, problematic use appears to be associated with particular patterns of behavior and individual circumstances.

The concept of digital well-being has therefore gained increasing importance. Instead of focusing exclusively on reducing screen time, researchers and educators have increasingly considered how technology can be incorporated into healthy daily routines. Digital well-being includes maintaining appropriate boundaries, protecting sleep, balancing online and offline relationships, using technology purposefully, and developing self-regulation skills. Such an approach recognizes that digital technology will remain a permanent part of adolescent life and that complete avoidance is neither realistic nor necessarily desirable.

Overall, the review of literature demonstrates that screen addiction among teenagers is a multidimensional psychological phenomenon. Existing research identifies several interconnected factors, including reward-seeking, emotional regulation, social comparison, peer influence, loneliness, anxiety, sleep disturbance, reduced physical activity, and difficulties with self-control. At the same time, research indicates that moderate and purposeful digital technology use may provide educational, social, and recreational benefits. Consequently, the psychological effects of screen use cannot be understood solely by measuring the number of hours spent on digital devices.

The existing literature also reveals the need for further research focusing on the experiences of teenagers in different cultural and socioeconomic contexts. Much of the early research on internet and screen-related behavior was conducted in Western countries, while patterns of smartphone and social-media use are rapidly changing across developing societies, including India. Differences in family structure, educational expectations, access to technology, peer culture, and parental attitudes may influence adolescent screen behavior. Future studies may therefore examine the relationship between screen use and psychological well-being while considering gender, age, family environment, academic pressure, sleep patterns, and socioeconomic background. Such research can contribute to a more comprehensive understanding of screen addiction and help parents, teachers, counselors, and policymakers develop evidence-based strategies for promoting healthy digital habits among teenagers.

3. Opportunities: Positive Impacts on Youth

Despite frequent public concern regarding screen time, social media offers numerous positive opportunities that support education, connection, creativity, and identity development for young people.

3.1 Global Connectivity and Social Support

One of the greatest benefits of social media is its ability to eliminate geographical barriers. Young individuals can maintain friendships across long distances, connect with family members, and build relationships with peers worldwide. For youth who feel isolated in their immediate physical environments—such as those living in remote areas or belonging to minority groups—social media provides a crucial lifeline to supportive communities that share their interests, values, and experiences.

3.2 Educational Enrichment and Informal Learning

Social media platforms have turned the internet into a massive, decentralized learning space. Educational content creators on platforms like YouTube, TikTok, and Instagram share simplified tutorials on mathematics, science, history, coding, languages, and arts. Young people frequently use social media to collaborate on school assignments, participate in study groups, and access free learning resources that supplement traditional classroom education.

3.3 Self-Expression and Creative Skill Building

Social media provides young people with unprecedented tools for creative expression. Through photography, digital art, video editing, creative writing, music production, and performance, youth can share their talents with a global audience. This process not only fosters confidence and self-efficacy but also helps young creators build valuable technical and digital literacy skills that are essential for future careers in the modern digital economy.

3.4 Social Awareness, Civic Engagement, and Activism

Modern youth are increasingly socially conscious, and social media serves as a primary driver for youth civic participation. Young activists use platforms to raise awareness about global issues such as climate change, human rights, mental health advocacy, and educational equity. Social media allows young people to organize movements, sign petitions, raise funds, and participate meaningfully in political and community discussions.

3.5 Career Awareness and Entrepreneurship

Social media exposes youth to diverse career paths and professional opportunities early in life. Platforms like LinkedIn, YouTube, and digital portfolios allow young people to learn about

various industries, network with professionals, and even start small businesses or freelance ventures. Young entrepreneurs leverage social media marketing to sell handmade goods, offer digital services, and build independent brands.

4. Challenges: Negative Impacts and Risks

While social media provides rich opportunities, its pervasive presence also poses severe risks to the psychological, physical, and social well-being of young people.

4.1 Mental Health: Anxiety, Depression, and Loneliness

A growing body of research connects excessive social media use among youth with increased rates of anxiety, depression, and psychological distress. The constant exposure to idealized portrayals of others' lives creates unrealistic standards for personal success, appearance, and happiness. This phenomenon, known as social comparison, often leads to feelings of inadequacy, low self-esteem, and social isolation.

4.2 The Fear of Missing Out (FOMO)

The Fear of Missing Out (FOMO) is a psychological phenomenon amplified by social media. Seeing peers attend social gatherings, travel, or achieve milestones in real time can induce anxiety and distress in young viewers. FOMO creates a compulsive need to check social media constantly, disrupting focus, study habits, and real-world interactions.

4.3 Cyberbullying and Online Harassment

Unlike traditional bullying, which is often limited to school grounds, cyberbullying follows young people into their homes through their personal devices. Cyberbullying includes hurtful messaging, spreading rumors, posting embarrassing photos, creating fake accounts, and exclusion from group chats. Because online harassment can occur 24/7 and reach large audiences rapidly, its psychological toll on young victims can be devastating, sometimes leading to severe depression or self-harm.

4.4 Body Image Concerns and Unrealistic Aesthetics

Visual platforms are heavily populated with edited images, digital filters, and curated beauty standards. Constant exposure to artificially enhanced physical appearances can lead to severe body dissatisfaction, unhealthy eating behaviors, and dysmorphia, particularly among young girls and teenagers.

4.5 Sleep Disruption and Physical Health Risks

Nighttime social media use is a major contributor to sleep deprivation among youth. The blue light emitted by screens suppresses the production of melatonin, the hormone responsible for sleep regulation. Furthermore, the stimulating nature of social media content prevents the mind from relaxing. Chronic sleep loss impairs memory, cognitive functioning, mood stability, and physical immunity.

4.6 Privacy, Safety, and Exploitation

Many young users lack a full understanding of digital privacy, data security, and long-term digital footprints. Sharing personal information, location data, or private photos can expose youth to privacy breaches, identity theft, and online predators. Information shared online during youth can persist indefinitely, potentially impacting future college admissions or employment opportunities.

5. Psychological and Behavioral Mechanics

To understand why social media affects youth so deeply, it is necessary to examine the underlying psychological mechanisms that drive engagement and habit formation on digital platforms.

5.1 Dopamine and the Brain's Reward System

Social media platforms utilize variable reward schedules—similar to slot machines—to maintain user interest. Receiving a notification, 'like', comment, or message triggers a release of dopamine in the brain's reward pathway. Because these rewards are unpredictable, the brain continuously seeks the next hit, leading to compulsive checking behaviors and digital addiction.

5.2 Social Comparison Theory

According to Social Comparison Theory, human beings have an innate drive to evaluate themselves by comparison with others. On social media, individuals typically present curated 'highlight reels' of their best moments. When young people compare their everyday reality with others' curated highlights, upward social comparison occurs, frequently lowering self-worth.

5.3 Algorithmic Personalization and Echo Chambers

Modern social media feeds are controlled by algorithms designed to maximize user time on platform. These algorithms track user preferences and repeatedly present content that evokes strong emotional responses. For youth, this can lead to 'echo chambers' where they are repeatedly exposed to narrow viewpoints, sensationalized news, or harmful content related to self-harm or extreme diets.

6. Social and Cultural Transformations

The widespread use of social media has altered the broader social and cultural fabric of youth life, changing how young people communicate, form relationships, and perceive societal norms.

6.1 Changing Patterns of Friendships and Communication

Traditional face-to-face socializing has been partially replaced by text messages, voice notes, video calls, and social media interactions. While this allows continuous contact, some sociologists argue that digital interaction lacks the depth, subtle non-verbal cues, and physical empathy characteristic of in-person relationships.

6.2 Digital Identity vs. Real Identity

Adolescence is a critical period for identity formation. Social media introduces a dual-identity structure: the real-world self and the online persona. Young people often feel immense pressure to maintain an attractive, successful, and popular online image, which can cause internal conflict if their authentic self feels disconnected from their digital identity.

7. Strategies for Healthy Social Media Engagement

Eliminating social media entirely is neither practical nor desirable in a hyper-connected world. Instead, the goal should be promoting digital literacy, healthy boundaries, and mindful consumption.

7.1 Role of Parents and Families

Parents should foster open, non-judgmental communication about digital experiences rather than relying solely on strict bans. Establishing device-free zones (such as dinner tables and bedrooms at night), setting reasonable screen time boundaries, and modeling healthy digital habits themselves can significantly guide youth toward balanced technology use.

7.2 Role of Educational Institutions

Schools should integrate comprehensive digital literacy and cyber-citizenship education into their curricula. Students should be taught how to critically evaluate online information, recognize misinformation, understand algorithmic mechanics, protect personal privacy, and address cyberbullying responsibly.

7.3 Role of Tech Companies and Platform Designers

Technology corporations share a ethical responsibility to protect young users. Platforms should implement robust age-verification systems, default privacy protections for minors, stronger moderation against harassment, and user-interface tools that encourage breaks and limit addictive design features.

7.4 Youth Empowerment and Self-Regulation

Ultimately, young people must be empowered to manage their own digital well-being. Practicing digital mindfulness—such as curating feeds to follow inspiring content, unfollowing toxic accounts, turning off non-essential notifications, and scheduling regular digital detoxes—can help youth maintain a healthy relationship with technology.

8. Conclusion

Social media is one of the most powerful influences shaping modern youth development. It is neither inherently good nor purely harmful; rather, it is a complex, double-edged tool. Its impact depends heavily on how platforms are designed, how content is consumed, and how society supports young users.

By leveraging the positive opportunities of global connection, learning, and self-expression, while actively mitigating the risks of mental distress, cyberbullying, and addiction, we can create a healthier digital landscape where young people thrive both online and offline.

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Rao Umrao Singh a Revolutionary of the Revolt of 1857: Historical Evidence and Genealogy Preserved in the 'Bhat ki Pothi'

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One of the most important moments in Indian history is thought to have been the Revolt of 1857. In addition to the sepoys, members of all castes, groups, peasants, zamindars, and local leaders actively took part in the fight against British authority, leading many historians to refer to it as the First War of Indian Independence. The Indian people's feeling of national consciousness and desire for liberation were bolstered by this widespread rebellion, which also put the foundations of colonial power to the test. In Indian history, 1857 is not just a year of uprising but also a magnificent period of coordinated opposition to British tyranny, bravery, selflessness, and dignity. Several local heroes showed exceptional bravery and leadership during this uprising, but conventional historiography has not given them enough credit for their achievements. One such notable revolutionary was Rao Umrao Singh Gurjar, who organized a resolute opposition to British rule and effectively led the Revolt of 1857 in the Dadri and Bulandshahr provinces.

An essential primary source for researching Rao Umrao Singh Gurjar's history is the Bhat kiPothi, or genealogical records kept by Bhats. The names of Rao Umrao Singh and his relatives are methodically listed in these genealogical records, which maintain his family's lineage. His name appears in various genealogical registers, which is important proof of his historical existence and shows that the indigenous genealogical tradition has preserved his family ancestry. As a result, the "Bhat kiPothi" are essential in confirming his historical identification as well as offering important information about his ancestry. This research paper explores the life, family history, ancestry, and background of Rao Umrao Singh. It also emphasizes his involvement in and contribution to the 1857 uprising. A number of political, economic, social, and religious elements influenced the context of the Revolt of 1857. Widespread unhappiness was caused by the East India Company's expansionist policies, the annexation of Indian princely states, the growing financial burden placed on zamindars and peasants, prejudice against Indian soldiers, and meddling in the religious and cultural customs of the Indian people. This animosity was heightened by the debate surrounding the use of pig and cow fat in Enfield rifle cartridges. Consequently, the insurrection began on May 10, 1857, when Indian soldiers at the Meerut Cantonment rose against British rule. The uprising swiftly extended from Meerut to Delhi, where the rebels publicly opposed British rule and proclaimed the Mughal Emperor Bahadur Shah Zafar to be the Emperor of India. The revolution quickly expanded throughout northern India once the rebels took control of Delhi.

The areas of Bulandshahr and Dadri (Gautam Buddha Nagar), which are situated between Meerut and Delhi, became significant hubs of the Revolt of 1857. The Gurjars, Jats, Rajputs, and other rural populations in these regions enthusiastically joined in the revolutionary movement and organized a resolute struggle against British authority. Raja Rao Darghai Singh was the ruler of the Dadri Estate (Riyasat). His grandson, Rao Umrao Singh, was a member of the Dadri Estate's ruling family. The family was given the honorary title "Rao" during the reign of Raja Rao Darghai Singh. As a result, "Rao" was added to the names of every family member. The family belonged to the Bhatigotra of the Gurjar caste, and Raja Rao Darghai Singh's ancestral hamlet was Katheda. According to the "Bhat kiPothi" (genealogical registers), this family's history is as follows:

The district of Gautam Buddha Nagar* in the Meerut Division¹ of Western Uttar Pradesh holds a strategically important geographic position because it borders Delhi, the National Capital Territory. The village of Katheda is located in this district's Dadri Tehsil². The "Bhat kiPothi" still preserves the village's heritage. In fact, the genealogical records of many of the villages in this district are so comprehensive that they disprove the claims made by some European historians that India had no historical writing tradition. The name "Katheda" is derived from the name of the Gurjar chief 'Kidaru Singh'³, according to the information preserved in the Bhat kiPothi. Due to its ease of pronunciation, the name gradually changed to

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its current form, "Katheda." According to the genealogical records, Kidaru Singh established the village on **Tuesday, the second day (Dwitiya/Dooj) of the month of Chaitra in VikramiSamvat 1545⁴.**

Kidaru Singh's ancestors moved from Bharatpur, which is in the modern-day Jaisalmer district of Rajasthan, according to the genealogical records kept in the "Bhat kiPothi." Eventually, two brothers arrived in Delhi's Tughlakabad⁵. Bagchas, which subsequently became known as Bhati, was their original gotra. These two brothers, Rana Rao Kaushal and Rana Prav, rebelled against a local Nawab or authority who controlled the area across the Yamuna River⁶. The Nawab had halted their sister's "*Dola*" (bridal procession) upon her marriage, Bhat claims that it was customary for the Nawab to demand that the Hindu girls' bridal procession stop at his house for one night⁷. Only after spending the night there was the bride permitted to move on to her marital residence. The sister of Rana Rao Kaushal and Rana Prav is claimed to have experienced the same thing; she allegedly fled the Nawab's home and told her brothers about it according to the custom documented in the Bhat kiPothi. They took action after their sister complained to her brothers⁸.

The area was then referred to as KasamhGarh, which subsequently became Kasna. The two brothers conquered the entire Kasna region by fighting the Nawab. Bhataner became a well-known name for this region after that⁹. While Rana Prav crossed the Ganga River and took control of a vast area, Rana Rao Kaushal remained in this area. His ancestors later established numerous Gurjar communities in the trans-Ganga area. The Bhat kiPothi contains information on these incidents¹⁰.

Rana Rao Kaushal contracted two marriages. His second bride was from a Rajput household, although his first marriage was to a Gurjar woman. Kale Singh of the Kasanagotra from the village of Reelkha was the father of Naval Kaur¹¹, his first wife. This marriage produced four sons: Uday Singh, Bhoraj Singh, Dheeru Singh, and Jalla Singh¹². Four distinct villages were established by these four brothers. Khodna was founded by Uday, Pali by Bhoraj, Gulista by Dheeru, and Palla Village by Jalla¹³. The village of Palla was established by Jalla Singh, and it subsequently gave rise to the settlement of Katheda. According to the Bhat kiPothi, on Saturday, the third day (Teej) of the month of Chaitra in VikramiSamvat 1240, Jalla Singh established the village of Palla¹⁴.

According to genealogical sources, Palla later gave rise to eight communities, including the village of Katheda. Shri Sonu Bhat, son of Shri Tarachand, of Racchouti village, maintains the genealogical registry (Pothi) of Palla village, whereas Shri Pradeep Kumar Bhat, son of Shri Srinivas, maintains the genealogical register of Katheda village.

Ratan Kaur, the daughter of Dheerjeet Singh of the Pundeer Rajput clan from Kankhal-Jwalapur in the Haridwar district, was Rana Rao Kaushal's second wife¹⁵. Malviram Singh, Male Ram Singh, Khadak Sen Singh, and Ratansen Singh are the four sons of this marriage¹⁶. The villages of Aamka, Tildumma, Samaudipur, and Ghodi-Bacheda were each created by these four sons, according to the Bhat ki Pothi¹⁷. The BhatiGurjars of these villages came to identify as Rajputs due to their maternal lineage, according to the genealogical records. The village of Katheda gets its name from the Gurjar chief Kidaru Singh, according to the 'Bhat kiPothi'. Due to its ease of pronunciation, the name—originally Kidreda—gradually changed to Katheda. According to the genealogical records, on Tuesday, the second day (Dwitiya/Dooj) of the month of Chaitra in VikramiSamvat 1545, Kidaru Singh established the village. Kidaru Singh gave the Bhat a mare, five robes, fifty-one silver coins, gold kadulle (ornaments), and one maund (mann) of grain as dakshina (religious honorarium) on the occasion of the village's founding.¹⁸

Muchra Singh was Kidaru Singh's only son and successor. Kidaru Singh gave the Bhat gold kadulle, gold ramjhole (ornaments), fifty-two yards (gaz) of cloth, and a quarter man of grain as gifts on Muchra Singh's birthday.¹⁹

The Bhat kiPothi states that Tej Kaur, the daughter of Kale Singh of the Nangdiigotra from Dankaur, was married to Muchra Singh, the son of Kidaru Singh.²⁰ They had five sons, namely Dogadh, Gopi, Hardas, Maydas, and Lal Das. Dogadh was married to Bhagirathi, the daughter of Kehar Singh of the Chhokar gotra.²¹ They had four sons: Ghasi, Parsram, Malkha, and Jagdev. Parsram was married to Sundari, the daughter of Hari Singh of the Dahaliyagotra from the village of Sunpura. They had three sons: Maida Singh, Shobharam, and Ramchand.²²

Among them, Shobharam was married to Shanti, the daughter of Ghasi of the Awanagotra from the village of Basantpur. They had four sons, namely Abhay Singh, Sedhu Singh, Budhan Singh, and Dhom Singh.²³ Sedhu Singh was also known as Rao Darghai Singh, who became the ruler of the Dadri

Estate (Riyasat).²⁴The Dadri region was a part of the sarkar of Koil under the subah of Agra during the reign of Emperor Akbar. Later, it was integrated into the subah of Delhi. Dadri was established as a distinct paraganas during the Shahalam era, and Rao Darghai Singha Bhati Gurjar of Katheda was given ownership of its 133 villages.²⁵The term "Dadri estate" was later applied to this grant. The Dadri Principality was popularly known as the 'Bhatner' Principality. He was married to Medh Kaur, the daughter of Tula Singh of the Adhanagotra from Silampur.²⁶ They had ten sons: Jalam Singh, Harjas, Sitaram, Surajmal, Johar Singh, Harnam, Vasudev, Har Sahay, and Fateh Singh.²⁷

Fateh Singh was married to Sahab Kaur, the daughter of Shital Singh of the Mavigotra from the village of Joli, situated near Sikandrabad.²⁸ They had five sons: Rao Umrao Singh, Bhagwan Singh, Abbhan Singh, Bishan Singh, and Narpat Singh.²⁹ Rao Umrao Singh Gurjar was married to Phool Kaur, the daughter of Seva of the Kasanagotra from the village of Baranpur.³⁰ They had five sons and one daughter, namely Shishram, Jile Singh, Mittar, Chatar, Dataram, and Daulati. Daulati was married into the Baisla gotra.³¹

The Bhat kiPothi further record that all the brothers of Rao Umrao Singh fought against the British during the Revolt of 1857 and were martyred in the course of the struggle. All of them were married, and the genealogies of their respective lineages continue to be maintained in the Bhat kiPothi. Their descendants still reside in the village of Katheda.

The son of Rao Umrao Singh, Mittar, was married to Bhagwani, the daughter of Lahar Singh of the Dedhagotra from the village of Shobhapur.³² They had four sons: Rishal, Prahlad, Birbal, and Rambal. Rambal remained unmarried throughout his life. Mittar's eldest son, Rishal, was married to Chhoti, the daughter of Kishan Sahay of the Tongargotra from the village of Chakkarpur. They had three sons: Johar Singh, Sultan, and Luckhy.³³

Sultan was married to Kudiya, the daughter of Tota of the Baisoyagotra from the village of Pelanji, Delhi.³⁴ They had three children: two sons, Bhup Singh and Rajkumar, and one daughter, Khelavati, also known as Vinod.³⁵

Bhup Singh was married to Bedvati, the daughter of Jhandu of the Nagar gotra from the village of Imliya. They had one son, Dhiraj.³⁶

Dhiraj was married to Sulandari, the daughter of Bhagwat of the Payalagotra from the village of Dausa. They had two sons, Love Kush and Shivam, and two daughters, Kajal and Aanchal.³⁷

The Revolt of 1857 received a significant boost on May 10, 1857, when Indian soldiers and the Meerut police force united to rebel against British control. Thousands of residents of Meerut city and villagers from nearby villages, including Panchli, Ghat, Nangla, and Gagol, gathered in the Sadar Kotwalineighborhood of Meerut as word of the military rebellion spread. Dhan Singh Gurjar was the Kotwal (Chief Police Officer) of the Meerut SadarKotwali at the time. When the uprising started, several Meerut police officers joined the rebels³⁸.

Dhan Singh Gurjar naturally became the leader of the revolutionary masses because he was a native of the surrounding village of Panchli, had the trust of both the local population and the revolutionary soldiers, and had a prominent position in the police administration. Under his direction, a number of revolutionary acts against British rule were carried out at the Sadar Bazaar and Cantonment districts by rebel soldiers, police officers, and locals. The revolutionaries, led by Dhan Singh Gurjar, invaded the Meerut Jail at around 2:00 AM in the morning on that same day. They broke inside the prison, freed about 836 inmates, and set the jail structure on fire³⁹. The insurrection was strengthened when the majority of the freed inmates joined the revolutionary movement. While the flames of insurrection quickly spread throughout Meerut and the nearby villages, the rebel army marched onto Delhi that same night.⁴⁰

The revolutionary leader of the Dadri Estate, Rao Umrao Singh Gurjar, declared the insurrection at Bulandshahr (then known as Baran) as soon as he learned of the uprising at Meerut on May 10, 1857. The Gurjar, Bhati Rajput and Rangar communities' villages in and around Dadri, Dankaur, Sikandrabad, Kasna, and Surajpur rebelled against British control in response to his summons.⁴¹

Nearly 35,000 people gathered at the Dadri Fort in the afternoon of May 11, 1857, where they formed a SarvKhap Panchayat. Rao Umrao Singh Gurjar presided over the historic assembly. Rao Roshan Singh, Rao Bishan Singh, Rao Bhagwant Singh, Rao Surjit Singh of Dankaur, Rao Sedhu Singh and Indra Singh of Katheda, Kanha Singh of Atta, Dariyav Singh of Junaidpur, Natha Singh of Atta, Rambaksh Singh of Gunpura, Dada Majlis of Luharli, Jhandu Singh and Nainsukh of Nangla, Inder Singh and Mehtab

Singh of Guthawali, Ahiman Singh of Badhpura, Malik Singh of Noob, and Nawab Walidad Khan of Malagarh were among the notable participants.⁴² Numerous people from the Rangar and Rajput communities attended the assembly as well.

The Panchayat decided to fight colonial authority together and discussed ways to drive the British out of India. The participants were motivated by a strong desire to exact revenge for colonial injustices and were greatly incensed by the harsh policies of the British government. The Revolt of 1857 in Western Uttar Pradesh was organized in large part thanks to this historic assembly, which also served to unite the revolutionaries in the area under a single cause.

Emperor Bahadur Shah Zafar was making plans at the Red Fort in Delhi to drive the British out of India while the SarvKhap Panchayat was meeting at the Dadri Fort. The Emperor ordered that a trustworthy cavalry messenger be sent right away to Dadri and Malagarh to call Rao Umrao Singh Gurjar and Nawab Walidad Khan to the imperial court after conferring with his trusty advisor, Hakim Ahsanullah Khan.⁴³ On Prince Abu Bakr's advice, Hakim Ahsanullah Khan called in Bhagwan Sahay Gurjar, a 3rd Native Cavalry officer who had just arrived from Meerut, and told him to go straight to Dadri and Malagarh to deliver the Emperor's invitation and accompany Rao Umrao Singh and Nawab Walidad Khan to Delhi.⁴⁴ When Bhagwan Sahay Gurjar arrived in Dadri, he saw that Rao Umrao Singh Gurjar was leading a SarvKhap Panchayat, with Nawab Walidad Khan as the primary guest. Both leaders received an invitation from Emperor Bahadur Shah Zafar through Bhagwan Sahay. Nawab Walidad Khan and Rao Umrao Singh Gurjar accepted the imperial summons and left for the Red Fort that same evening.⁴⁵ Emperor Bahadur Shah Zafar formally granted Nawab Walidad Khan the Sanad of the Malagarh Estate and acknowledged Rao Umrao Singh Gurjar as the ruler of the Dadri Estate on May 12, 1857, at a lavish assembly in the Diwan-i-Aam of the Red Fort, in front of his courtiers.⁴⁶ His uncle ruled the Dadri Principality prior to him. The Mughal Emperor gave both revolutionary leaders official legitimacy by bestowing these Sanads. After this acknowledgment, Raja Rao Umrao Singh Gurjar led a call for revolt in Bulandshahr. The government offices were plundered and burned on fire by the revolutionaries after they took control of the district Cutcherry (court complex). The Gurjar revolutionaries, led by Rao Umrao Singh, ambushed a group of British cavalry on May 21, 1857, and took control of the government treasury. They marched to the Bulandshahr jail later that night, defeated the guards, breached the prison gates, and freed every inmate.⁴⁷ After being freed, the inmates joined the revolutionary movement, which bolstered the uprising even more. The revolutionaries quickly took control of Bulandshahr.

On May 22, 1857, a group of men from the 9th Native Infantry reached Khurja after securing Bulandshahr. From May 22 to May 26, the rebels controlled Khurja, seizing the government treasury and taking control of the tehsil and police station. As a result, British movement and communications along the main routes that connected Meerut to Agra and Bulandshahr to Delhi were essentially stopped.⁴⁸ Mr. Brand Sapte was the District Magistrate of Bulandshahr during the Revolt of 1857.⁴⁹ He called a gathering of the main pro-British landlords and local chiefs after learning of the insurrection in order to devise a plan for putting an end to it. Rao Gulab Singh of Kuchesar, Nawab Mohammad Ali Khan of Chhatari, Nawab Murad Ali of Pahasu, Abdul Latif of Khanpur, Kunwar Lachhman Singh of Shikarpur, Inayatullah Khan of Chanderu, Abdul Rahman Khan, Ratan Singh, Shadi Ram, and Naubat Singh Jat of Sehra and Saidpur were among those present.⁵⁰ They promised to fully assist the British government in putting an end to the revolutionary movement.

A second SarvKhap Mahapanchayat, presided over by Raja Rao Umrao Singh Gurjar, was held at the Dadri Fort on May 26, 1857. The Panchayat decided that, under whatever circumstances, the British army should be stopped and defeated at Ghaziabad if it tried to advance from Meerut to Delhi.⁵¹ The Gurjar, and Rajput rebels started making extensive preparations for armed resistance against the British as a result of this decision. On the eastern bank of the Hindon River close to Ghaziabad, the revolutionary forces set up sturdy defensive positions in response to the Panchayat's resolutions. Raja Rao Umrao Singh Gurjar was the leader of the unified revolutionary force. Rao Bishan Singh, Rao Bhagwan Singh, Prince Abu Bakr, Nawab Walidad Khan, Chaudhary Lakhpat Singh, and Bhagwan Sahay Gurjar were among the main leaders, each leading his own troop.⁵² Conversely, Brigadier Archdale Wilson's British force was moving closer to Delhi. But the British soldiers were forced to stop and form their own lines behind the bridge over the Hindon River due to the rebels' well-organized defensive positions. On the river's left bank, close to the location of the current railway bridge, their artillery was stationed.⁵³ The British army and the revolutionary troops engaged in a bloody and decisive

combat on the banks of the Hindon River on May 30, 1857. Thousands of revolutionaries lost their lives fighting the British rifle regiments' approach on the first day of the conflict. By hiding among five abandoned guns, an Indian artilleryman showed incredible bravery and tactical expertise. He set off the gunpowder, which resulted in a huge explosion, when the British troops came to seize the cannon after the revolutionary forces had temporarily retreated. Captain Andrews and a number of British soldiers were killed as a result, while numerous more suffered severe injuries.⁵⁴ The British then interred their dead close to Ghaziabad's Inspection Bungalow. The next day, the fighting went on, and the British force sustained significant casualties once more. Numerous British riflemen, including Lieutenant Perkins, were killed in action, and numerous others were injured.⁵⁵ The British force was unable to advance to Delhi via the Ghaziabad road due to the revolutionaries' resolute opposition. Brigadier Wilson was forced to withdraw his soldiers to Meerut and abort the advance as a result.

District Magistrate Sapte stated that "the Gurjars were the most dangerous and formidable rebels" the British faced during the 1857 uprising following the defeat at the Battle of Hindon. He noted that they severely damaged the British government's administration and assets and inflicted significant losses on it. He launched a harsh campaign of retaliation against the rebels after the Battle of Hindon. The village of Chandpur, which is roughly three kilometers from Bulandshahr, is where the campaign started. The entire village was burned down, and many patriots were put to death on suspicion of taking part in the uprising⁵⁶. Following that, the British government conducted a wide-ranging operation in the area to find, detain, and punish those responsible for the rebellion.

Raja Rao Umrao Singh Gurjar and Rao Roshan Singh were taken into custody following the putdown of the uprising. They were ruthlessly put to death by being trampled beneath elephants at the well-known Kala Aam (Kaleaam) Chowk in Bulandshahr in December 1858.⁵⁷ Similarly, hundreds of other revolutionaries, including Rao Bishan Singh, Rao Bhagwan Singh, and Rao Surjit Singh, were put to death in public at Kala Aam Chowk. Khwaja Moinuddin Hasan, a contemporary eyewitness, describes these events in detail in his book *Khadang-e-Ghadar*.*

The genealogies of Rao Umrao Singh's sons, which have been maintained by the Bhat throughout many centuries, are also preserved in the Bhat kiPothe. In their genealogical records, the Bhat kiPothe lists the names of a number of participants in the Revolt of 1857, including Rao Bishan Singh, Rao Bhagwant Singh, Rao Roshan Singh, Rao Sedhu Singh, and others. According to the oral and written tradition upheld by the Bhat, it also records the killing of these insurgents at Kale Aam Chowk by the British and details the cruel treatment they endured.

In conclusion, the narratives included in the Bhat kiPothe depict real historical occurrences that occurred in society. Rao Umrao Singh and many more lesser-known revolutionaries are documented in the Bhat kiPothe. It conserves important documentary proof of numerous previously unnoticed historical facets. Additionally, via the preservation of many historical records, it is a valuable resource for reconstructing the history of rural and regional India. When combined with known historical sources and oral traditions, the evidence found in the Bhat kiPothe can greatly aid in the creation of a more inclusive and thorough history.

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Administrative Capacity and Healthcare Implementation: A Study of Ayushman Bharat–PM-JAY in India

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Abstract

Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (PM-JAY) has substantially enlarged the institutional reach of publicly financed hospital care in India. Yet formal entitlement does not necessarily produce usable healthcare access. This paper examines PM-JAY through the lens of administrative capacity and asks how differences in organizational, informational, provider, coordination, regulatory, and frontline capacities shape implementation. The study uses qualitative secondary-source policy analysis based on peer-reviewed research, official program documents, and the performance audit of the Comptroller and Auditor General of India. It develops a six-dimensional PM-JAY Administrative Capacity Framework (PMJAY-ACF) to explain how policy entitlement is converted into healthcare access across multiple administrative levels. The evidence indicates that PM-JAY has developed an extensive digital, purchasing, and intergovernmental architecture, while implementation continues to depend on state and district organizations, provider availability, reliable beneficiary and claims data, reimbursement arrangements, regulatory oversight, and beneficiary-facing support. Recent evidence is more favorable than some early assessments: national and Haryana-based studies report improved financial protection among insured populations. However, studies from Chhattisgarh and Puducherry continue to identify gaps in utilization, out-of-pocket expenditure, registration, and access. The paper argues that administrative capacity is neither a single determinant nor a substitute for healthcare infrastructure. Rather, it operates as a multilevel and complementary mechanism that conditions whether formal coverage becomes effective access. Policy attention should consequently shift from expansion alone toward the institutional reliability of the entire implementation chain.

Keywords: administrative capacity; Ayushman Bharat; PM-JAY; health governance; policy implementation

1. Introduction

Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana represents one of the most ambitious attempts to extend publicly financed hospital care in India. Launched in September 2018, PM-JAY was designed to provide eligible households with cashless access to secondary and tertiary hospitalization through a network of public and private hospitals. Its beneficiary base has subsequently expanded. In 2024, the Union government extended PM-JAY coverage to all citizens aged 70 years and above irrespective of income, further increasing both its social reach and administrative responsibilities (Press Information Bureau [PIB], 2024). The expansion reinforces the importance of asking not simply how many people are formally covered, but whether the administrative system can reliably transform coverage into care.

This distinction is central to evaluating large social programs. Enrollment, cards issued, hospital admissions, claims settled, and government expenditure are relevant measures of administrative activity, but they are not equivalent to effective access, financial protection, or quality of treatment. Fukuyama (2013) cautions against measuring governmental capacity through outputs alone because outcomes are influenced by factors beyond administrative competence. This problem is particularly relevant to PM-JAY. A household may qualify for the program yet face difficulty completing registration. An eligible beneficiary may possess a card but have no accessible hospital offering the required specialty. Treatment may be authorized while additional expenditure on medicines, diagnostics, transport, or other services remains. A hospital may be formally empaneled but participate only selectively. The movement from entitlement to healthcare is therefore an administrative process rather than an automatic consequence of policy adoption.

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Early scholarship anticipated this governance challenge. Angell et al. (2019) argued that PM-JAY's contribution to universal health coverage would depend heavily on stewardship, regulation, quality control, and wider health-system strengthening. Bali and Ramesh (2021), applying a policy-capacity perspective to Indian healthcare reform, subsequently identified important deficits in operational capacity. Empirical research has since documented difficulties involving personnel, state-level organization, hospital processes, provider payment, intergovernmental coordination, claims management, and beneficiary access (Furtado et al., 2022; Pillai & Obasanjo, 2023; Saxena et al., 2022; Srivastava et al., 2023).

At the same time, the evidence should not be organized around a predetermined conclusion that PM-JAY is administratively unsuccessful. Recent studies complicate the earlier picture. Kumar et al. (2025) found substantially lower direct medical expenditure among PM-JAY beneficiaries than comparable non-beneficiaries in Haryana. Using nationally representative CAMS 2022–2023 data, Bonu and Bhushan (2026) found publicly funded health insurance—principally PM-JAY and related state programs—to be associated with greater service utilization and partial protection against catastrophic expenditure. These findings coexist with less favorable evidence from Chhattisgarh and with continuing registration and utilization gaps identified among vulnerable households in Puducherry (Garg et al., 2024; Swarna & Stalin, 2026).

This paper interprets such variation as analytically important rather than inconvenient. It addresses three questions:

RQ1. How does administrative capacity influence the conversion of PM-JAY entitlement into effective healthcare access?

RQ2. Which dimensions of administrative capacity appear most consequential for PM-JAY implementation?

RQ3. Why does implementation vary across states and local contexts despite a common national program architecture?

The paper's principal contribution is to develop a PM-JAY Administrative Capacity Framework (PMJAY-ACF) that links six capacity dimensions to specific stages of implementation. Rather than treating administrative capacity as an undifferentiated attribute of government, the framework conceptualizes implementation as a chain in which organizational, informational, provider, coordination, regulatory, and frontline capacities must work together. This approach also helps explain why a nationally standardized entitlement can produce uneven practical access.

2. Administrative Capacity and Policy Implementation: A Conceptual Framework

Administrative capacity refers broadly to the resources, skills, organizations, and institutional arrangements through which governments formulate and execute policy. Wu et al. (2015) distinguish analytical, operational, and political competencies across individual, organizational, and system levels. Their framework is valuable because it rejects the assumption that governments simply possess either “high” or “low” capacity. Capacity may instead be uneven: a government can possess strong analytical systems while lacking operational personnel, or strong political commitment while possessing weak implementation organizations.

Bali and Ramesh (2021) apply this perspective directly to Indian health reform and identify operational capacity as a particularly important constraint. Research on India's community-health-worker program similarly demonstrates that analytical, organizational, and political capacities interact across different administrative levels and that weakness in organizational capacity can undermine otherwise successful policy initiatives (Roy et al., 2023). These findings are pertinent to PM-JAY because implementation is distributed across the National Health Authority (NHA), State Health Agencies (SHAs), district institutions, insurers or implementation-support agencies, hospitals, digital platforms, and beneficiary-facing personnel.

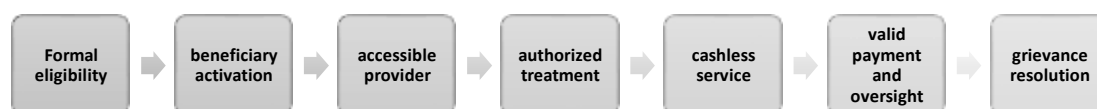
The present study adapts this literature to the institutional requirements of PM-JAY. Its conceptual contribution lies not in proposing a general replacement for existing policy-capacity theory, but in translating that theory into six observable implementation capacities suited to a large publicly financed healthcare-purchasing program as mentioned in Table 1.

Table 1: PM-JAY Administrative Capacity Framework (PMJAY-ACF)

Capacity dimension	Central administrative question	PM-JAY implementation mechanism	Illustrative indicators
Organizational-operational capacity	Can implementing organizations consistently perform assigned functions?	SHA/DIU staffing, training, workflow management, institutional continuity	vacancies, staff competencies, DIU functionality, processing times
Analytical-digital capacity	Can administrators generate, validate, connect, and use reliable information?	beneficiary identification, claims systems, costing, utilization analytics	data completeness, validation errors, interoperability, costing evidence
Provider-system capacity	Is covered treatment available within reasonable reach?	hospital empanelment, specialty availability, public-private provider network	provider density, geographic distribution, specialty availability
Coordination capacity	Can multiple organizations and levels of government act coherently?	NHA-SHA-DIU relations, insurer/provider coordination, state adaptations	role clarity, interagency resolution, implementation consistency
Regulatory-purchasing capacity	Can government purchase appropriate care while controlling cost, quality, and abuse?	package pricing, claims review, audits, fraud detection, empanelment enforcement	claim delays, audits, de-empanelment, fraud detection, payment accuracy
Frontline-access capacity	Can beneficiaries understand and use their entitlement when care is needed?	registration assistance, Arogya Mitras, authorization, grievance redressal	awareness, registration, denial rates, grievance resolution, residual OOPE

(Source: Prepared by the Researcher)

The framework conceptualizes PM-JAY implementation as an entitlement-to-access conversion chain:



This formulation generates three propositions.

First, administrative capacity is complementary rather than additive. Strong performance at one stage cannot fully compensate for serious failure elsewhere. Accurate beneficiary data have limited practical value where required providers do not exist; a dense provider network is insufficient if eligible patients cannot complete authentication.

Second, digital capacity is an enabling capacity rather than a substitute for administration. Information systems can accelerate verification, claims, portability, and fraud detection, but their effectiveness depends on data quality, trained personnel, institutional follow-up, and regulatory authority.

Third, provider-system capacity operates as a boundary condition on insurance-based implementation. Public financing can increase purchasing power but cannot immediately create specialists, hospital beds, or geographically accessible facilities where supply is inadequate. Administrative performance must therefore be analyzed in interaction with the underlying health system.

This approach differs from explanations that treat PM-JAY outcomes mainly because of financing or program design. It places attention on the institutional processes through which benefits are produced.

3. Methodology

The study uses qualitative secondary-source policy analysis. The initial source base consisted of a Scopus export containing 208 records supplied for this research. Titles, abstracts, publication sources,

keywords, and bibliographic information were screened for relevance to PM-JAY, publicly funded health insurance, administrative and policy capacity, implementation, provider purchasing, claims management, financial protection, digital systems, state variation, and beneficiary access.

Priority was given to peer-reviewed empirical research in established journals and to studies directly examining PM-JAY. The Scopus material was supplemented with independently verified theoretical literature and official evidence, particularly the CAG performance audit and Government of India material. Conference papers, marginally relevant publications, and sources of uncertain scholarly quality were excluded from the core argument.

Sources were coded conceptually according to the six PMJAY-ACF dimensions. The analysis compares evidence across studies rather than aggregating effect estimates because the literature varies substantially in design, geographic scope, outcome measures, and study period.

The method has limitations. Much detailed implementation research concerns the early years of PM-JAY, while institutional arrangements have subsequently changed. Several outcome studies are confined to particular states. National studies of publicly funded insurance do not always isolate PM-JAY from state schemes. The paper therefore does not estimate a causal effect of “administrative capacity.” Instead, it identifies mechanisms and evaluates whether different bodies of evidence are consistent with the proposed framework.

4. PM-JAY's Institutional and Administrative Architecture

PM-JAY combines national standardization with significant subnational implementation discretion. The NHA establishes major policy, technical, purchasing, and monitoring frameworks, while SHAs manage implementation within states. States have adopted trust, insurance, hybrid, and other administrative arrangements, often incorporating institutions developed under earlier state insurance programs.

Such flexibility permits local adaptation but makes administrative performance dependent on state institutions. Furtado et al. (2022), comparing trust-based purchasing in Uttar Pradesh with insurance-based purchasing in Jharkhand, found differences in claims management, purchasing arrangements, administrative costs, and oversight. Srivastava et al. (2023) similarly demonstrated that PM-JAY implementation in Uttar Pradesh, Chhattisgarh, and Tamil Nadu was shaped by recruitment systems, organizational hierarchy, institutional memory, leadership, and state-specific adaptations. Implementation models therefore alter who performs administrative functions; they do not eliminate those functions.

Hospitals occupy another critical position in the architecture. Beneficiary verification, package selection, preauthorization, treatment documentation, discharge, claims submission, and payment form a continuous administrative sequence. Research from Gujarat and Madhya Pradesh found meaningful departures between prescribed procedures and hospital practice during early implementation, including delays in claim reimbursement (Saxena et al., 2022).

The program has also continued to change. The CAG audit covered September 2018 to March 2021 and therefore provides evidence about an earlier implementation phase rather than current conditions. Its findings should not be projected automatically into 2026. Subsequent government measures have included strengthening district implementation, revising benefit packages and rates, upgrading hospital-engagement systems, and expanding capacity-building mechanisms (PIB, 2025). The appropriate analytical question is consequently not whether PM-JAY possessed a fixed level of capacity in 2018, but whether institutions have been able to identify and correct weaknesses over time.

5. Administrative Capacity and PM-JAY Implementation

5.1 Organizational and Operational Capacity

Large-scale health purchasing requires organizations capable of performing specialized functions continuously. SHAs and district structures must handle empanelment, medical review, data management, claims, grievances, fraud control, and communication with hospitals.

Early implementation revealed important personnel constraints. Srivastava et al. (2023) documented shortages, recruitment difficulties, competency differences, and overlapping responsibilities across three states. States responded through contractual hiring, decentralization, external support, and task reassignment. These responses indicate adaptation, but they also demonstrate that institutional design alone does not guarantee administrative capability.

The CAG audit similarly found that DIUs were absent in several jurisdictions and reported personnel shortages in SHAs and DIUs across 22 states and Union Territories during the period examined (CAG, 2023). These findings matter because district organizations perform the practical coordination required between state authorities and providers.

However, the temporal dimension is important. By March 2025, the Union government reported that DIUs had been established to undertake regular interaction with empaneled hospitals and address beneficiary and provider issues, alongside additional capacity-building measures (PIB, 2025). Administrative capacity should therefore be understood as something governments can build, reorganize, and institutionalize rather than as a static characteristic.

5.2 Analytical, Informational, and Digital Capacity

PM-JAY's scale would be difficult to administer without extensive digital infrastructure. Beneficiary identification, portability, authorization, claims processing, provider monitoring, and fraud analytics all depend on information systems. Yet digitization simultaneously creates new requirements for data validation, interoperability, and institutional response.

The CAG audit identified weaknesses in beneficiary-data validation and transaction-management controls during the early years, including duplicate or implausible records and inconsistent information across systems (CAG, 2023). The broader lesson is not simply that databases can contain errors. In an entitlement program, data quality has distributional consequences because errors can determine who is recognized by the system and whether a transaction proceeds.

Provider pricing demonstrates another form of analytical capacity. Prinja et al. (2023a) show that the cost of hospital services varies with factors such as hospital type, location, scale, and utilization, making uniform reimbursement difficult to justify without evidence. Prinja et al. (2023b) further argue that sustainable PM-JAY purchasing requires routine hospital-cost information integrated with existing management and billing systems rather than periodic stand-alone costing exercises.

Thus, the relevant capacity is not merely collecting more data. It is the ability to transform credible data into decisions about payment, monitoring, package design, and correction of implementation problems.

5.3 Provider and Health-System Capacity

An insurance entitlement is valuable only when an appropriate provider can deliver the covered service. PM-JAY therefore sits at the intersection of administrative capacity and structural healthcare supply.

The CAG audit documented pronounced interstate differences in the availability of empaneled healthcare providers during its audit period, with provider availability per lakh beneficiaries ranging from 1.8 in Bihar to 26.6 in Goa. It also identified shortages of equipment, personnel, and specialties in some empaneled institutions (CAG, 2023). Such disparities illustrate why national insurance coverage can coexist with uneven effective access.

Provider participation is also influenced by purchasing conditions. Interviews in Kerala and Tamil Nadu suggested that reimbursement levels could discourage private-hospital participation (Pillai & Obasanjo, 2023). Earlier work similarly identified tensions surrounding private-provider participation (Choudhury & Datta, 2020).

Recent evidence, however, cautions against accepting the claim that PM-JAY prices are necessarily financially unviable. Using cost data from district hospitals across nine states, Jyani et al. (2025) modeled a 100-bed private district-level hospital and found that it could reach financial break-even under PM-JAY-based pricing assumptions. The study does not prove that all hospitals or specialties are adequately reimbursed, but it challenges the generalization that package rates are uniformly unsustainable.

The more defensible conclusion is that provider participation depends on a combination of payment rates, case mix, occupancy, hospital scale, payment predictability, administrative burden, and local market conditions. Provider capacity is thus simultaneously a health-system characteristic and an object of administrative purchasing.

5.4 Coordination and Interstate Variation

PM-JAY operates within India's federal system, where states possess different administrative histories, health infrastructures, prior insurance schemes, political relationships, and provider markets. Variation is therefore expected even under common national rules.

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Srivastava et al. (2023) found that institutional memory and state adaptation could support implementation, while organizational culture, hierarchy, staffing practices, and incentives could also constrain it. Furtado et al. (2022) demonstrate that trust and insurance models assign responsibilities differently but still require effective public oversight. Outsourcing claims or insurance functions does not remove the requirement for state capacity; it changes the form of capacity required from direct administration toward contracting, supervision, and enforcement.

The evidence consequently does not justify ranking one administrative model as universally superior. States with stronger pre-existing institutions may use greater flexibility effectively, while the same discretion may produce fragmentation where administrative systems are weaker.

This is also why utilization differences should not automatically be interpreted as administrative success or failure. Dubey et al. (2023) identify substantial geographic and social inequalities in PM-JAY supply and utilization. Such disparities may reflect administration, but they may also result from hospital distribution, population structure, disease patterns, state policy legacies, and socioeconomic inequality.

5.5 Regulatory, Claims, and Purchasing Capacity

Strategic purchasing requires more than reimbursing submitted claims. Government must determine what services to purchase, set defensible prices, assess provider eligibility, review claims, identify abuse, impose sanctions, and protect quality.

Saxena et al. (2022) found early deviations from prescribed hospital procedures at several stages of the PM-JAY transaction. Furtado et al. (2022) similarly demonstrate the importance of claims review and provider oversight across different purchasing models.

The CAG audit identified weaknesses in monitoring institutions during 2018–2021. Anti-fraud cells had not been established in four states or Union Territories, claim-review committees were absent in eight, and mortality and morbidity review committees were missing in 11 (CAG, 2023). (Comptroller and Auditor General of India) These findings illustrate a wider governance issue: sophisticated claims platforms are of limited regulatory value if organizations lack personnel and authority to investigate abnormal transactions.

Provider-payment research indicates that regulatory capacity also includes the ability to revise purchasing rules in response to evidence. Cost-informed differentiation of reimbursement rates may better reflect variation among facilities and reduce incentives for selective participation or inappropriate service provision (Prinja et al., 2023a).

5.6 Frontline Capacity and the Beneficiary Experience

From the beneficiary's perspective, PM-JAY is not encountered as an intergovernmental architecture. It is encountered through registration, documentation, hospital admission, authorization, communication with staff, discharge, and grievance procedures.

Lipsky's (2010) account of street-level bureaucracy remains useful here even though PM-JAY involves public and private actors rather than a conventional bureaucracy alone. Formal rules become meaningful through frontline interactions. Beneficiaries with weaker digital literacy, fewer documents, limited mobility, or less familiarity with administrative procedures may require greater assistance to convert formal eligibility into actual treatment.

The CAG's early audit found substantial delays in grievance resolution: among 37,903 grievances reviewed, only 3,718 were resolved within the specified turnaround period (CAG, 2023). More recent evidence shows that access gaps have not disappeared uniformly. In an urban-slum study in Puducherry, Swarna and Stalin (2026) found that although 65% of surveyed households were eligible, only 49% of eligible households had registered and 14% had utilized PM-JAY benefits. Difficult registration and limitations involving hospitals and treatment packages were reported as barriers.

These figures should not be generalized nationally, but they expose an important mechanism: formal entitlement can be progressively lost at successive administrative stages. Effective implementation should therefore be assessed through the proportion of eligible citizens who can move successfully through the complete access chain rather than through eligibility alone.

6. Discussion

The evidence supports the central proposition of this paper: administrative capacity mediates the relationship between PM-JAY entitlement and effective healthcare access. Yet this relationship is more conditional than a simple capacity-success hypothesis suggests.

For the first research question, administrative capacity matters because nearly every stage between eligibility and treatment requires organized action. Beneficiaries must be identified, providers contracted, prices established, transactions authorized, claims verified, hospitals monitored, and grievances resolved. Administrative weakness can therefore reduce coverage without formally changing the entitlement itself.

Regarding the second question, the evidence suggests that organizational-operational, regulatory-purchasing, and coordination capacities are particularly consequential. Bali and Ramesh's (2021) identification of operational deficits remains persuasive, but PM-JAY demonstrates that operational competence increasingly depends on analytical and digital systems. Data, however, cannot compensate for weak regulatory institutions or unavailable providers. The six capacities are therefore complementary.

Outcome studies reinforce this interpretation. Earlier systematic evidence found that publicly funded insurance schemes in India generally improved utilization while evidence on financial protection remained inconclusive (Reshmi et al., 2021). Garg et al. (2020) found limited early effects of PM-JAY in Chhattisgarh, and their later study reported no significant improvement in utilization, quality, or financial protection associated with enrollment after four years of implementation (Garg et al., 2024).

More recent findings are more favorable. Kumar et al. (2025), studying six Haryana districts, reported considerably lower direct medical expenditure among PM-JAY beneficiaries. National CAMS evidence likewise associates publicly funded insurance coverage with greater outpatient and inpatient utilization, lower odds of catastrophic health expenditure, and lower inpatient out-of-pocket spending (Bonu & Bhushan, 2026). The national study is cross-sectional and principally concerns publicly funded insurance rather than PM-JAY in isolation, so causal attribution remains inappropriate.

The apparent contradiction between these findings should therefore not be resolved by choosing one study as definitive. Instead, it supports a configurational interpretation. PM-JAY outcomes depend on combinations of administrative capacity, provider supply, state institutions, socioeconomic conditions, and scheme maturity.

The PMJAY-ACF accordingly contributes a distinction between formal entitlement and administrative conversion capacity. Two citizens possessing the same formal entitlement may face substantially different practical opportunities if they live in jurisdictions with different provider networks, administrative staffing, claims systems, or beneficiary support. Administrative capacity can therefore become a mechanism through which a nationally uniform entitlement produces territorially uneven effective rights.

7. Policy Implications

The analysis suggests five priorities. First, SHAs and DIUs should be treated as permanent professional implementation institutions. Capacity building should focus not only on staff numbers but on specialized competence in purchasing, medical claims, data analysis, provider regulation, grievance management, and fraud investigation.

Second, PM-JAY should move from digital transaction administration toward digital learning administration. Beneficiary, claims, provider, grievance, and costing data should be connected sufficiently to identify recurring implementation failures and guide policy correction.

Third, provider-network assessment should move beyond the number of empaneled hospitals. Effective purchasing requires information on geographic accessibility, specialties offered to PM-JAY patients, treatment volumes, quality, payment delays, and residual beneficiary expenditure.

Fourth, provider-payment policy should remain evidence-responsive. Recent costing research demonstrates both the importance and feasibility of using hospital-level cost evidence to refine reimbursement (Jyani et al., 2025; Prinja et al., 2023a, 2023b).

Finally, grievance redressal and beneficiary assistance should be treated as core administrative infrastructure. Complaints provide information about treatment denial, registration barriers, unauthorized charging, and hospital behavior. A functioning grievance system is therefore simultaneously a citizen-protection mechanism and a source of implementation intelligence.

None of these measures eliminates the need for broader investment in public healthcare infrastructure. Purchasing capacity and service capacity must develop together.

8. Conclusion

PM-JAY has established a national institutional platform capable of financing hospital care at a scale unprecedented in India's publicly funded health-insurance experience. Whether that achievement produces equitable and financially protective healthcare, however, depends on more than the formal generosity or numerical reach of the scheme.

The paper's first research question can therefore be answered directly: administrative capacity shapes PM-JAY implementation by determining whether formal eligibility can be converted into a completed healthcare transaction. Its second question requires a multidimensional answer. Organizational, digital, provider, coordination, regulatory, and frontline capacities operate together; persistent weakness in any critical stage can reduce the value of strengths elsewhere. For the third question, interstate variation arises because the same national architecture interacts with markedly different administrative institutions, provider markets, health infrastructures, prior policy arrangements, and social conditions.

The PM-JAY Administrative Capacity Framework developed here consequently treats capacity as a multilevel conversion mechanism rather than a general attribute of "good governance." It also avoids attributing every difference in PM-JAY performance to administration. Health-system supply, socioeconomic inequality, political context, and disease burden remain important alternative explanations.

The evolving evidence supports a balanced assessment. Recent national and Haryana-based studies provide credible indications that publicly funded insurance can improve utilization and reduce some financial burdens. At the same time, state and community studies demonstrate that enrollment, provider access, out-of-pocket expenditure, and implementation quality remain uneven. Expansion and implementation success are therefore related but analytically distinct.

Future research should operationalize the six PMJAY-ACF dimensions at state and district levels and test their association with utilization, financial protection, quality, and equitable access. Such comparative research would permit a stronger causal assessment of whether, and under what institutional conditions, administrative capacity converts India's increasingly broad healthcare entitlement into effective healthcare access.

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