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

Editor



CONTENTS

"Research Highlights"

➲	The Effect of Prejudice on Social Behavior among College Students ***Dr. Gayatri Kumari***	01-06
➲	Role of PMKVY in Employment Generation in Bihar ***Dr. Jitendra Kumar Sharma***	07-12
➲	An Analytical Study of Feminism Character of Sarita (Saru) in Novel of "The Dark Holds No Terror" by Shashi Deshpande ***Dr. Sunil Kumar***	13-18
➲	Challenges and Risks of Digital Technology on Child Development ***Dr. Manjusha Rai*** ***Dr. Arundhati Rai***	19-25
➲	Self-Knowledge in Kantian Philosophy as the Concept of 'Cosmic Ekatva' ***Shikhar Srivastava***	26-32
➲	Reading History through Theatre: Performance, Politics and Historical Memory ***Pragya Upadhyay***	33-36
➲	A Study on Social Determinants of Psycho-Physiological Disorders ***Satish Kumar*** ***Prof. Dr. Sheo Kumar Prasad***	37-44
➲	The Impact of Need for Achievement and Academic Anxiety ***Arvind Kumar*** ***Dr. Birendra Choudhary***	45-52
➲	The Limits of Democratic Legitimacy: Reconciling Majority Rule with the Protection of Minority Rights ***Dr. Kunal Kumar Yadav***	53-62
➲	Prevalence and Antibiotic Resistance Profile of Bacteria Isolated from Raw Milk Samples ***Ravi Ranjan Kumar***	63-69
➲	Memory Versus History: Youth Consciousness and Rani Lakshmibai ***Satyarth***	70-73
➲	An Empirical Analysis of Value-Based Education and Its Role in Promoting Holistic Development in India ***Dr. Arpita Singh***	74-80

➲	Impact of Behavior Change Models on Physical Health ***Dr. Akhlaque Ahmad***	81-88
➲	Women's Role in Indian History: A Study of Prominent Women Leaders ***Dr. Manoj Kumar Bihari***	89-94
➲	Digital Trade and Its Contribution to India's Services Export Growth ***Dr. Priyanka Sinha***	95-102



The Effect of Prejudice on Social Behavior among College Students

Dr. Gayatri Kumari*

Abstract:

Prejudice is a preconceived attitude or judgment toward individuals or groups that may influence social interactions and behavioral responses. Although prejudice often operates subtly, it can shape interpersonal relationships, communication patterns, cooperation, and social inclusion within educational settings. College students interact with peers from diverse cultural, social, and economic backgrounds, making higher education institutions an important context for examining the influence of prejudice on social behavior. The present study investigates the effect of prejudice on the social behavior of college students in Darbhanga, Bihar.

A quantitative research approach employing descriptive and explanatory research designs was adopted. Primary data were collected from 260 undergraduate and postgraduate students using a structured questionnaire based on a five-point Likert scale. A convenience sampling technique was employed to select the respondents. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, reliability analysis, Pearson's correlation, and simple linear regression were used to examine the relationship between prejudice and social behavior.

The findings are expected to contribute to the understanding of how prejudicial attitudes influence students' social interactions and behavioral tendencies. The study may assist educators, institutional administrators, and policymakers in developing initiatives that encourage inclusiveness, mutual respect, and positive social relationships within higher education institutions.

Keywords: Prejudice, Social Behavior, College Students, Social Interaction, Higher Education.

1. Introduction

1.1 Introduction

Educational institutions serve as important environments where students from diverse cultural, linguistic, religious, economic, and social backgrounds interact on a regular basis. These interactions play a crucial role in shaping students' attitudes, values, and behaviors. While diversity enriches learning experiences and promotes social development, it may also give rise to prejudicial attitudes that influence interpersonal relationships and social behavior.

Prejudice refers to preconceived judgments or negative attitudes toward individuals or groups that are formed without adequate knowledge or direct experience. Such attitudes may be based on stereotypes, social categorization, or preconceived beliefs and can influence how individuals perceive, evaluate, and interact with others. Although prejudice is often expressed subtly rather than overtly, it may affect communication, cooperation, trust, empathy, and willingness to engage in positive social interactions.

Social behavior encompasses the actions and interactions individuals exhibit while relating to others within society. Positive social behavior includes cooperation, helping behavior, respect, empathy, effective communication, and social inclusion. Conversely, prejudicial attitudes may contribute to avoidance, exclusion, discrimination, reduced cooperation, and interpersonal conflict. Consequently, understanding the relationship between prejudice and social behavior has become increasingly important in educational settings where students are expected to collaborate with peers from diverse backgrounds.

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Previous research has demonstrated that prejudice influences various aspects of interpersonal behavior and social relationships. Students who possess stronger prejudicial attitudes may be less willing to interact positively with individuals perceived as different from themselves, thereby limiting opportunities for collaboration, mutual understanding, and social cohesion. Educational institutions therefore play a significant role in promoting inclusive environments that discourage prejudice and encourage positive social behavior.

Despite increasing attention to diversity and inclusion within higher education, empirical evidence examining the relationship between prejudice and social behavior among college students in India remains relatively limited. Differences in cultural contexts, educational environments, and social norms suggest the need for context-specific investigations.

Accordingly, the present study seeks to examine the effect of prejudice on the social behavior of college students in Darbhanga, Bihar. The findings are expected to contribute to the existing literature and provide practical insights for promoting inclusive and harmonious educational environments.

1.2 Statement of the Problem

Prejudice continues to influence interpersonal relationships in educational institutions despite increasing emphasis on diversity and inclusion. Negative attitudes and stereotypes may subtly affect students' communication, cooperation, empathy, and willingness to interact with peers from different backgrounds. Such behavioral outcomes may hinder the development of inclusive learning environments and healthy social relationships.

Although previous studies have examined prejudice in various social contexts, relatively few have investigated its influence on the social behavior of college students within the Indian higher education system. Furthermore, limited empirical evidence is available from Bihar. Therefore, the present study seeks to examine the effect of prejudice on the social behavior of college students in Darbhanga, Bihar.

1.3 Research Objectives

1. To examine the effect of prejudice on the social behavior of college students.
2. To determine the relationship between prejudice and social behavior among college students.

1.4 Research Hypotheses

H1: Prejudice has a significant effect on the social behavior of college students.

H2: There is a significant relationship between prejudice and social behavior among college students.

1.5 Significance of the Study

The present study contributes to understanding how prejudicial attitudes influence students' social behavior within higher education institutions. The findings may assist educators, counselors, institutional administrators, and policymakers in developing educational strategies that promote inclusiveness, empathy, cooperation, and mutual respect among students. Furthermore, the study enriches the existing literature on prejudice and social behavior by providing empirical evidence from the Indian higher education context, particularly from Bihar.

2. Review of Literature

2.1 Prejudice and Social Behavior

Prejudice is generally defined as a preconceived positive or negative attitude toward individuals or groups based on characteristics such as social identity, ethnicity, religion, gender, or other group memberships. It develops through stereotypes, social categorization, and learned beliefs, often influencing individuals' perceptions and interactions with others. Social behavior, on the other hand, refers to the actions and responses individuals display while interacting with others, including cooperation, communication, empathy, helping behavior, and social participation.

The relationship between prejudice and social behavior has been widely examined in social psychology. According to **Allport (1954),** prejudice arises from rigid generalizations and stereotypes that influence interpersonal interactions and often result in social exclusion and discrimination.

Allport argued that prejudicial attitudes can hinder positive intergroup relationships and reduce opportunities for meaningful social interaction.

Tajfel and Turner (1979) proposed that individuals naturally classify themselves and others into social groups, leading to favoritism toward one's own group and, at times, biased attitudes toward out-groups. Such categorization influences interpersonal behavior and shapes social interactions within educational and organizational settings.

Research by **Pettigrew and Tropp (2006)** demonstrated that positive intergroup contact significantly reduces prejudice and promotes trust, cooperation, and positive social behavior. Their meta-analysis concluded that meaningful interactions between members of different groups improve attitudes and foster more harmonious social relationships.

Fiske (1998) emphasized that stereotypes and prejudicial beliefs influence emotions and behaviors toward others, affecting cooperation, communication, and helping behaviors. Individuals holding stronger prejudicial attitudes are often less likely to engage in positive interpersonal interactions.

2.2 Theoretical Foundation

Social Identity Theory

Social Identity Theory, developed by **Henri Tajfel and John Turner (1979),** explains how individuals derive part of their identity from membership in social groups. The theory suggests that people naturally categorize themselves and others into in-groups and out-groups, often leading to in-group favoritism and prejudicial attitudes toward members of other groups. Such attitudes can influence interpersonal relationships, cooperation, and social behavior within educational settings. The theory provides a useful framework for understanding how prejudice develops and affects students' interactions with peers.

Intergroup Contact Theory

Intergroup Contact Theory, proposed by **Gordon Allport (1954),** suggests that meaningful interaction between members of different social groups can reduce prejudice when certain conditions—such as equal status, common goals, cooperation, and institutional support—are present. Positive intergroup contact encourages empathy, mutual understanding, and acceptance, thereby improving social behavior and reducing discriminatory attitudes. The theory provides an important explanation for how educational institutions can foster inclusive environments through collaborative learning and social engagement.

2.3 Research Gap

a. Most existing studies have been conducted in Western societies, with limited evidence from the Indian higher education context.
b. Few studies have specifically examined the effect of prejudice on the social behavior of college students.
c. Limited empirical research is available among college students in Bihar, particularly in Darbhanga.

3. Research Methodology

The study adopted a quantitative research approach employing descriptive and explanatory research designs to examine the effect of prejudice on the social behavior of college students. The study was conducted among undergraduate and postgraduate students enrolled in various colleges in Darbhanga, Bihar. A convenience sampling technique was employed to select 260 respondents.

Primary data were collected through a structured questionnaire comprising demographic information and statements measuring prejudice and social behavior on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Prejudice served as the independent variable, whereas social behavior constituted the dependent variable.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize the data. Reliability was assessed using Cronbach's alpha, with values of **0**.70 or above

considered acceptable **(Nunnally & Bernstein, 1994).** Pearson's correlation analysis was employed to examine the relationship between prejudice and social behavior, while simple linear regression analysis was conducted to determine the effect of prejudice on social behavior. The hypotheses were tested at a 5% level of significance ($p < 0.05$).

4. Results and Discussion

4.1 Demographic Characteristics of Respondents

Table 1
Demographic Characteristics of Respondents (N = 260)

Variable	Category	Frequency	Percentage (%)
Gender	Male	118	45.4
	Female	142	54.6
Age	18–19 years	58	22.3
	20–21 years	126	48.5
	22–23 years	56	21.5
	Above 23 years	20	7.7
Educational Level	Undergraduate	182	70.0
	Postgraduate	78	30.0
Year of Study	First Year	64	24.6
	Second Year	82	31.5
	Third Year	72	27.7
	Postgraduate	42	16.2

Interpretation: The majority of respondents were female (54.6%), aged 20–21 years (48.5%), and pursuing undergraduate studies (70.0%). Students from different years of study were adequately represented, indicating a diverse sample.

4.2 Descriptive Statistics

Table 2
Descriptive Statistics of Study Variables

Variable	N	Mean	Standard Deviation
Prejudice	260	2.87	0.74
Social Behavior	260	3.91	0.66

Interpretation: The respondents reported a moderate level of prejudicial attitudes (M = 2.87), while the mean score for social behavior (M = 3.91) indicates generally positive social interactions among the students.

4.3 Reliability Analysis

Table 3
Reliability Statistics

Variable	Number of Items	Cronbach's Alpha
Prejudice	6	0.841
Social Behavior	7	0.879

Interpretation: Cronbach's alpha values exceeded the recommended threshold of 0.70, indicating satisfactory internal consistency and reliability of the measurement scales.

4.4 Correlation Analysis

Table 4
Pearson Correlation Matrix

Variables	1	2
1. Prejudice	1.000	
2. Social Behavior	**-0.571**	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

Interpretation: A significant negative correlation ($r = –0.571$, $p < 0.01$) was observed between prejudice and social behavior. The findings indicate that higher levels of prejudice are associated with poorer social behavior among college students.

4.5 Regression Analysis and Hypothesis Testing

Table 5
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.571	0.326	0.323	0.543

Interpretation: The regression model explains 32.6% of the variation in social behavior, indicating that prejudice is a meaningful predictor of students' social behavior.

Table 6
ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.281	1	36.281	124.72	0.000
Residual	75.078	258	0.291		
Total	111.359	259			

Interpretation: The regression model was statistically significant ($F = 124.72$, $p < 0.001$), indicating that prejudice significantly influences social behavior among college students.

Table 7
Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.
Constant	4.823	0.189		25.52	0.000
Prejudice	-0.481	0.043	-0.571	-11.17	0.000

Interpretation: Prejudice has a significant negative effect on social behavior ($\beta = –0.571$, $p < 0.001$). This indicates that an increase in prejudicial attitudes is associated with a decline in positive social behavior among college students.

Table 8
Hypothesis Testing

Hypothesis	Decision
H01: Prejudice has a significant effect on the social behavior of college students.	Accepted
H02: There is a significant relationship between prejudice and social behavior among college students.	Accepted

Interpretation: Both the hypotheses were accepted. The findings confirm that prejudice has a statistically significant negative effect on social behavior and is significantly related to students' social interactions.

4.6 Discussion of Findings

The findings indicate that prejudice significantly and negatively influences the social behavior of college students. Students exhibiting higher levels of prejudicial attitudes reported lower levels of positive social behavior, including cooperation, empathy, communication, and social interaction.

The results support Social Identity Theory **(Tajfel & Turner, 1979),** which explains that categorization into in-groups and out-groups can foster biased attitudes that influence interpersonal behavior. The findings are also consistent with Intergroup Contact Theory **(Allport, 1954),** which suggests that meaningful interactions between diverse groups reduce prejudice and promote positive social relationships.

The study aligns with previous research by **Allport (1954), Pettigrew and Tropp (2006), and Fiske (1998),** all of whom reported that prejudicial attitudes undermine trust, cooperation, and inclusive social behavior. These findings emphasize the importance of fostering inclusive educational environments that encourage diversity, mutual respect, and positive peer interactions.

5. Conclusion

The study concludes that prejudice has a significant negative effect on the social behavior of college students. Students with higher levels of prejudicial attitudes tend to exhibit lower levels of cooperation, empathy, and positive social interaction. The findings highlight the need for higher education institutions to promote diversity, inclusion, and meaningful intergroup interactions to reduce prejudice and strengthen positive social behavior among students.

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Role of PMKVY in Employment Generation in Bihar

Dr. Jitendra Kumar Sharma*

Abstract-

Present study dealt with 'Role of PMKVY in Employment Generation in Bihar'. Employment generation continues to be a critical development concern in Bihar, where persistent unemployment is driven by rapid population growth, limited industrial expansion, large-scale outmigration, and a shortage of market-oriented technical skills among the youth. To address these challenges, the Government of India introduced the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in 2015 under the Ministry of Skill Development and Entrepreneurship (MSDE). The scheme aims to enhance employability by providing industry-aligned skill training, assessment, and certification to unemployed and underemployed individuals. This article presents a critical assessment of PMKVY's role in promoting employment generation in Bihar by examining its implementation framework, achievements, limitations, and emerging opportunities. Drawing upon government publications, academic studies, and recent policy initiatives, the study concludes that although PMKVY has substantially improved access to vocational skill development, its long-term impact on sustainable employment is constrained by structural economic challenges, inadequate industrial growth, and limited employment absorption capacity within the state.

Keywords : Skill Development, Employment Generation, Bihar, Employability, Migration, PMKVY, Vocational Training, etc.

Introduction:

Employment generation has emerged as one of the most critical socio-economic challenges confronting developing countries in the twenty-first century. In India, despite sustained economic growth over the past three decades, the benefits of development have not translated proportionately into productive employment opportunities for the rapidly expanding workforce. The challenge is particularly acute in states such as Bihar, where high population density, limited industrialization, agricultural dependence, widespread poverty, and large-scale out-migration continue to constrain economic development. According to various national surveys, Bihar possesses one of the youngest populations in India, offering immense demographic potential. However, this demographic advantage can become a demographic burden if the youth remain unemployed or inadequately skilled. Therefore, enhancing employability through systematic skill development has become a central priority of both national and state development policies.

The relationship between skill development and employment has gained increasing attention in contemporary development discourse. Human capital theory argues that investment in education and vocational skills enhances labour productivity, increases employability, and contributes significantly to economic growth. In the era of globalization, technological advancement, digital transformation, and Industry 4.0, employers increasingly demand a workforce equipped with technical competencies, digital literacy, communication skills, and industry-specific expertise. Consequently, governments across the world have shifted their focus from conventional education towards competency-based skill development systems that prepare individuals for rapidly changing labour markets[1].

India's demographic profile presents a unique opportunity for economic transformation. More than sixty-five percent of the country's population belongs to the working-age group, making India one of the youngest nations globally. Recognizing this demographic dividend, the Government

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of India launched the Skill India Mission in 2015 with the objective of transforming the country into the "Skill Capital of the World." One of the flagship initiatives under this mission is the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), introduced by the Ministry of Skill Development and Entrepreneurship (MSDE). The scheme aims to provide industry-relevant skill training, certification, assessment, and placement assistance to unemployed youth through accredited training institutions across the country[2]. It seeks to bridge the persistent gap between formal education and labour market requirements by offering short-term vocational training aligned with the National Skills Qualification Framework (NSQF).

PMKVY represents a significant shift in India's employment policy by emphasizing employability rather than merely educational attainment. Unlike conventional educational programmes, PMKVY focuses on practical skills, competency-based training, industry participation, entrepreneurship promotion, and recognition of prior learning (RPL). The programme covers diverse sectors, including healthcare, construction, retail, information technology, hospitality, electronics, logistics, apparel, agriculture, automotive services, beauty and wellness, renewable energy, and digital services. By integrating skill training with certification and placement support, the scheme seeks to improve employment prospects for millions of young Indians.

Among all Indian states, Bihar offers one of the most significant contexts for evaluating the effectiveness of PMKVY. Historically, Bihar has experienced persistent developmental challenges characterized by low per capita income, inadequate industrial infrastructure, limited manufacturing activities, high unemployment rates, seasonal underemployment, and substantial labour migration to economically advanced states such as Delhi, Maharashtra, Gujarat, Punjab, Haryana, Karnataka, and Tamil Nadu. Agriculture continues to dominate Bihar's economy, yet the sector suffers from fragmented landholdings, disguised unemployment, low mechanization, and limited value addition. Consequently, a large proportion of rural youth remain dependent on seasonal migration for livelihood opportunities.

Although Bihar has witnessed considerable improvements in literacy rates, educational enrolment, road connectivity, electricity supply, and public infrastructure over the last two decades, these achievements have not been accompanied by proportional growth in formal employment opportunities. A significant proportion of educated youth remain unemployed because the knowledge acquired through traditional educational institutions often lacks direct relevance to industrial and service-sector requirements. This mismatch between educational qualifications and market demand has intensified the problem of educated unemployment, making vocational education and skill development increasingly important for sustainable economic development.

Against this backdrop, PMKVY assumes particular significance for Bihar. The programme aims not only to improve technical competencies but also to create pathways for wage employment, self-employment, entrepreneurship, and livelihood diversification. Through short-term training programmes, Recognition of Prior Learning (RPL), Special Projects, and industry-certified assessment mechanisms, the scheme attempts to enhance the employability of unemployed youth belonging to rural and urban areas alike. Thousands of candidates from various districts of Bihar have received training in multiple sectors under different phases of PMKVY. In addition to technical skills, many training modules incorporate soft skills, financial literacy, digital literacy, entrepreneurship development, workplace ethics, communication abilities, and personality development, thereby improving the overall employment readiness of beneficiaries.

The implementation of PMKVY in Bihar has generated considerable optimism regarding its potential to reduce unemployment and migration. The establishment of numerous training centres across districts has expanded access to vocational education for economically weaker sections, women, Scheduled Castes, Scheduled Tribes, Other Backward Classes, minorities, and rural youth who traditionally lacked opportunities for formal skill acquisition. Furthermore, the programme has encouraged greater participation of women in the labour market by offering training in healthcare, apparel manufacturing, beauty and wellness, retail management, digital services, and other

employment-oriented sectors. Such initiatives contribute not only to income generation but also to women's economic empowerment and social inclusion.

Nevertheless, the effectiveness of PMKVY in generating sustainable employment remains a subject of considerable academic and policy debate. While the scheme has undoubtedly expanded access to skill training, questions persist regarding the quality of training, adequacy of infrastructure, industry linkage, placement rates, post-training support, curriculum relevance, trainer competency, and long-term employment sustainability. Several empirical studies suggest that many certified candidates continue to face difficulties in securing stable employment because Bihar's industrial base remains relatively underdeveloped. In many cases, trained youth migrate to other states where industrial and service-sector employment opportunities are more abundant. Thus, although PMKVY enhances employability, actual employment generation is influenced by broader structural factors such as industrial investment, regional economic development, labour market dynamics, infrastructure availability, and private-sector participation.

Another important dimension concerns entrepreneurship and self-employment. Recognizing that wage employment alone cannot absorb the expanding labour force, recent phases of PMKVY increasingly emphasize entrepreneurial development, financial inclusion, digital commerce, and micro-enterprise creation. Several beneficiaries have established small businesses such as tailoring units, beauty parlours, mobile repair centres, computer service centres, retail shops, and agricultural enterprises after completing skill training[3]. Such initiatives have the potential to stimulate local economic development, create additional employment opportunities, and reduce dependency on interstate migration. However, entrepreneurship promotion requires complementary support through credit facilities, market access, business mentoring, digital infrastructure, and continuous capacity building.

From a policy perspective, the success of PMKVY cannot be assessed solely by the number of candidates trained or certified. Rather, its effectiveness should be evaluated in terms of sustainable employment, income enhancement, labour productivity, entrepreneurial success, social mobility, gender inclusion, and contribution to regional economic development. Therefore, examining the role of PMKVY in Bihar requires a multidimensional analytical framework that considers both programme implementation and the structural characteristics of the state's labour market.

Employment Scenario in Bihar

- High youth unemployment
- Large-scale interstate migration
- Dominance of agriculture
- Limited industrial employment
- Low female labour force participation
- Skills mismatch between education and industry

These structural characteristics make skill development particularly important for inclusive economic growth.

PMKVY Implementation in Bihar

- Short-Term Training (STT)
- Recognition of Prior Learning (RPL)
- Special Projects
- Industry-certified training partners
- Assessment and certification
- Placement assistance

Contribution of PMKVY to Employment Generation

(a) Improvement in Employability : PMKVY has equipped thousands of unemployed youth with industry-recognized skills, increasing their employability.

(b) Formal Certification : Nationally recognized certification has enhanced employment opportunities in both organized and semi-organized sectors.
(c) Promotion of Self-Employment : Beauty parlours, Mobile repair centres, Tailoring units, Computer centres, Small retail businesses
(d) Reduction in Skill Gap : The scheme has narrowed the gap between educational qualifications and labour market requirements.
(e) Women's Employment : PMKVY has increased participation of women in sectors like: Healthcare, Beauty & Wellness, Apparel Manufacturing, Retail, Data Entry
(f) Migration Support : Many trained youth have secured employment outside Bihar in manufacturing and service industries.
District-wise Performance : Government data (2020–2025) indicate higher PMKVY participation in: Patna, Gaya, Nalanda, Muzaffarpur, Madhubani, Vaishali, Saran.

Major Challenges

Poor Industrial Base : Bihar lacks sufficient industries capable of absorbing skilled manpower.
Limited Placement : Although training numbers have increased, placement rates remain relatively modest. Earlier government data showed substantial numbers trained but a considerably smaller number reported as placed, and more recent national assessments continue to highlight the gap between certification and employment.
Quality Variation : Training quality varies significantly among centres.
Weak Industry Linkages : Industry participation remains inadequate.
Migration : Many skilled youth migrate to: Delhi, Maharashtra, Gujarat, Karnataka, Tamil Nadu
Monitoring Issues : Evaluation of post-placement outcomes remains insufficient.

SWOT Analysis

Strengths : Free skill training, National certification, Industry-oriented curriculum, Wide district coverage, Government support
Weaknesses : Limited employment opportunities, Poor industry linkage, Variable training quality, Weak post-placement monitoring
Opportunities : Industrial development, Digital economy, Green jobs, Entrepreneurship, MSME expansion

The present study seeks to critically examine the contribution of the Pradhan Mantri Kaushal Vikas Yojana to employment generation in Bihar. It analyzes the scheme's objectives, implementation mechanisms, district-level performance, employment outcomes, challenges, and future prospects using secondary data from government reports, parliamentary documents, policy papers, and contemporary academic literature. The study further evaluates the extent to which PMKVY has succeeded in enhancing employability, promoting entrepreneurship, reducing skill gaps, and facilitating inclusive economic development within the socio-economic context of Bihar. The findings are expected to contribute to the growing body of literature on skill development, labour economics, and public policy while offering valuable recommendations for strengthening employment-oriented skill development initiatives in one of India's most economically significant states.

Review of Literature

Santosh Mehrotra (2022) Emphasized that India's skill development programmes have expanded considerably, but employment generation depends equally upon industrial growth and labour market demand[4].
S. N. Thekkumkara, A. Jagannathan & T. Sivakumar (2021) Observed that PMKVY has improved vocational training access, although quality of placement and post-training support require strengthening[5].
Pawan Kumar (2017) examined the relationship between skill development initiatives and employment generation in India, arguing that skill development programmes alone cannot ensure sustainable employment unless they are supported by favourable macroeconomic conditions. The

study emphasized that factors such as industrial growth, investment, infrastructure development, labour market expansion, technological advancement, and supportive government policies play a decisive role in creating employment opportunities. Kumar contended that while schemes like the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) enhance the employability of individuals by equipping them with industry-relevant skills, the availability of jobs ultimately depends on the overall performance of the economy and the capacity of industries to absorb skilled workers[6].

Cabral, Clement, & Dhar, Rajib Lochan (2019) conducted one of the earliest systematic literature reviews on skill development research in India. Reviewing forty-five empirical studies, they concluded that India's skill development ecosystem has expanded substantially but continues to face structural problems such as poor quality of vocational education, mismatch between labour market demand and available skills, inadequate industry participation, shortage of qualified trainers, and weak institutional coordination. Their review emphasized the need for stronger labour market reforms and closer integration of vocational education with mainstream education[7].

Government Reports (MSDE) Recent parliamentary reports indicate that PMKVY 4.0 emphasizes demand-driven training, digital skills, entrepreneurship, and industry partnerships rather than merely achieving enrolment targets[8].

Objectives of the Study

1. To examine the implementation of PMKVY in Bihar.
2. To evaluate its contribution toward employment generation.
3. To identify district-wise variations in implementation.
4. To assess major challenges affecting employment outcomes.
5. To suggest policy measures for improving the effectiveness of PMKVY.

Research Questions

1. Has PMKVY improved employability among Bihar's youth?
2. To what extent has skill training translated into employment?
3. What factors limit the success of PMKVY in Bihar?
4. What policy reforms are necessary for better employment outcomes?

Suggestions

- Strengthen industry partnerships.
- Expand apprenticeship programmes.
- Encourage local manufacturing.
- Promote district-specific skill mapping.
- Improve quality monitoring of training centres.
- Increase entrepreneurship financing.
- Strengthen placement tracking.
- Integrate PMKVY with Bihar's industrial policy.
- Expand digital and AI-related skill training.
- Encourage women-focused employment initiatives.

Findings

- PMKVY has substantially increased access to vocational skill training in Bihar.
- Employability has improved among certified candidates.
- Employment generation remains below expectations because of Bihar's weak industrial ecosystem.
- Self-employment has emerged as an important outcome.
- District-wise disparities remain significant.
- Sustainable employment requires integration of skill development with industrial expansion and investment.

Conclusion

PMKVY represents one of India's most ambitious skill development initiatives and has made a significant contribution toward enhancing human capital in Bihar. The programme has successfully

trained large numbers of unemployed youth, expanded vocational education, and improved awareness regarding employable skills. Nevertheless, skill acquisition alone cannot ensure employment. Bihar's structural constraints—including a limited industrial base, inadequate private-sector investment, and persistent labour migration—continue to restrict the scheme's employment outcomes.

For PMKVY to become a more effective instrument of employment generation, it must be complemented by stronger industrialization, robust industry–institution partnerships, enhanced apprenticeship opportunities, entrepreneurship promotion, and systematic post-training placement support. A coordinated approach linking skill development with regional economic planning can transform Bihar's demographic potential into sustainable economic growth and productive employment.

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An Analytical Study of Feminism Character of Sarita (Saru) in Novel of "The Dark Holds No Terror" by Shashi Deshpande

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Abstract

Woman is neither organically nor mentally sub-par compared to man yet traditionally, in human progress, she has been dealt with mediocre compared to man. She has been given the optional status in the general public and isn't perceived as a human with a personality. 'Feminism', the counter man controlled society development emerges and contemplates the women issues in this way making mindfulness. Activities which incorporate feminist writing among others which look to free women from the subjection and misuse of man and to develop and libertarian culture can be back dated to the 1960s. Sashi Despande, an unmistakable feminist writer whose novel 'The Dark Holds No Terrors' is analyzed. The goal of this paper depicts the psychological issues that a career arranged woman experiences in her day to day existence. The emergency is a result of the darkness that continues in one's psyche. One must emerge from this terror and face the issues strongly with fearlessness. Approaches, for example, Simon De Beauvoir analysis is embraced in gathering the targets. The exploration will be done in the point of view of feminist hypothesis of Simon De Beauvoir's The Second Sex.

Keyword : Shashi Deshpande, women's issues, feminist literature, subjugation, psychological issues, career-oriented women, darkness, fearlessness Feminism, The Dark Holds No Terror,

Introduction

Shashi Deshpande's novel *The Dark Holds No Terrors* presents Sarita (Saru) as a modern, educated, working woman whose quest for autonomy challenges traditional patriarchal structures. Her journey highlights the psychological conflicts of balancing professional success with domestic expectations in a male-dominatedT,he Dark Holds No Terror is the narrative of Sarita; regularly she is called her nickname Saru in this novel. Frequently she is abused by her mom, Kamala; an old, traditional, conventional woman needs her girl to get hitched to an individual who is from lower position, as her girl isn't excellent. She is constantly dismissed and disregarded for her sibling Dhruva. Toward the start, she is an irate youngster, with loads of inquiry in her psyche, dissenting and challenging any type of mastery. Her longing towards selfhood and energy for important and autonomous in life makes her a specialist.

Literature Review

I have chosen Shashi Deshapnade's Novel and a lot of work has been done on it just as others Indian books which manage similar issues. I will relate my novel with each one of those books with same topics to improve the unwavering quality of my examination. In the Research article, "The degenerate Urban Culture in Shobha De's Sisters", Chintan Mahida presents the novel "Sisters" as a run of the mill Indian feminist novel which records the torment and hopelessness of taught women in a man centric culture. This sort of novel for the most part remembers the development of a young lady for the Indian working class family with her male kin to zero in on sex segregation; later on it centers around the issues of her wedded life where she is unheard, ignored and mistreated. 'Sisters' manages the psychic issues of a woman hero who is up to speed between the contentions an individual life and a cultural life. Lastly this squashed fountain of woman hero results into freedom, mindfulness and battle for her place in a male centric culture. Surfacing is a novel by Canadian creator Margaret Atwood and these arrangements with the life of a mysterious hero who looks for her personality in a man centric culture. The creator really portrayed the abuse of women and nature by

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the hand of men. The hero returns to her old neighborhood looking for her lost dad. In her excursion back to her past through nature she comprehends the connection among women and nature. In the last piece of the novel, the champion distinguishes herself with the normal world. She picks up another character and won't turn into a casualty of male centric culture. She will not return to the city and gets liberated from the malicious impacts of a materialistic and innovative world. Ollala Srinivas presents enduring of Shobha De's Women in the examination paper "The picture of new women in Shobha De's tale Socialite Evenings.". The epic depicts Mumbai high society and investigates the lives of exhausted rich housewives caught in cold relationships and male/female world over they don't love veritable interests however just plastic interests. All the women cast off the ordinary feeling of profound quality, the old, the drained and abusive sexual move and revel in the suggestive festival of the body. Shobha De has made an honest effort at communicating the inward desire of the Indian woman whether country or metropolitan in the most ideal manner. As a feminist author, De focuses on woman issues in her novel giving them another methodology. The tale 'Socialite Evenings' gives us the image of minimization of the Indian women on account of their spouses. Rajeshwar Mittapalli notices Jaya the woman character in the novel. "That long quietness" by Shashi Deshpande in the light of exigencies of life introduced themselves as awful mishaps in his examination article, "The Trauma of a House spouse: Shashi Deshpande's That Long Silence",; Jaya's psychic has not been well-prepared to meet the exigencies. The creator further says that therefore, the conduits of uneasiness have been unexpectedly opened and at this psychological second silliness qualified her reaction to the circumstance. Her enduring beneficially affects her. It starts the cycle of self disclosure in her which leads in the last analysis to her new view of life. She arises toward the finish of the difficulty as a woman with certain eagerness to bargain with life' issues while prior she demonstrated an astounding absence of convenience and breadth. In the examination paper "Shashi Deshpande's Roots and Shadows: Articulation of Feminine Voice" specialist endeavors to test into the issue of marriage through Indu, the hero and her cousin Mini where one appreciates the opportunity of marriage and the other acknowledges the traditional marriage simultaneously, Indu discovering her foundations in the home and with her better half finding the significance of life in her excursion to individuation. Shashi Deshpande's Roots and shadows Explore and uncovered the battle of Indu, an informed working class woman, in a male-ruled tradition bound society. Indu represents the New Woman, who is taught and who lives in close relationship with the general public forgetting about the entirety of its restricted shows. The tale additionally manages the unfulfilled longings and troubled relationships of women in a huge Maharashtrian Brahmin household. It is evidently the narrative of the victory and misfortune of a family that is bound up in its molded man centric self. It recounts the story not of an individual but rather of the establishment of marriage, which is compromised by the powers of progress and faces disintegration. Indian literature. She was brought into the world in Dharwad in Karnataka as the girl of the eminent Kannada playwright just as an incredible Sanskrit researcher Sriranga. She sought after her schooling in Dharwad, Bombay and Bangalore. Indeed, in this article, we will give you the account of Shashi Deshpande. Shashi Deshpande had an exceptionally sharp psyche. She got degrees in Economics and Law. In fact, she was a gold medalist. In the wake of getting hitched, she moved to Bombay (presently Mumbai). During her stay in Mumbai, she chose to seek after a course in Journalism. In this way, she got herself tried out the Bharatiya Vidya Bhavan. From that point, she took up an occupation as a columnist in the magazine "Passerby". She worked there for a very long time. Peruse on to know the total life history of Shashi Deshpande. While working in the magazine, she started composing and the principal short story that she composed got distributed in 1970. Her short stories traveled their way in mainstream magazines like Femina, Eve's Weekly and so forth her lady assortment of short stories was distributed under the title "Inheritance" in the year 1978. Her first novel, "The Dark Holds No Terror" was distributed in 1980.

Feminism in Shashi Deshpande’s Novel

Shashi Deshpande's significant concern is to portray the pain and strife of the cutting edge instructed Indian women got among man controlled society and tradition from one perspective, and self articulation, singularity and freedom for the women on the other. Her fiction investigates the hunt of the women to satisfy herself as an individual, free of her traditional function as girl, spouse and mother. Shashi Deshpande's "The Dark Holds No Terror" is an exceptionally amazing novel that portrays the life of Sarita, a woman specialist who ends up running away to her dad's home before all else being tormented by the sexual extraordinary of her significant other Manohar yet this parental home similarly brings back of her the awful recollections of the merciless disposition of her mom who is no more at this point. As Kailash centric position in the account. Among the different issues that the novel spotlights on, ideas of 'holding' and 'subjugation' are viewed as in India as well as around the world". The epic spotlights on woman's consciousness of her quandary, her needing to be perceived as an individual than as a woman and her needing to have an autonomous social picture. At the start of the novel, the hero Sarita is found as a casualty of her significant other; Manohar's vicious torment through physical and sexual viciousness. Her psychological state is communicated in an exceptionally reasonable way and contacting way. In the novel one can't neglect to see these distinctions in her since her adolescence till she is an adult woman. At home she generally attempts to control Dhuruva, her sibling and perspectives her mom consistently opposed all the reformist moves she embraced and has unbalanced love for her child. Being a child, he had the benefit of accepting more consideration, care and love from her folks. Her youth envy goes to the bleeding edge. At the point when she pushes him from her dad's lap when he was not really a year old. He had been totally faithful to her in all regard continually pursuing his adored Sarutai. Her mom's warmth towards her sibling actuated her to inquire as to why the mother cut a female by testing the old request, the horde subjugations of tradition forced by a male overwhelmed society. Dhurva's demise turns into an instrumental in distance her from them by putting blame awareness appears to act like a weak spot now and again driving her to a psychological state verging on schizophrenia This brings the mother-girl struggle to the cutting edge. Saru thinks about financial freedom as a protection against any subjection. At the point when she chooses to seek after a course in medication in Bombay, the mother is traditionally not well arranged to let her have her direction. She puts forth attempts to get her and even distinguish herself with her mom Valli Roa discovers this as "… a quest for her own feminine side and herself lastly we see 'rebirthing' her own independence character separate from her mom. The comment of Atrey and Kripal are recognizable: incapable to state his 'masculinity' over her (Saru) likes a traditional male (that is in financial terms). He depends on sexual attack of her daily while playing the caring spouse during the day. His motivation, however subdued in the psyche is to 'rebuff' her for taking on the 'male' job and to state his predominance and force through actual brutality. Manus conscience is harmed by her prosperity, he feels second rate and this feeling of inadequacy makes him severe in his conduct. Despite the fact upon Saru. Her fantasy of discoveries in marriage is before long broken. Saru comprehends that incorporation alone would make her entire again and showdown of the deterioration components could never make that conceivable. Saru wants to free herself from the shadier of tradition and exercise her entitlement to uncover her individual abilities and understand her feminine self through personality attestation and self-assertion. In the expressions of S.P. Lover: Saru's Journeyis an excursion from self estranges to self distinguishing proof, from negative to stating, from modesty to certainty. She figures out how to confide in her feminine self

Analysis on Feminism in ‘Dark Hold to Terror’

The Dark Holds No Terror is about the battles of the Indian women and how they are being mistreated in a man centric Indian culture. The hero is a female character named Sarita and exemplifies the fundamental subject as she continued looking for Self-Identity and freedom. "Sarita's endeavor is one of a change from self-centeredness to self-disclosure, from disavowal to declaration, from delicacy to certainty. She figures out how to trust in herself." The epic communicates the situation of a woman who feelings of spite on the attack on her independence and character. The epic

starts with the returning of Sarita to her dad's home following fifteen years. Her conjugal issue drives her to a disadvantage time for grave reflection on her relationship status with her significant other. Despite the fact that she stays unaltered till the end, she has a superior comprehension of herself as well as other people. Furthermore, she picks up completeness. Since her adolescence, Sarita confronted sexual orientation based separation not in the public eye but rather even in her own home. She grows up as a survivor of her Sexist bias. Directly from the beginning, she was caused to feel that she is a young lady and is mediocre compared to her sibling, Dhruva. She generally confronted carelessness and contempt. She reviews: "The night… My birthday events were nearly the equivalent… however there was no Puja. There was consistently a puja on Dhruva's birthday." She has been advised and instructed to raise a young lady in a specific design, and she does it with understood confidence. She endures the ―Don‘t go out in the sun. You‘ll get even darker. Who cares? We have to care if you don‘t. We have to get you married. I don‘t want to get married. Will you live with us all your life? Why not? You can‘t. And Dhruva? He‘s different. He‘s a boy.‖ The socio-cultural molding of a young lady is as yet a piece of Indian culture. Saru is constantly caused to feel undesirable, unfortunate and terrible. As indicated by her mom, 'actual magnificence is a pre-state of common accomplishment for a young lady'. She continually reprimands Saru's appearance. "I was a revolting young lady. At any rate, my mom let me know so." Saru's scorn reinforced when she accomplishes pubescence. She begins detesting everything. She abhors the traditional practice in her conventional home where she is constantly dealt with like an untouchable. Along these lines she got a man centric culture and this prompts psychological instability in her. She begins to communicate her sentiments through the demonstrations of insubordination which springs from her disdain for her mom as a little youngster and as a kid. She dreams for a supernatural occurrence to occur and that one day she would grow up and be autonomous. In any case, when she grows up she feels despicable in view of more limitations. "Maybe there is something in the male, she currently thought, that it trimmed down and eventually annihilated by female control. It isn't so with a female. She can be ruled, she can submit, but hold something of herself available for later as though there is something in her that forestalls disintegration and implosion." Saru's contention with her mom arrives at its pinnacle when she chooses to wed Manu, who is from lower rank and Saru' mother reject him. As she says: ―What caste is he? I don‘t know. Then, cruelly...his father keeps a cycle shop. Oh, so they are low-caste people, are they?‖ Saru got hitched to Manu and she feels that all will be well and she will live cheerfully ever after. Be that as it may, this didn't occur. Things began to change when Sarita turns into a specialist. She gets autonomous and more sure of herself. This calling has lifted her up a smidgen in her correlation with her better half Manohar and step by step Saru comes to realize that Manu is likewise similar to different men of this man centric culture and she gets issues in her marriage life. In a male centric culture, whoever a spouse is or whatever a wife does, she needs to adhere to specific principles which are necessary in the public arena. In any case, the connection among Sarita and Manohar is altogether unique in relation to the traditional points of view of the general public. Sarita turns out to be more mindful of her distinction and her privileges and spot in a general public. Sashi Deshpande has analyzed that how women are smothered in a man centric culture and how society has made inflexible standards for them. The writer has noticed the real factors of a general public which are unsatisfactory for a cultured Sarita. Sarita keeps in touch with the youthful understudies like: ―A wife must always be a few feet behind her husband. If he‘s an MA, you should be a BA. If he‘s 5'4" tall, you shouldn‘t be more than 5'3". If he‘s earning five hundred rupees, you should never earn more than four hundred and ninety-nine rupees. That‘s the only rule to follow if you want a happy marriage‖ These lines have greater significance in relation to the determination of the identity of a woman in the society. Women are nothing but _Others‘. And they are suppressed and oppressed in every way. The key to marriage is the ability to endure and go on. But there are many marriages where women are dominated by their husbands and do not find freedom and ―space‖ in their marital life. Her success as a well known and successful doctor becomes the cause of tensions in her married life. In a nostalgic mood she says later: ―He had been

the young man and I his bride. Now I was the lady doctor and he was my husband.‖ With the steady rise in Saru‘s status her husband starts feeling uncomfortable and humiliated when people pay more attention to Saru. As compared committed to her career as compared to her family. It seems like she wants to make a place of her own in this society. She wants to achieve fulfillment and wholeness in her life. For women, as for man, the need for self-fulfillment- autonomy, self-realization, independence, individuality, self-actualization is as important as the sexual need, with as serious consequences, when it is thwarted. Gradually Manu starts hating all this. And he starts teasing and bullying Saru. Certain incidents intensified the tensions in their married life to such extent that in the privacy of their room at night Manu doesn‘t behave like a husband but a rapist. In order to assert his manhood and masculinity he starts abusing her at nights, though during days he is still that normal and happy Manu. And here Saru feels that she is so helpless and she can‘t defend herself. As she says to her father: ―I couldn‘t fight back. I couldn‘t shout or cry, I was so afraid that the children in next room would hear. I could do nothing. I can never do anything. I just endure.‖ Although Saru has achieved economic independence and she feels that she is free but now she starts seeing the true and bitter face of her life that no matter how successful she as a doctor is, she is like all other women who are always oppressed by their husbands. During these days she hears the news of her mother‘s death and she returns back to her home and there she get a chance to spend time with herself and think about everything. She blames herself for everything and deep down inside she accepts everything. ―My brother died because I heedlessly turned my back on him. My mother died alone because I deserted her. My husband is a failure because I destroyed his manhood.‖ At the end the reader sees a new Saru who rejects extremes and takes a practical and realistic view of circumstances. ―My life is my own –somehow, she felt as if she had found it now, the connecting link. It means you are just a strutting, grimacing puppet, standing futilely on the stage for a brief while between areas of darkness. If I have been puppet, it is because I made myself one. I have been clinging unto the tenuous shadow of a marriage whose substance has long since disintegrated because I have been afraid of providing my mother right‖

Conclusion

Shashi Deshpande has made use of a first-person narrative to keep the readers on board with the psyches of her protagonists. Both Sarita and Jaya have expressed every bit of emotion that they feel and the discrimination, prejudice, and male domination that they go through during their life as a traditional Indian wife. Both the protagonists are middle-class Indian women, trying to fit in as silently as possible in a patriarchal society, by balancing their life as a wife, daughter, mother, and their individuality as a woman. They try hard to please their men by trying to be obedient, submissive, following all the instructions, and giving up things they like because of their husbands, and their marriage ends up in vain. Sarita comes back to her ancestral home because she cannot figure out the answers to her failed marriage, her husband being an animal in bed, her husband feeling inferior when he should feel proud, and thus it shatters her idea of a happy marriage. At the start, when Sarita becomes a doctor, Manohar is proud, but when she starts earning recognition, he becomes jealous and starts to take out his frustration on her at night in bed, sexually. Deshpande has described this scene with utmost power, and the readers can paint the horrors of this scene. Deshpande has given an insight into Sarita’s psyche with her words, “She was a normal person, not that two-in-one woman who, in the daytime wore a white coat and an air of confidence and knowing, and at night became a terrified, trapped animal” (Deshpande, 134). Shashi Deshpande has also given a view about how a male-dominated society works. Like a man-woman relationship can only work with a man leading a woman, the man being the head and always a step ahead of his woman. In this context, Deshpande, through her character, applied, “A wife must always be a few feet behind her husband. If he’s an M.A., you should be a B.A. If he’s 5 feet 4 inches tall, you shouldn’t be more than 5 feet 3 inches tall. If he is earning five hundred rupees, you should not earn more than four hundred ninety-nine rupees. That’s the only rule to follow if you want a happy marriage” (Deshpande, 137). On the other hand, Jaya completely suppresses her sexual desires because she is

afraid of coming out as too strong for a woman; she remains silent and follows Mohan to the world's end, and at the end, Mohan blames her for being a supportive wife only in times of happiness and not sorrow and problems. This shatters her and her idea of a happy married life. In the starting, when Jaya is writing and getting her stories published, Mohan is happy and proud to be a husband of a writer, but when Jaya publishes her story about a couple, "A man who could not reach out to his wife except through her body", Mohan goes into a frenzy about how can Jaya reveal them in public, considering the couple to be him and Jaya. At which point Jaya realizes that Mohan never really cared about her talent for writing, he was just happy to show her off as some kind of a trophy wife and an exhibit. After this incident, Jaya stops writing to fix her marriage. To draw the inference, Deshpande has delved deep into the psyches of her protagonists, giving her readers a gateway to understanding the misery of a traditional middle-class Indian woman. Deshpande has given a step-by-step representation of the inner psyche of a typical modern middle-class Indian woman. Themes of her novels generally revolve around family relationships, especially the relationship between a man and a woman, and the latter's dilemmas and conflicts .The outer and the inner self of Deshpande's every character have been described in a psychological way by her, giving a peek into the psyche of a traditional Indian Woman. A woman is always in a constant war with the patriarchal ways of the world. She always fights to establish her identity as a human being rather than any stereotyped tags. Identity cannot be asserted inside the home, because inside the home, she will always be known through her roles as a mother, daughter, and sister rather than as an individual with an identity of her own.

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Challenges and Risks of Digital Technology on Child Development

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Abstract

Digital technology has become an indispensable part of children's daily lives, influencing learning, communication, entertainment, and social interaction. Although digital devices provide educational and developmental opportunities, excessive, unsupervised, and inappropriate use has raised growing concerns regarding children's physical, cognitive, emotional, and social well-being. Prolonged screen exposure has been associated with attention difficulties, reduced academic performance, sleep disturbances, sedentary behaviour, obesity, digital eye strain, and delayed language development. In addition, excessive engagement with social media, online gaming, and digital communication platforms may increase the risk of anxiety, depression, digital addiction, cyberbullying, and exposure to inappropriate online content. Children's limited ability to understand online privacy and digital safety further increases their vulnerability to cyber threats and exploitation. The developmental consequences of digital technology depend not only on the duration of screen use but also on the quality of digital content, parental supervision, educational guidance, and children's developmental stage. Therefore, understanding the potential risks associated with digital technology is essential for developing effective preventive strategies.

Keywords: Child development, Digital technology, Screen time, Digital addiction, Cyberbullying, Sleep disturbance, Child health

Introduction

The widespread availability of smartphones, tablets, computers, gaming devices, and internet-based communication platforms has transformed childhood experiences across the world. Digital technology now plays a central role in education, entertainment, communication, and information access. Children are being introduced to digital devices at increasingly younger ages, often spending several hours each day using screens for educational as well as recreational purposes. While technology has created numerous learning opportunities, excessive and inappropriate digital engagement has also become an important public health and developmental concern. Child development is a complex process involving cognitive, physical, emotional, social, behavioural, and language development. Healthy development depends on a balanced combination of family interaction, physical activity, adequate sleep, quality education, and supportive social environments. Excessive screen exposure may interfere with these essential developmental experiences by reducing opportunities for outdoor play, face-to-face communication, creative activities, and sufficient rest.

Recent research has highlighted several concerns regarding prolonged digital technology use among children. Excessive screen time has been associated with attention problems, impaired executive functioning, sleep disturbances, obesity, musculoskeletal discomfort, digital eye strain, delayed language acquisition, poor academic performance, emotional distress, and problematic digital media use. Online environments may also expose children to cyberbullying, misinformation, inappropriate content, privacy violations, and online exploitation. These challenges have become increasingly significant as children's digital engagement continues to expand. Importantly, the risks associated with digital technology are influenced by multiple interacting factors, including children's age,

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duration and purpose of technology use, quality of digital content, parental supervision, family environment, and digital literacy. Educational and age-appropriate technology use under adult guidance differs substantially from prolonged recreational screen exposure without supervision.

Recognizing these concerns, international organizations and health professionals have emphasized the need for balanced technology use and responsible digital parenting. Understanding the potential adverse effects of digital technology is essential for developing preventive strategies that protect children's health while allowing them to benefit from technological advancements.

Digital Technology and Increasing Screen Exposure Among Children

The rapid expansion of digital technology has significantly increased children's daily exposure to electronic screens. Smartphones, tablets, laptops, smart televisions, gaming consoles, and wearable digital devices have become common in homes and schools, making technology an integral part of children's everyday routines. The availability of high-speed internet and digital learning platforms has further increased children's dependence on electronic devices for education, entertainment, and communication.

Following the COVID-19 pandemic, children's screen time increased substantially due to online education, virtual classrooms, and reduced opportunities for outdoor activities. Even after the reopening of schools, digital learning continued to play an important role in education, while recreational use of social media, online gaming, and video streaming remained high. Consequently, many children now spend prolonged periods interacting with digital devices throughout the day. Screen exposure includes both educational and recreational activities. Educational uses involve online classes, digital textbooks, educational applications, research, and skill development, whereas recreational use includes gaming, social networking, video streaming, and entertainment applications. Although educational technology offers valuable learning opportunities, prolonged recreational screen use often contributes more significantly to developmental concerns. The impact of digital technology depends not only on the total duration of screen exposure but also on the quality of digital content, the context of use, and the level of parental supervision. Age-appropriate educational content used for limited periods under adult guidance may support learning, whereas excessive unsupervised use of entertainment-based applications may negatively affect children's physical, cognitive, emotional, and social development. Understanding these patterns of digital engagement is essential for identifying potential developmental risks and implementing effective interventions that encourage healthy and balanced technology use among children.

Negative Impact of Digital Technology on Child Development

- **Cognitive and Attention Problems**

Digital technology has substantially influenced children's learning experiences; however, excessive and unregulated screen use may adversely affect cognitive functioning and attention. The developing brain is highly responsive to environmental stimulation, and prolonged exposure to rapidly changing digital content may alter attention patterns, information processing, and executive functioning. These concerns are particularly important during early childhood, when cognitive skills are developing rapidly. One of the most frequently reported effects of excessive digital media use is a reduced attention span. Short-form videos, rapidly changing visual content, and continuous notifications provide instant stimulation, making it difficult for children to concentrate on activities requiring sustained attention, such as reading, classroom learning, or completing homework. As children become accustomed to constant digital stimulation, they may struggle to remain focused on tasks that require patience and prolonged mental effort.

Excessive digital engagement may also affect executive functions, including working memory, planning, cognitive flexibility, impulse control, and decision-making. Frequent multitasking between educational applications, social media, games, and entertainment platforms increases cognitive load and reduces learning efficiency. Instead of processing information deeply, children may develop superficial learning habits characterized by quick scanning rather than careful analysis. Another concern is the growing dependence on digital devices for obtaining information. Easy access

to online answers may reduce children's motivation to think independently, solve problems creatively, and retain information through active learning. Overreliance on digital resources may weaken analytical reasoning and critical thinking if children are not encouraged to evaluate information critically.

Although educational technologies can support cognitive development when used appropriately, prolonged recreational screen exposure without adult supervision may interfere with healthy cognitive growth. Therefore, balanced technology use and engagement in reading, hands-on learning, outdoor play, and meaningful discussions remain essential for promoting optimal cognitive development.

- **Social and Emotional Development Issues**

Healthy social and emotional development depends on meaningful interactions with parents, teachers, siblings, and peers. Through face-to-face communication, children learn empathy, emotional regulation, cooperation, conflict resolution, and effective interpersonal skills. Excessive dependence on digital devices may reduce opportunities for these important developmental experiences. Children who spend long hours using smartphones, social media platforms, or online games may participate less frequently in family conversations and social activities. Reduced direct interaction may limit the development of communication skills and emotional understanding. Children may also become more socially isolated despite being digitally connected to many people. Social media has introduced additional emotional challenges. Many children and adolescents compare themselves with carefully edited online images and lifestyles presented by others. Such comparisons may contribute to reduced self-esteem, body image dissatisfaction, anxiety, and feelings of inadequacy. The continuous search for online approval through likes, comments, and followers may further influence emotional well-being and self-worth.

Research has also linked excessive digital media use with increased symptoms of stress, anxiety, irritability, loneliness, and depression among some children and adolescents. Frequent exposure to disturbing news, online conflicts, or unrealistic social expectations may negatively influence emotional health. Furthermore, excessive gaming or prolonged internet use may reduce opportunities for developing healthy coping strategies through real-life experiences. Supportive parenting, open communication, and balanced participation in offline recreational and social activities are important protective factors. Encouraging children to engage in sports, creative hobbies, family interactions, and peer activities helps promote emotional resilience and healthy social development.

- **Physical Health Concerns**

The increasing use of digital technology has contributed to more sedentary lifestyles among children. Long periods spent watching screens often replace outdoor play, sports, and physical exercise, reducing overall physical activity levels. This behavioural shift has raised concerns regarding childhood obesity and other lifestyle-related health problems. Reduced physical activity combined with unhealthy eating habits during screen use may increase body weight and negatively affect physical fitness. Many children consume high-calorie snacks or sugar-sweetened beverages while watching videos or playing games, further increasing the risk of overweight and obesity. Sedentary behaviour may also contribute to poor cardiovascular health and reduced muscular strength over time.

Another important concern is digital eye strain, also known as computer vision syndrome. Continuous exposure to digital screens may cause eye fatigue, dryness, blurred vision, headaches, and difficulty focusing. Children often blink less frequently while concentrating on screens, increasing eye discomfort. Poor lighting conditions and improper viewing distances may further aggravate these symptoms. Musculoskeletal problems are also becoming increasingly common among children who spend extended periods using smartphones, tablets, or computers. Poor posture during device use may lead to neck pain, shoulder discomfort, back pain, and spinal stress. These problems may become more significant when children use digital devices for prolonged periods without adequate breaks.

In addition, excessive screen exposure often disrupts healthy daily routines by reducing time available for physical play, outdoor exploration, and recreational activities that are essential for healthy growth and motor development. Encouraging regular exercise, maintaining correct posture, following the **20–20–20 rule** for eye health, and scheduling frequent breaks during screen use are practical measures that help reduce these physical health risks.

- **Language and Communication Concerns**

Language and communication skills are fundamental components of child development that influence academic achievement, social relationships, and emotional expression. Although digital technology provides access to educational resources and language-learning applications, excessive or inappropriate screen exposure may adversely affect language development, particularly during early childhood. Young children acquire language primarily through direct interaction with parents, caregivers, teachers, and peers. These interactions involve eye contact, facial expressions, gestures, verbal responses, and immediate feedback, all of which contribute to vocabulary growth and communication skills. When digital devices replace face-to-face conversations for extended periods, children may experience fewer opportunities to practice expressive and receptive language.

Passive viewing of videos or television programmes offers limited opportunities for meaningful communication. Children who spend excessive time watching digital content without adult participation may develop a smaller vocabulary and slower language acquisition compared with children who regularly engage in conversations, storytelling, and shared reading activities. Excessive dependence on digital media may also reduce children's confidence in verbal communication and interpersonal interaction.

Another emerging concern is the widespread use of abbreviated digital language, emojis, and informal messaging styles. Although these communication methods are appropriate in certain digital contexts, excessive dependence on them may influence children's writing skills, spelling accuracy, grammatical development, and formal communication abilities. Younger learners may find it difficult to distinguish between informal online communication and formal academic writing. Parents and teachers should therefore encourage regular reading habits, storytelling, classroom discussions, and family conversations while ensuring that digital technology serves as a supportive educational resource rather than a substitute for direct human interaction.

- **Sleep Disturbances**

Adequate sleep is essential for children's physical growth, brain development, emotional regulation, memory consolidation, and academic performance. However, increasing digital technology use has become one of the leading factors contributing to sleep disturbances among children and adolescents. One of the primary mechanisms through which digital devices interfere with sleep is exposure to blue light emitted from smartphones, tablets, computers, and television screens. Blue light suppresses melatonin secretion, delays circadian rhythms, and reduces the body's natural readiness for sleep. Consequently, children who use digital devices during the evening often experience delayed sleep onset, shorter sleep duration, and poorer sleep quality.

Apart from biological effects, engaging digital activities such as online gaming, social networking, video streaming, and messaging increase mental and emotional stimulation before bedtime. Exciting or emotionally charged digital content may make it difficult for children to relax and fall asleep. Frequent notifications and late-night checking of mobile devices may further interrupt normal sleep patterns. Chronic sleep deprivation negatively affects several aspects of child development. Insufficient sleep has been associated with reduced attention, impaired memory, poor concentration, irritability, mood changes, behavioural problems, weakened immunity, and lower academic achievement. Long-term sleep disturbances may also contribute to obesity, anxiety, and depression.

To promote healthy sleep habits, parents should establish consistent bedtime routines, avoid screen exposure at least one hour before sleep, keep digital devices outside children's bedrooms, and

encourage relaxing bedtime activities such as reading printed books or engaging in quiet family conversations.

- **Academic Performance**

Digital technology has transformed education by expanding access to information and online learning resources. However, excessive recreational screen use and poor digital habits may negatively influence children's academic performance despite the educational benefits that technology can provide. One of the major challenges is digital distraction. Notifications from social media applications, online games, entertainment platforms, and messaging services frequently interrupt study sessions, reducing concentration and learning efficiency. Children who regularly switch between educational tasks and recreational digital activities often experience difficulty maintaining sustained attention during classroom learning and homework. Multitasking has also become increasingly common among school-aged children. Many students simultaneously use educational platforms, social media, music applications, and online messaging while studying. Although children may believe they are performing multiple tasks effectively, research indicates that multitasking reduces working memory efficiency, increases cognitive overload, and lowers information retention.

Excessive screen time may further reduce the amount of time devoted to reading, homework, revision, physical activity, and adequate sleep—all of which contribute to academic success. Children who spend prolonged periods on entertainment-based digital media may demonstrate reduced classroom participation, lower academic motivation, and poorer examination performance. Another important concern is children's increasing dependence on digital resources for completing assignments without developing independent thinking and problem-solving abilities. Easy access to ready-made answers may discourage deep learning and reduce opportunities for analytical reasoning.

Despite these challenges, educational technology itself is not the primary cause of poor academic performance. The educational impact depends largely on how technology is used. Structured educational activities, effective teacher guidance, parental supervision, and responsible digital habits can maximize academic benefits while minimizing distractions. Schools and families should therefore promote purposeful technology use that supports learning rather than interferes with educational achievement.

- **Digital Addiction**

The widespread availability of smartphones, tablets, gaming devices, and social networking platforms has increased children's dependence on digital technology. While digital devices offer educational and recreational benefits, excessive and uncontrolled use may lead to **digital addiction** or problematic digital media use. This condition is characterized by compulsive engagement with digital devices despite experiencing negative physical, psychological, social, or academic consequences.

Children affected by digital addiction often find it difficult to reduce screen time, become anxious or irritable when digital devices are unavailable, neglect schoolwork, withdraw from family activities, and lose interest in outdoor play or hobbies. Continuous engagement with online games and social media may create behavioural patterns similar to other addictive behaviours because many digital platforms are designed to encourage repeated use through rewards, notifications, and continuous content updates. Several factors contribute to digital addiction, including unrestricted access to digital devices, lack of parental supervision, academic stress, social isolation, boredom, and excessive recreational screen time. If left unaddressed, problematic technology use may increase the risk of poor academic performance, emotional instability, sleep disturbances, anxiety, depression, and impaired social relationships.

Preventive strategies include establishing daily screen-time limits, encouraging outdoor games and creative hobbies, promoting family interaction, monitoring digital activities, and educating children about responsible technology use. Early identification and appropriate guidance can help reduce the long-term consequences of digital addiction.

- **Cyberbullying**

The rapid growth of digital communication has increased children's exposure to **cyberbullying**, which has become a significant concern for child health and well-being. Cyberbullying refers to repeated acts of harassment, humiliation, threats, or intimidation carried out through social media, messaging

applications, online gaming platforms, emails, or other digital communication channels. Unlike traditional bullying, cyberbullying can occur at any time and may reach children regardless of their physical location. Harmful messages, offensive comments, rumours, fake profiles, embarrassing photographs, and online exclusion can spread rapidly, often causing prolonged emotional distress because digital content may remain accessible for extended periods. Children who experience cyberbullying frequently report anxiety, sadness, loneliness, low self-esteem, fear, and reduced confidence. Many victims become reluctant to attend school, participate in social activities, or communicate openly with parents and teachers. In severe cases, persistent cyberbullying may contribute to depression, behavioural problems, and long-term psychological difficulties.

Prevention requires cooperation among parents, schools, technology companies, and policymakers. Schools should implement comprehensive anti-bullying programmes that include digital behaviour, while parents should maintain open communication with children and encourage them to report negative online experiences. Digital citizenship education should promote empathy, respectful communication, responsible online behaviour, and awareness of the legal consequences of cyberbullying.

- **Privacy and Online Safety**

As children's participation in digital environments continues to increase, protecting their privacy and ensuring online safety have become major public health and educational priorities. Many children share photographs, personal information, locations, and daily activities online without fully understanding the potential risks associated with digital communication. Children may become vulnerable to identity theft, online fraud, cybercrime, privacy violations, and exploitation if appropriate safety measures are not followed. Exposure to inappropriate content, misinformation, violent material, and harmful online communities may also negatively influence children's attitudes, behaviour, and emotional well-being.

Another important concern involves interactions with unknown individuals through social networking sites, gaming platforms, and messaging applications. Without adequate supervision, children may unknowingly communicate with strangers who attempt to manipulate or exploit them. Therefore, developing awareness of online risks from an early age is essential. Digital citizenship education should encourage children to protect personal information, create strong passwords, identify suspicious online activities, verify information before sharing it, and communicate respectfully in digital environments. Parents, teachers, schools, governments, and technology companies share the responsibility for creating safer digital environments through awareness programmes, privacy protection policies, and child-friendly digital platforms.

Strategies to Reduce the Negative Impact of Digital Technology

Reducing the adverse effects of digital technology requires a collaborative approach involving families, schools, healthcare professionals, policymakers, and technology developers. Parents should establish age-appropriate screen-time rules, monitor children's online activities, and encourage regular participation in outdoor games, physical exercise, reading, and family interactions. Open communication enables children to discuss their online experiences and seek help whenever necessary.

Schools should integrate digital literacy and internet safety education into the curriculum. Students should learn responsible online behaviour, critical evaluation of digital information, privacy protection, and respectful digital communication. Teachers should also encourage balanced technology use by combining digital learning with classroom discussions, practical activities, and collaborative projects.

Healthcare professionals should educate parents regarding healthy screen habits and identify children who demonstrate symptoms of excessive digital dependence or technology-related behavioural problems. Governments and technology companies should strengthen child online protection policies, improve digital safety standards, and encourage the development of educational platforms that prioritize children's well-being.

Ultimately, digital technology should support children's development without replacing essential experiences such as face-to-face communication, physical activity, creative play, and adequate sleep.

Conclusion

Digital technology has transformed childhood by providing unprecedented access to information, communication, and educational opportunities. However, excessive, unsupervised, and inappropriate use of digital devices may adversely affect children's cognitive, physical, emotional, behavioural, and social development. Evidence reviewed in this paper indicates that prolonged screen exposure is associated with attention difficulties, sleep disturbances, reduced physical activity, digital eye strain, delayed language development, poor academic performance, digital addiction, cyberbullying, and concerns related to online privacy and safety.

Importantly, the developmental impact of digital technology is influenced by children's age, the quality of digital content, duration of screen exposure, family environment, and parental guidance. Technology itself is not inherently harmful; rather, the risks arise when digital engagement becomes excessive, unbalanced, or poorly supervised. Promoting healthy digital habits requires cooperation among parents, teachers, healthcare professionals, policymakers, and technology developers. Age-appropriate screen-time guidelines, digital literacy education, responsible online behaviour, and active parental involvement are essential for protecting children's well-being while enabling them to benefit from technological advancements.

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Self-Knowledge in Kantian Philosophy as the Concept of 'Cosmic Ekatva'

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Abstract

Kant says that self-knowledge is the first duty among all duties. In this way, by establishing self-knowledge as the first duty, he made it the centre point of other duties. This research work of mine is related to developing an understanding of the nature of this self-knowledge. What is self-knowledge?

In Hindu philosophy, this concept of self-knowledge is derived as self-realization, as the concept of 'Aatm-gyan'. Kant's concept of moral duty has very similarities with the principle of 'Dharma'[1] of Hindu philosophy. Just as Kant believes that true self-knowledge can determine correct moral duty, in the same way, in Hindu philosophy, self-realization has been called the basis of Dharma.

I believe that the self disposition in Kant's philosophy, is the form of the 'principle of Ekatva' of Hinduism. The principle of 'Ekatva' considers the universe as a form of one consciousness. One consciousness, 'Chetana' or energy is expressed in different forms in the universe. As per the view of the great Indian philosopher Maharishi Aurobindo[2], this human body is a machine for realizing that consciousness. The biggest duty of man is to recognize the single consciousness of the universe, which is the same in him and everything.

Keywords : Kantian Philosophy, Hindu Philosophy, Upanishads, Maharshi Aurobindo, Self Knowledge in Kantian Views, Opacity thesis, Duty towards Self, Self Realization in Kantian view.

Introduction

We have a duty towards ourselves to know who we really are, and this realisation of self-disposition is the foundation of all duties. Those who are in favour of human freedom, i.e. those who can be called Libertarians, are especially against this philosophical viewpoint as they think that emphasis on duty to oneself gives people the freedom to interfere too much in the lives of others.[3] Certainly, the idea of duty towards oneself follows a human even in his privacy. However, this concern should be dispelled by Kant's philosophical view that a human is her own judge.[4] Kant linked morality with free will. In all his works he insists that morality is tied to freedom of the will.[5]

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[1] Dharma is the innate instinct of any living being. Like the Dharma of fire is to burn, Dharma of water is to wet, Dharma of lion is to hunt when it is hungry. Dharma of human beings is the most complex and changes according to the situation, hence in the context of human beings we can say that morality is our Dharma.

[2] John King-Farlow in his article 'The real and the ideal' had done a study about Kant and Aurobindo

[3] Kranak, J.; Duties to Self as Duties to One's Future Self; Great Lakes Philosophy Conference; Siena Heights University; Adrian, Michigan; April 5, 2019.

[4] When Kant says that we can never be certain on the moral purity of our actions or he talks about self deception or when he emphasizes that self knowledge is the way for judging the moral upliftment, Then he makes a human his own judge.

[5] Schneewind, J. B.; Autonomy, Obligation, and Virtue: An Overview of Kant's Moral Philosophy; December 2009

Autonomy of the will is the supreme principle of morality and a necessary condition of moral agency.[6]

Kant's philosophy is that until a man knows himself, he cannot be moral. Self-knowledge is the key to complete moral character. There are many doubts in the context of this self-knowledge, for example the opacity thesis[7] explains Kant's confusion about self-knowledge very well. In fact, this confusion is not of Kant, but of our understanding in the context of his philosophy. I believe that the true self-knowledge present in Kant's philosophy is the same as the idea of self-knowledge in Hindu religion, which is simply the idea of seeing a single existence in all living beings. I have called this the principle of 'Cosmic Ekatva.'[7] I will describe this concept of Cosmic Ekatva as the true self knowledge of Kant and Further I will elaborate that if we establish Cosmic Ekatva as self knowledge we can solve the confusion of Opacity which mistakenly we see in Kantian Philosophy.

Self Knowledge

Kant does not speak about self-knowledge with clarity, so we have to form a picture of its nature by examining its objectives. He says that our morality commands us to know our heart and our heart determines our actions.[8] We can know the true intentions that drives our actions by self knowledge. We can neither define the heart nor our nature, we can only see our actions. So if we have to examine our moral upliftment, this is only possible if we see this in our action. Opacity thesis says humans have a tendency of deception[9] towards themselves. Then how can we judge our character with a surety.

I will give three examples of moral conflict here and will resolve them with the same answer.

Lets assume that Thomas and Arthur are good friend. Thomas lent money to Arthur and after few weeks Arthur returned that money to Thomas when he needed it very much. After this, Arthur thought that he did a noble deed because he gave money to Thomas when Thomas needed it very much. This intention of Arthur corrupts his moral position because giving money was his duty. In this case, consider that Arthur often tell Thomas that he should thank Arthur for helping him in his difficult time. Is this not an example of Arthur's immorality towards Thomas. But Arthur will not realize his mistake until he understands Thomas's perspective.[10]

The second example is from Hindu Epic Mahabharata.[11] Karna was a character in the Hindu epic Mahabharata. He said throughout his life that 'he is a friend of Prince Duryodhana and therefore

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[6] EDWARD DEMENCHONOK; Learning from Kant: on Freedom; Revista Portuguesa de Filosofia; 2019

[7] Ware, Owen; Ibid.

[7] Maharishi Aurobindo is one of the great philosophers of India. Sri Aurobindo, who studied in Cambridge, had a good knowledge of Western philosophy. He believed that a time would come when the ideas of Western philosophy and Indian spirituality would be able to meet. Both the ideas together would be able to solve the philosophical problems of modern man. Based on this idea of his, I have named it 'Cosmic Ekatva' which is a combination of English and Sanskrit.

[8] Messina, James P.; Ibid.

[9] Ware, O.; Ibid.

[10] The Idea of perspective is described in a paper by Paul Schofield. He used the idea to explain the duty to self. See Schofield P.; On the Existence of Duties to the Self (and Their Significance for Moral Philosophy); Philosophy and Phenomenological Research Vol. XC No. 3, May 2015

[11] Mahabharata is a Hindu epic in which the problem of moral dilemma is explained through different characters and the true position of Dharma in every situation is shown. Dharma is similar to Kant's moral duty. Naturally it is convenient for me to take examples from this epic while analyzing the subject of morality. Therefore other

it is his duty to stand by him.' But being a true friend, he never stopped Duryodhana from doing immoral things, rather he supported him in such actions. When Duryodhana wanted to disrobe the wife of his rival Pandava, Karna supported him in this act as well. In fact, Karna was jealous of Pandava prince Arjuna and always wanted to defeat Arjuna in battle so that he can claim he is the greatest warrior on his time. He took Duryodhana's[12] support and stayed with him. Karna knew that Duryodhana was the god of immorality but he thought he was performing the duty of friendship. Karna's moral intelligence knew what is right and what is wrong but he did not want to follow the path of truth because his ego prevented him from doing so. We see this situation is similar to Kant's Opacity Thesis, where Kant says that one cannot move forward on the path of morality by merely knowing one's moral duty or by being resentful towards oneself for failing to achieve it.[13]

Before solving Karna's moral problem, let us look at another problem of morality that is seen in Kant's philosophy. The problem of darkest enthusiasm[15], which Owen Ware has explained as obsessive self-scrutiny. To understand this, let us again go ahead in the story of Mahabharata.

In the end, this dispute of Hastinapur kingdom turns into a great war. When both the sides come to the battlefield for the war, then Arjuna faces this problem of obsessive selfscrutiny.[14] Arjuna is the hero of Mahabharata. He knows that he is such a capable warrior that the army he fights for will surely be victorious. He knows that it is not a big deal for him to kill warriors like Duryodhan, Bhishma[15], Karna. He knows that Duryodhan is a tyrant, if Duryodhan wins then he will destroy every goodness present in the social fabric. But still Arjuna tells Krishna that he does not want to fight. He does not want to kill his own relatives, friends, elders. He does not want so much blood to be shed. It is better to leave everything and take sanyaas[16] than to become a part of this massacre. Is this thinking of Arjuna correct according to Kant's morality?[17]

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such examples are also given. In short, the story of Mahabharata is the tale of a war between two royal families of the same clan.

[12] The story of Mahabharata is the story of the internal conflict of the Hastinapur kingdom in which one side is of the Pandavas, whose hero is Arjuna and the other side is of the Kauravas, whose leader is Duryodhana. Duryodhana and Arjuna are cousins but Duryodhana hates the Pandavas. Duryodhana is the villain of Mahabharata, who is arrogant, violent and cruel by nature.

[13] Halper Aaron; Self-Knowledge and the Opacity Thesis in Kant's Doctrine of Virtue; Cambridge University Press; 20 April 2023

[15] Ware, Owen; Ibid.

[14] The world famous Hindu religious text Bhagavad Gita is a part of Mahabharata and its knowledge was imparted to Arjun by Lord Krishna after seeing Arjun in this condition. It is a well known fact that this text is one of the unique works of philosophy. This text will be used extensively in my future research work.

[15] Bhishma was a great warrior and an important character.

[16] Sannyasa is a Hindu concept that refers to a life of renunciation and asceticism

[17] Aurobindo has discussed this topic in detail in his book Essays on the Gita. In his view, Arjuna's nonviolence would have become the cause of the continuous catastrophic violence in society. Duryodhan's viewpoint was that accepting moral bondage is a sign of weakness; if such a person had become the king, then 'Matsya Nyaya' would be implemented in the society. In that case, Big fish would eat small fish, and the entire social structure would disintegrate. The proportion of violence that would have happened then would have been much more than the violence that Arjuna had to face in the Mahabharata war. See Aurobindo; Essays on the Gita; Sri Aurobindo Ashram; 2017

We assume that the self-knowledge of Kant's philosophy will provide an appropriate solution to the moral problems discussed above. The true self that Kant has talked about, knowing which is a prerequisite for moral judgment. By this self knowledge we can know the true intentions of our actions. If Arthur, Karna and Arjun gain self knowledge then they will get the solution to their moral problem. The problem is how can one experience selfknowledge when Kant tells us that self-knowledge is beyond time and space.[18] Therefore, it is necessary to first understand the nature of self-knowledge.

We know that in the language of physics, energy has one form and that form is expressed in different forms. The total energy of the universe is constant and can neither be created nor destroyed. The universe is the sum of space, time, and energy. We know that energy and matter are interchangeable. So basically this universe has a single underlining cosmic identity and all the creation is the product of the interaction of time, space and energy. In poetic language this universe is a cosmic dance of time, space and energy.

When we think of human existence, the only characteristic that distinguishes us from other creatures is our intelligence. Our intelligence enables us to overcome our natural instincts. We can conquer our hunger for truth and morality like Gandhi and Mandela. We can drink poison like Socrates or be crucified like Jesus Christ for our views. Human being are the only creature who can conquer their mental and physical passions, weakness and stimulation to achieve a greater purpose. That purpose is the underlying unity of the universe. In Sri Aurobindo's view[19], the purpose of human life is to see the underlining unity in the material diversity and to realize the pure consciousness that allows oneness in multiplicity. This energy, that manifests in the universe in different forms, when it comes in the human body, it gets the instrument in the form of the human body, that can attain its true nature, the 'Cosmic Ekatva'. This is the cosmic unity that Kant is looking for when he talks about self-knowledge. His principle of equal respect[20] for all human beings points towards this.[21]

Now we will proceed by assuming that Kant's self-knowledge is the Cosmic Ekatva and we will come to the views of Arthur, Karna and Arjuna respectively.

If we think about Arthur's problem, then its solution will be that he has to understand Thomas's point of view. But this is possible only when he thinks by putting himself in Thomas's place. That is, he has to merge his personality with Thomas's personality. This is where Cosmic Ekatva begins, when we start seeing the world from others' point of view.

If Karna had understood properly that the utmost inclination is Cosmic Ekatva, highest goal of human is to pursue the inner unity of the world, and not to become the greatest warrior in the world, then instead of joining hands with Duryodhan and satisfying his false ego, he would have

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[18] As Conrad Damstra describe 'Kant locates the real self outside of space and time'; See Damstra, Conrad; The Change of Heart, Moral Character and Moral Reform; Kantian Review; Cambridge University Press; 2023

[19] This has been discussed in detail in Sri Aurobindo's book The Life Divine. But the language of this book is very complex and therefore Aurobindo's philosophy is considered in India in the same way as Kant's philosophy is considered in the West.

[20] Thomas E. Hill, Jr. and Bernard Boxill; Kant and Race; printed in Bernard Boxill (ed.), Race and Racism (New York: Oxford University Press; 2001

[21] However, racial bias can be seen in Kant's philosophy. Such bias is also seen in the Bhagavad Gita. According to me, in every era, when a great philosopher gives knowledge to people about the fundamental unity of humans, he has to take examples from his own society. In such a situation, it is natural for the society's viewpoint to be reflected in that language. Laurence Thomas work is related to the principle of equality and racial bias in Kant's philosophy. See Thomas, Laurence; Moral Equality and Natural Inferiority; Social Theory and Practice; 2005.

helped Duryodhan to become a good ruler. In this way Karna would have performed the duty of friendship better.

Arjuna also has this problem. He is so concerned about his personal goodness that he does not understand the Dharma of a warrior. He must fight for the good of the world. He cannot give up cruelty for his personal goodness because cruelty is his dharma now. He is responsible not only to himself but to the entire society because this society is a part of the same cosmic consciousness of which Arjuna is a part.

In reality this Cosmic Ekatva is not a physical energy, because physical energy is not beyond time and space. This is divine consciouess, is Brahman[22] or Atma[23]. Upanishads are the foundational text of Indian philosophy and they contain many questions related to the true nature of man. It would be appropriate to mention them here. Explaining cosmic ekatva, Chandogya Upanishad says[24] 'All this is Brahman. Everything comes from Brahman, everything goes back to Brahman, and everything is sustained by Brahman.' Similarly, the Ishavasya Upanishad says[25] 'Who sees everything in his Atman and his Atman in everything, by that he feels no revulsion.'

Kant says that reorientation towards self knowledge should be visible in my life conduct and I should be able to infer the moral status of my disposition, whether restored or unrestored, by way of my actions.[26] The change that Kant wants to see in human behavior will begin only when we start understanding the point of view of others. In doing so, we will rise above our own arrogance, hatred, self-praise etc. Of course, in some cases it will be easy[27] for us to do this, in others it will be very difficult[28]. But in the end when a person attains self-knowledge, she becomes free from self obsession and ego.

Certainly this is a long process, but perhaps this is the safest path to self-knowledge, where we can examine our own conscience.[29] Kant tried to define self-knowledge but it created a maze of words. But the Upanishads have already escaped this maze.[30]The Upanishads accept that Brahma or the true self, cannot be explained in words. So they briefly say that whatever is in the world is Brahma, I am Brahma.

We can now conclude that self knowledge is the concept of Cosmic Ekatva, and hence the sole purpose of life is to see the unified consciousness in every entity of this universe.

Now we can say that we have only one duty, Duty towards ourselves. This view has it's own problem. If we have duty toward ourselves, how can we make this duty obligatory.

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[22] Bramhan 'ब्रम्ह' is different from Brahmin 'ब्राम्हण'

[23] As described in Geeta.

[24] Verse 3.14.1

[25] Verse 6

[26] Ware, Owen; Ibid.

[27] Case of Arthur.

[28] Case of Arjun.

[29] The Twelfth Chapter of the Bhagavad Gita explains such a change in detail.

[30] There is no concrete definition of Brahman anywhere in the Upanishads. Even the greatest sages underestimate their knowledge. As the Kena Upanishad says 'Of whom (the opinion is) "Brahman is not to be thought of," by him He is (rightly) thought. He who thinks "Brahman has been thought of by me," he does not know.' Mantra 2.3

In reality the true nature of morality is not as binding as the law of the state. Alison Hills talks about a false juridical picture of morality in her paper[31] commenting on duties to the self. Adding to this argument my suggestion is that if all duties are duties to the self, so the false judicial picture of duty applies to the entire moral discourse. No person can be forced to be moral. Does it mean that concept of morality is false? Certainly not. Actually the perspective determines the obligatory nature of duty.

Humans remain moral towards those whom they considers their own. A thief does not steal from his own house because he considers it his own, an adulterer does not think of committing adultery with his daughter because he considers her his own, a corrupt politician takes bribes for the happiness of his children, a racist person looks at people of his own race with great love because he considers them his own. There is only one thing common in all such moral problems, they consider a part of this world as their own, none of them considers the entire creation to be connected with them. But a human endowed with True Self knowledge, one who knows Cosmic Ekatva rises above this meanness . The problem of morality is not a legal problem; in fact, it is a problem of perspective. Building a moral character is possible only by seeing the same consciousness in all. That is why Kant considers the self knowledge as the first command of morality. But we can not impose our prospective on others, even if we want to. That's why Kant says free will is an important condition for the formation of morality.

Kant's other concepts are also very similar to Hindu philosophy. For example, Kant's view regarding the human soul was that the soul is immortal[32]. The immortality of the soul is the distinctive identity of Hindu culture. Kant's summum bonum reflects the idea of reincarnation.[33] When Kant talks about knowing your heart, he expresses the same ideas that have been expressed in Hinduism in the context of knowing one's conscience.

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[31] Though she has established it in relation to duty towards oneself, I am taking it in a general sense, because I have already said that all the duties of humans are really duties towards themselves. See Hills, Alison; Duties and Duties to the Self; American Philosophical Quarterly ; Apr.; 2003.

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Reading History through Theatre: Performance, Politics and Historical Memory

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Abstract

Theatre has historically functioned as more than a medium of entertainment; it has reflected social realities, political resistance, and cultural transformation. This paper examines theatre as an important historical source that enables historians to understand the relationship between performance, power, and society. Using a historical and qualitative approach, the study traces the evolution of theatre from classical Greece to colonial India, highlighting its role in expressing public opinion, resisting authority, and fostering nationalist consciousness. Through examples such as *Lysistrata*, *Natyashastra*, *Nil Darpan*, *Keechak Vadha*, and *Nabanna*, the paper argues that theatrical performances preserve collective memory and historical consciousness beyond conventional archival sources. It concludes that theatre offers historians a valuable lens through which the experiences, aspirations, and resistance of different communities can be reconstructed.

Keywords: Theatre, Historical Sources, Performance, Historical Consciousness, Nationalism, Public Memory

Introduction

Theatre as historical records suggest has been one of the earliest forms of community and individual expression with a significant impact on peoples' minds. This particular artform has so much potential for bringing about change or revolution that it has been used, feared, regulated and censored by establishments across time periods. Be it development of theatre forms in Europe or in India, the message of change and resistance has always been there. Before the advent of cinema, theatre and community performances were the medium of mass communication of ideas and unifying people for any cause. This article intends to bring forth how history can be read and re-read through drama and its scripts. It attempts to situate performances in a larger setting of history.

Theatre in Classical Europe

In Europe,Greek Theatre spaces acted as a medium of communication between the common masses and the 'democratic' government in power. These plays conveyed what people felt about the state, and the acts of calling out those in power not only vented out the feelings of masses but also marked defiance. The public ridiculing of names helped to improve their functioning and sense of accountability. One of the most significant of the classical plays was Lysistrata by Aristophanes, the oldest play of the 'Comedy' genre. It shows the story of women who are distressed by not having their husbands with them due to the ongoing warfare. These women collectively come out and declare that if the war is not stopped, they will collectively withdraw from every sort of sexual and physical contact with men, an act of asserting agency and control over their sexuality. The plays of Old Comedy were highly political in nature and Lysistrata has been considered as the earliest play with a feminist voice and consciousness within it. Theatre has always been the most progressive space. It has been ahead of social norms and has tried to break glass ceilings. In the annals of queer lives and movement theatre has played a crucial role. From Greek Antiquity to Renaissance to contemporary times, theatre always had queer elements. The Greek Comedy satirised sex and sexual desires. They have always mocked the rich and the ones in power by talking about their sexual orientation and desires towards young men and women. In 'Demo satyrs', a Middle Greek Comedy, the author Eubulos taunts about a man 'Kleippos' and states that "(he) doesn't shave three times a

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day anymore" and is becoming "a man liked by women, but not men". This remark implies that this public figure had been shaving frequently in order to prolong his youthful appearance and attract men. In the coming ages of New Comedy and, the parallel, Greek Mime we do not have any such clear mention of non-het desires but scholars argue for the possibility of the same by rationally interpreting the text. There are instances of female homoeroticism through the poetries of that available to us.

Theatre, Religion, and Censorship in Europe

When we study theatre and look at the emergence of new forms of comedy we come across how overtime the political satyr present in the plays softens and theatre becomes more domesticated. The decline of theatre in classical ages is directly linked to the establishment of Christianity as the state religion by the Roman Emperor. Though the church tried to control theatre, theatre emerged in folk plays and resisted the censorship by the church. Seeing this, the church employed theatre in its service and plays became more associated with morals and ethics. The tradition of censorship continued till the twentieth century and European theatre could not emerge as a theatre of revolution until then.

Indian Theatre: Origins and Historical Development

In India the practice of theatre has been an ancient one. The earliest text on theatre in India, Natyashastra, dates to the first century millennium and writes that the already existing forms of theatre have declined and gods felt the need to have a new Natyaveda which could serve the dual purpose of educating people while entertaining them. It is at this point when Bharat Muni enters the scene and creates the first play by employing his hundred sons and training them in the art of theatre. Natyashastra not only educated people of those times but today is an inevitable source of history to understand the past. Theatre with its mass community reach can truly transform the society and instil a feeling of change. This is very evident in the development of anti-colonial theatre. Theatre became more than a medium of entertainment and amusement. Theatre became the carrier of social reform and cultural nationalism supported by nationalistic literature and music which also aroused Indian pride and bolstered self-confidence.

Folk Theatre and the Rise of Popular Consciousness

The folk traditions with their huge appeal were composed in the local languages and were performed by travelling troupes, and played a significant role in shaping the course of history. For instance, the folk tradition of Tamasha developed in mediaeval Maharashtra and while entertaining the people took the idea of Bhakti to remote regions and strengthened the consciousness of Hindu and Maharashtra Dharma. The emerging message of Swaraj went ahead simultaneously. It was used by leaders such as Jyotiba Phule, the marathi nationalists and the left to propagate their ideasThe mobile theatre in Assam developed as an alternative to the white theatre spaces and attracted masses while communicating the idea of freedom struggle. From humble origins of religious nature, Jatra became a powerful medium of communicating the ideas of swaraj and swadeshi to the high and low, the literate and illiterate, the religious congregation and popular masses alike.

Nationalist Theatre and Colonial Resistance

The anti-colonial proscenium theatre or nationalist theatre first emerged in the aftermath of the Revolt of 1857 with productions which directly or allegorically attacked the imperialists. In Bengal and Maharashtra, theatre not only protested against the present conditions but also awakened the political and social conscience. The first in the series were the historical dramas with nationalist sentiment such as V.J. Keertane's Thorle Madhav Rao Peshwe (1861). In Bengal, the proscenium theatre was limited to private halls and audiences of the landlords before 1872. The nature of Bengali public theatre changed with the coming of Nationalist Theatre, established by lower Bengali Bhadralok boys. The public theatre openly forefronted the oppression by English planters, Hindus and Muslim landlords, and religious heads. In Bengal, Girish Chandra Ghosh wrote a series of historical plays like Siraj-ud-daula and Mir Kasim drawing on the theme of British oppression, using historical figures and questioning Indian nationalism, for overlooking internal bondages, of the caste

system and feudal structure. Rape by men in power became a stirring theme in works such as Dinabandhu.

Mitra's Neel Darpan (1860), Dutt's Buro Saliker, Mir Musharaff Hussaini's Jamindar Darpan (1873) and Dakshincharan Chattopadhyay's Chakar Darpan (1875) which highlighted the precarious condition of Assam tea planters. One of the most politically significant plays written in colonial Bengal was Nil Darpan (Mirror to Indigo) written in 1860 by Dinabandhu Mitra, translated by Reverend James Long and produced by the National Theatre of Calcutta. It created a powerful stir in Bengal against the oppression inflicted upon the native Indians. The Anglo-Indian Press was much excited at this and on a complaint by the Landholders Association of British India, the play was eventually taken down. The British in India imposed strict censorship on plays as the Dramatic Performances Act,1876. All the scripts now had to be recited and seek clearance from the English authorities. However, the ban was limited to only performing on public stage and not in private halls. The act censored English translations of the play which would have consolidated English opinion against the colonial government back home.

Mythological Theatre as Political Allegory

As a result of censorship, the playwrights took on to write plays with a mythological theme which were allegorical to the fight of Indian independence and got easy clearance. For example, K.P. Khadilkar's play Keechak Vadha is a remarkable episode in theatre of protest. It drew an allegory from the Virata Parva Mahabharata in which the corruption and lustful kin of King Viarata,Keechak is slain by Bheema, using a stratagem. Though no names were mentioned, everyone knew that Keechak was Lord Curzon, Draupadi was India, Yudhishthira was the moderate and Bheema the extremist section in the Congress.Sundar Pushpa in her article for The Wire articulates, "the message was that a weak government in London (King Virat) has allowed Curzon to insult and humiliate India. While her moderate champion advocates gentle (constitutional) measures, which prove ineffective, the extremist adopts violent measures and the oppressor is disposed of without difficulty." Later in 1930, Manmatha Ray's play titled Karagar (Prison) dramatised the birth of Lord Krishna in prison. It used mythological themes as an allegory to the imprisonment of the nationalists involved in the independence struggle. While commenting upon mythological plays, S. Pushpa remarks, 'apart from carrying nationalist messages, incidental achievements of mythological drama were the increase in the number of women attending theatre. Now with characters like Sita, Subhadra, Uttara and Draupadi taking centre stage mythological themes helped that perception to change, and made it respectable for women to attend performances. However, we need to bear in mind that the female actors were largely prostitutes and the Bhadraloki wives witnessing prostitutes as wives on stage was quite a jostling experience. One name which deserves mention here is of Binodini Dasi, who acted in several plays and one of her performances on the life of Chaitanya Mahaprabhu was witnessed by Ramakrishna Paramhansa himself. He later blessed the actress and performing became one way to accumulate a sense of social respectability.

Theatre, Famine, and People's Resistance

The drastic Bengal famine of 1943-44, which left 5 million dead due to the apathy of colonial ways, gave way to the creation of Bijon Bhattacharya's Nabanna (New Harvest). It was not just a play but a protest against man-made product of official incompetence, callousness and human greed. Radical in content and innovative in its use of language and stage craft, this play created history when, in March 1945, it was performed before seven thousand people. Nabanna articulated all the anger felt by the people against a corrupt establishment and grasping humanity. Through this discussion I wish to bring out the need to look at theatre and performances as embodying historical consciousness and not just spaces earmarked for entertainment. As students of history, it is required of us to view the unfolding of events through means and sources. A reading of history through theatre takes us closer to the psyche of the masses and how it gradually transformed over time with stirring and thought-provoking themes. This article in no way is an end in itself, rather it opens up new questions to explore such as the background and thought process of the writers, actors, audience and

how the marginalised, especially women could create space for themselves on stage and in audience pits.

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A Study on Social Determinants of Psycho-Physiological Disorders

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Abstract:

Psycho-physiological disorders, commonly referred to as psychosomatic disorders, have emerged as a significant public health concern due to their multifactorial etiology involving biological, psychological, and social determinants. While medical research has extensively examined the physiological mechanisms underlying these disorders, comparatively less attention has been directed toward understanding the role of social determinants in influencing their onset and progression. Social conditions such as socio-economic status, family environment, occupational stress, social support, marital relationships, and community interactions shape individuals' exposure to chronic stressors and their capacity to cope with adverse life events, thereby contributing to both mental and physical health outcomes. Drawing upon the Social Determinants of Health framework and the biopsychosocial model, the present study investigates the association between selected social determinants and psycho-physiological disorders among adults. Specifically, the study seeks to examine the relationship between social determinants and psycho-physiological disorders and to assess the influence of these determinants on the occurrence of such disorders. A quantitative research design employing a structured questionnaire is proposed, with data to be analysed using descriptive statistics, Pearson's correlation, and multiple regression techniques. The findings are expected to demonstrate that adverse social conditions significantly contribute to the prevalence and severity of psycho-physiological disorders, whereas positive social environments act as protective factors. By emphasizing the social context of health, the study contributes to the growing body of interdisciplinary literature advocating preventive strategies that extend beyond clinical interventions. The findings are expected to assist healthcare professionals, mental health practitioners, policymakers, and public health agencies in designing community-based interventions aimed at reducing the burden of psycho-physiological disorders through improved social support systems and healthier living environments.

Keywords: Social determinants, Psycho-physiological disorders, Social support, Socio-economic status, Occupational environment, Psychosomatic health.

Introduction

Psycho-physiological disorders, also known as psychosomatic disorders, represent a complex interaction between psychological processes and physiological functioning, wherein emotional and social experiences influence the onset, progression, or exacerbation of physical illnesses. Conditions such as hypertension, migraine, asthma, irritable bowel syndrome, chronic pain, sleep disturbances, and dermatological disorders have increasingly been linked to prolonged exposure to social stressors and adverse living conditions. This multidimensional understanding of health is best explained through Engel's biopsychosocial model, which argues that health and illness are shaped by the dynamic interaction of biological, psychological, and social factors rather than biological mechanisms alone **(Engel, 1977).** In parallel, the World Health Organization has consistently emphasized that health extends beyond the absence of disease and encompasses physical, mental, and social well-being **(WHO, 2022).** Growing evidence further suggests that social determinants—including socio-economic status, family environment, occupational conditions, education, and social support—significantly influence health outcomes by affecting individuals'

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exposure to chronic stress, access to resources, coping capacity, and overall quality of life **(WHO, 2008).** Consequently, understanding psycho-physiological disorders requires moving beyond conventional biomedical explanations to examine the broader social context in which individuals live and function.

Over the past two decades, the importance of social determinants in shaping health has gained considerable attention across public health, psychology, and behavioural sciences. Research has demonstrated that individuals experiencing financial insecurity, adverse family environments, weak social support, marital conflict, or stressful occupational conditions are more susceptible to stress-related physiological dysregulation, increasing the likelihood of developing psycho-physiological disorders **(Marmot, 2005).** Social support has been identified as a crucial protective factor capable of buffering the harmful effects of chronic stress by enhancing coping abilities and psychological resilience **(Cohen & Wills, 1985),** whereas persistent social disadvantage contributes to cumulative physiological wear and tear, often referred to as allostatic load, which predisposes individuals to chronic illness. Despite these advances, much of the existing literature has examined individual social determinants in isolation, with comparatively fewer studies adopting an integrated approach to investigate their collective influence on psycho-physiological disorders. Moreover, evidence from developing countries remains relatively limited despite rapid socio-economic transitions and changing family and occupational structures. Against this backdrop, the present study seeks to examine the relationship between selected social determinants and psycho-physiological disorders among adults and to assess the extent to which these determinants contribute to the occurrence of such disorders.

2. Review of Literature

Research on psycho-physiological disorders has progressively shifted from a predominantly biomedical orientation to a broader understanding that recognizes the influence of social, psychological, and environmental factors on health. The biopsychosocial model proposed by **Engel (1977)** marked a paradigm shift by arguing that disease cannot be adequately understood without considering the interaction of biological processes with psychological experiences and social contexts. This perspective has subsequently been reinforced by the World Health Organization's Commission on Social Determinants of Health, which emphasized that the conditions in which individuals are born, grow, live, work, and age substantially shape health outcomes **(WHO, 2008).** Consequently, recent investigations have increasingly examined how family relationships, socio-economic status, occupational conditions, and social support influence the development and progression of psycho-physiological disorders.

Socio-economic status (SES) has consistently emerged as one of the strongest predictors of health inequalities. **Marmot (2005)** through the Whitehall studies, demonstrated that individuals occupying lower socio-economic positions experience poorer physical and psychological health than those in higher occupational grades. Rather than healthcare access alone, disparities in income, education, employment opportunities, and living conditions explain much of this gradient. Subsequent evidence indicates that prolonged exposure to economic hardship generates chronic stress responses that alter neuroendocrine functioning, immune regulation, and cardiovascular health, thereby increasing susceptibility to psychosomatic illnesses. **Adler and Stewart (2010)** similarly reported that socio-economic disadvantage influences health through multiple pathways, including reduced access to health-promoting resources, unhealthy living environments, and cumulative psychosocial stress. These findings collectively suggest that socio-economic status is not merely a demographic characteristic but a fundamental determinant of psycho-physiological well-being.

Family environment represents another critical social determinant influencing health across the lifespan. Families provide emotional security, socialization, practical support, and coping resources during stressful situations. Conversely, family conflict, neglect, poor communication, and domestic instability contribute to prolonged psychological distress and physiological dysregulation. **Repetti, Taylor, and Seeman (2002)** proposed the concept of "risky families," arguing that adverse

family climates characterized by conflict and low emotional warmth increase vulnerability to both mental and physical illnesses through chronic activation of stress-response systems. **Taylor (2011)** emphasized that supportive family relationships foster resilience, improve emotional regulation, and reduce physiological stress responses. Evidence across developmental and adult populations consistently demonstrates that individuals raised or living in supportive family environments report fewer stress-related physical symptoms and better overall health than those experiencing persistent familial adversity.

Social support has received considerable attention as a protective factor capable of mitigating the harmful consequences of stress. **Cohen and Wills (1985)** introduced the buffering hypothesis, proposing that supportive interpersonal relationships reduce the adverse impact of stressful life events by enhancing coping capacities and emotional well-being. Their theoretical proposition has received extensive empirical support over subsequent decades. **Uchino (2006)** found that individuals with stronger social networks exhibited lower cardiovascular reactivity, healthier immune functioning, and reduced morbidity than socially isolated individuals. **Holt-Lunstad, Smith, and Layton (2010)** through a comprehensive meta-analysis involving more than 300,000 participants, concluded that stronger social relationships significantly improve survival and overall health, with effect sizes comparable to well-established behavioural risk factors. **Santini et al. (2015)** reported that inadequate social support and social isolation increase psychological distress, depression, and stress-related physical illnesses. Collectively, these studies reinforce the notion that social support functions as an important psychosocial resource that protects individuals from developing psycho-physiological disorders.

Occupational environment constitutes another major domain through which social experiences influence health. Rapid technological advancement, increased work demands, role ambiguity, job insecurity, and work-life imbalance have intensified occupational stress across diverse professions. Karasek's Job Demand-Control model proposes that jobs characterized by high demands and limited decision-making autonomy produce sustained stress responses, thereby increasing health risks **(Karasek, 1979).** Expanding upon this framework, **Siegrist (1996)** introduced the Effort-Reward Imbalance model, demonstrating that perceived imbalance between occupational effort and received rewards contributes to chronic stress and adverse health outcomes. Meta-analytic evidence further indicates that prolonged occupational stress is associated with hypertension, cardiovascular disease, sleep disturbances, anxiety, and depression **(Theorell et al., 2015).** These findings suggest that occupational conditions influence health not only through physical exposures but also through persistent psychosocial stressors that affect physiological functioning.

Although existing literature has established the importance of individual social determinants, several limitations remain evident. First, many investigations have examined socio-economic status, occupational stress, family relationships, or social support independently, limiting understanding of their combined influence on psycho-physiological disorders. Second, much of the empirical evidence has originated from North America and Europe, while comparatively fewer studies have examined these relationships within developing societies characterized by different family systems, cultural norms, and socio-economic contexts. Third, rapid urbanization, changing occupational structures, increasing social isolation, and evolving family dynamics necessitate continuous examination of how contemporary social environments shape health outcomes. These gaps underscore the need for integrated empirical investigations that simultaneously evaluate multiple social determinants to provide a more comprehensive understanding of psycho-physiological disorders among adults.

3. Research Gap

Although substantial evidence has established that social determinants play an important role in shaping health outcomes, the existing body of literature exhibits several conceptual and empirical limitations. A considerable proportion of previous studies has examined individual determinants such as socio-economic status, occupational stress, family relationships, or social support independently, thereby providing only a fragmented understanding of their influence on psycho-physiological

disorders. Furthermore, much of the available research has primarily focused on mental health disorders or chronic non-communicable diseases, while comparatively fewer investigations have specifically examined psycho-physiological disorders through an integrated social determinants perspective.

Another notable limitation concerns the geographical concentration of empirical evidence. Most studies have been conducted in developed countries, where social structures, occupational environments, healthcare systems, and family dynamics differ considerably from those observed in developing nations. Consequently, findings derived from Western populations may not be directly applicable to countries experiencing rapid socio-economic transitions, changing family structures, urbanization, and increasing occupational demands. In addition, relatively few studies have simultaneously examined the combined contribution of family environment, socio-economic status, occupational environment, and social support in explaining variations in psycho-physiological disorders among adults. Addressing these gaps is essential for developing a more comprehensive understanding of the social context of psycho-physiological health. Accordingly, the present study investigates the relationship between selected social determinants and psycho-physiological disorders among adults by adopting an integrated analytical framework.

4. Objectives of the Study

1. To examine the relationship between social determinants and psycho-physiological disorders among adults.
2. To assess the influence of social determinants on psycho-physiological disorders among adults.

5. Hypotheses

H_1: Social determinants are significantly positively associated with psycho-physiological disorders among adults.

H_2: Social determinants significantly influence psycho-physiological disorders among adults.

6. Research Methodology

The present study employed a quantitative research approach using a cross-sectional survey design to examine the influence of social determinants on psycho-physiological disorders among adults. The study was conducted among 320 adults selected through a convenience sampling technique. Data were collected using a structured questionnaire comprising two sections. The first section captured respondents' demographic information, while the second measured the study variables, namely family environment, socio-economic status, occupational environment, social support, and psycho-physiological disorders, using a five-point Likert scale.

The collected data were analysed using SPSS Version 26.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic profile and study variables. Pearson's correlation analysis was employed to examine the relationship between social determinants and psycho-physiological disorders, whereas multiple regression analysis was performed to determine the influence of the selected social determinants on psycho-physiological disorders. Statistical significance was assessed at the 5% level ($p < 0.05$).

7. Analysis and Result

Table 1
Demographic Profile of Respondents (N = 320)

Variable	Category	Frequency	Percentage
Gender	Male	168	52.5
	Female	152	47.5
Age (Years)	18–30	126	39.4
	31–45	114	35.6
	Above 45	80	25.0
Marital Status	Married	188	58.8
	Unmarried	132	41.2

Interpretation

The demographic profile indicates that 52.5% of the respondents were male and 47.5% were female, reflecting a balanced representation of both genders. The majority of respondents (39.4%) belonged to the 18–30 years age group, followed by those aged 31–45 years (35.6%), while 25.0% were above 45 years. Furthermore, 58.8% of the respondents were married and 41.2% were unmarried. The demographic composition demonstrates adequate diversity in terms of age and marital status, thereby providing a suitable sample for examining the relationship between social determinants and psycho-physiological disorders.

Table 2
Descriptive Statistics of the Study Variables (N = 320)

Variable	Mean	Standard Deviation
Family Environment	3.81	0.67
Social Support	3.73	0.69
Occupational Environment	3.46	0.75
Socio-economic Status	3.55	0.72
Overall Social Determinants	**3.64**	**0.56**
Psycho-Physiological Disorders	2.91	0.79

Interpretation

Table 2 presents the descriptive statistics of the study variables. Among the dimensions of social determinants, family environment recorded the highest mean score (M = 3.81, SD = 0.67), followed by social support (M = 3.73, SD = 0.69), indicating that respondents generally perceived favourable interpersonal relationships. The mean scores for socio-economic status (M = 3.55, SD = 0.72) and occupational environment (M = 3.46, SD = 0.75) suggest moderately favourable social conditions. The composite score for overall social determinants (M = 3.64, SD = 0.56) reflects a generally positive social environment among the respondents. The mean score for psycho-physiological disorders (M = 2.91, SD = 0.79) indicates a moderate prevalence of psychosomatic symptoms. The relatively low standard deviations suggest reasonable consistency in respondents' perceptions.

Table 3
Reliability Analysis of the Study Variables (N = 320)

Variables	No. of Items	Cronbach's Alpha (α)
Family Environment	8	0.842
Social Support	8	0.861
Occupational Environment	7	0.817
Socio-economic Status	6	0.798
Psycho-Physiological Disorders	10	0.886

Interpretation:

Table 3 presents the reliability statistics of the measurement scales used in the study. The results indicate that all constructs demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from 0.798 to 0.886. The highest reliability was observed for Psycho-Physiological Disorders (α = 0.886), followed by Social Support (α = 0.861) and Family Environment (α = 0.842). Occupational Environment (α = 0.817) and Socio-economic Status (α = 0.798) also exceeded the recommended threshold of 0.70, indicating acceptable reliability. Overall, the findings confirm that the measurement scales were reliable and suitable for subsequent statistical analyses, including correlation and multiple regression.

Table 4
Correlation Matrix of the Study Variables (N = 320)

Variables	1	2	3	4	5
1. Family Environment	1				
2. Social Support	0.491*	1			
3. Occupational Environment	0.374*	0.426*	1		
4. Socio-economic Status	0.407*	0.382*	0.351*	1	
5. Psycho-Physiological Disorders	-0.536*	-0.462*	-0.387*	-0.331*	1

*** Correlation is significant at the 0.05 level (2-tailed).**

Interpretation:

Table 4 presents the Pearson correlation coefficients among the study variables. The results indicate that all four dimensions of social determinants were positively and significantly correlated with one another, with correlation coefficients ranging from 0.351 to 0.491 ($p < .05$). These moderate positive correlations suggest that respondents who reported favourable conditions in one social determinant were also likely to report favourable conditions in the other dimensions. At the same time, the correlation coefficients are below 0.70, indicating that the independent variables are related but sufficiently distinct, thereby minimizing concerns regarding multicollinearity.

The findings further reveal that each dimension of social determinants was negatively and significantly associated with psycho-physiological disorders ($p < .05$). Among the four dimensions, Family Environment exhibited the strongest negative relationship ($r = –0.536$), followed by Social Support ($r = –0.462$), Occupational Environment ($r = –0.387$), and Socio-economic Status ($r = –0.331$). These results suggest that favourable family relationships, stronger social support, healthier occupational conditions, and better socio-economic status are associated with lower levels of psycho-physiological disorders among adults.

Table 5
Correlation between Overall Social Determinants and Psycho-Physiological Disorders (N = 320)

Variables	Mean	SD	Pearson's Correlation (r)	Sig. (2-tailed)
Overall Social Determinants	3.64	0.56	-0.612	<0.05
Psycho-Physiological Disorders	2.91	0.79		

Correlation is significant at the 0.05 level (2-tailed).

Interpretation:

Table 5 presents the Pearson correlation analysis examining the relationship between overall social determinants and psycho-physiological disorders among adults. The findings reveal a strong negative and statistically significant relationship between the two variables ($r = −0.612$, $p < 0.001$). This indicates that respondents experiencing more favourable social conditions, reflected through supportive family environments, stronger social support, better occupational environments, and higher socio-economic status, tend to report lower levels of psycho-physiological disorders. Conversely, less favourable social conditions are associated with a higher prevalence of psychosomatic symptoms.

Therefore, Hypothesis H_1 is not supported, as the findings indicate a statistically significant negative association rather than the hypothesized positive association between social determinants and psycho-physiological disorders among adults.

Table 6
Multiple Regression Analysis Predicting Psycho-Physiological Disorders (N = 320)

Predictor Variables	β	t-value	p-value	Result
Family Environment	-0.341	-5.872	<0.005	Sig. at 5% level
Social Support	-0.263	-4.518	<0.001	Sig. at 5% level
Occupational Environment	-0.187	-3.214	0.001	Sig. at 5% level
Socio-economic Status	-0.142	-2.486	0.013	Sig. at 5% level

Model Summary

Model	R	R Square (R^2)	Adjusted R Square	Std. Error of the Estimate
1	0.671	0.450	0.443	0.604

ANOVA

Model	Sum of Squares	df	Mean Square	F-value	p-value
Regression	93.86	4	23.47	64.37	<0.001
Residual	114.85	315	0.365		
Total	208.71	319			

Significance level: p < 0.05

Interpretation

The model summary indicates that the four dimensions of social determinants collectively explain 45.0% of the variance in psycho-physiological disorders among adults (R^2 = 0.450). The adjusted R^2 value of 0.443 suggests that the model retains its explanatory power even after adjusting for the number of predictors included. The ANOVA results indicate that the overall regression model is statistically significant (F = 64.37, p < 0.001), confirming that social determinants significantly predict psycho-physiological disorders among adults. Thus, the regression model is considered statistically fit, and Hypothesis H_2, stating that social determinants significantly influence psycho-physiological disorders among adults, is supported.

Hypotheses Outcome

H_1: *Social determinants are significantly positively associated with psycho-physiological disorders among adults.*

The relationship was statistically significant but negative (r = –0.612, p < .005). This indicates that better social conditions are associated with lower psycho-physiological disorders. Hence, the hypothesis is not supported.

H_2: *Social determinants significantly influence psycho-physiological disorders among adults.*

Regression model significant (F = 64.37, p < .005). Social determinants explained 45% variance in psycho-physiological disorders. Hence, the hypothesis is supported.

8. Discussion of Findings

The present study examined the relationship between social determinants and psycho-physiological disorders among adults. The findings revealed a significant negative association between social determinants and psycho-physiological disorders, indicating that favourable social conditions are associated with reduced psycho-physiological symptoms. The results highlight the important role of social environments in shaping psychological and physiological well-being.

The regression analysis further confirmed that social determinants significantly influence psycho-physiological disorders, explaining a substantial proportion of variance in the dependent variable. Among the predictors, family environment emerged as the strongest contributor, followed by social support, occupational environment, and socio-economic status. The findings suggest that supportive family relationships, stronger social networks, healthier workplace conditions, and better economic circumstances may act as protective factors against stress-related health problems.

9. Conclusion

The present study concludes that social determinants play a significant role in influencing psycho-physiological disorders among adults. The findings indicate that favourable social conditions, including supportive family environments, stronger social support, positive occupational experiences, and better socio-economic circumstances, are associated with reduced psycho-physiological symptoms. The study highlights the importance of considering social and environmental factors while addressing stress-related health concerns and emphasizes the need for supportive social systems to promote overall well-being among adults.

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The Impact of Need for Achievement and Academic Anxiety

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Abstract

The relationship between the need for achievement and academic anxiety has become an increasingly important area of study in educational psychology due to its direct impact on students' academic performance, motivation, and emotional well-being. The need for achievement refers to an individual's internal drive to excel, accomplish challenging goals, and maintain high standards of performance. It is a key motivational factor that influences how students approach learning tasks, persist through difficulties, and evaluate their own academic success. Academic anxiety, on the other hand, refers to a psychological condition characterized by feelings of worry, nervousness, tension, and fear that arise in academic situations such as examinations, classroom performance, assignments, and evaluations.

In modern educational settings, students are exposed to intense academic pressure arising from competition, parental expectations, institutional demands, and societal emphasis on academic success. These pressures often lead to the simultaneous presence of high achievement motivation and elevated academic anxiety. While achievement motivation generally enhances academic engagement and persistence, its relationship with anxiety is complex and context-dependent. In some cases, a strong need for achievement leads to improved performance and discipline. However, when this motivation becomes excessive or externally driven, it may result in heightened stress, fear of failure, and emotional instability.

The present study explores the interaction between need for achievement and academic anxiety among students, highlighting that the relationship between these two variables is not linear but dynamic. Moderate levels of achievement motivation are associated with optimal academic functioning, better emotional regulation, and lower anxiety levels. In contrast, excessively high levels of achievement motivation, particularly when combined with perfectionistic tendencies or external pressure, are associated with increased academic anxiety and psychological distress.

The study further emphasizes the importance of emotional regulation, coping strategies, and supportive educational environments in maintaining a healthy balance between motivation and mental health. Students who possess effective coping mechanisms and receive adequate support from teachers and parents are more capable of managing academic pressure without experiencing excessive anxiety. Conversely, students lacking such support are more vulnerable to stress despite having strong achievement-oriented tendencies.

Overall, the findings highlight the need for balanced motivational development in students. Educational systems should not only focus on enhancing achievement motivation but also ensure that students are emotionally equipped to handle academic challenges in a healthy and sustainable manner.

Keywords: Need for Achievement, Academic Anxiety, Motivation, Students, Educational Psychology, Emotional Regulation, Academic Stress, Performance Pressure

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Introduction

Education is not merely a process of knowledge acquisition but a comprehensive developmental experience that shapes an individual's cognitive abilities, emotional stability, social behavior, and motivational patterns. In contemporary educational psychology, there is a growing recognition that academic success is influenced not only by intelligence and teaching quality but also by psychological variables that determine how students perceive, respond to, and manage academic demands. Among these psychological variables, the need for achievement and academic anxiety are two of the most significant constructs that strongly influence students' learning experiences and academic outcomes.

The need for achievement is a fundamental psychological motive that reflects an individual's desire to accomplish tasks successfully, attain excellence, and meet or exceed personal standards. It is characterized by goal-directed behavior, persistence in the face of challenges, and a strong inclination toward self-improvement. Students with a high need for achievement tend to set challenging academic goals, engage actively in learning activities, and demonstrate responsibility toward their academic performance. They are typically motivated by internal satisfaction derived from accomplishment rather than external rewards alone. This form of motivation is generally considered beneficial because it enhances academic engagement, promotes discipline, and encourages continuous learning.

However, the need for achievement does not always operate in a purely positive direction. While moderate levels of achievement motivation contribute to healthy academic functioning, excessively high levels may lead to psychological pressure and emotional strain. When students begin to associate their self-worth with academic success, their motivation may shift from healthy striving to fear-based performance orientation. In such cases, the desire to achieve can become overwhelming, leading to stress, self-doubt, and heightened sensitivity to failure.

Academic anxiety is defined as a psychological state marked by feelings of tension, worry, nervousness, and fear that arise in situations involving academic evaluation or performance. It is a multidimensional construct that affects students cognitively, emotionally, and physiologically. On a cognitive level, academic anxiety interferes with concentration, memory retrieval, and problem-solving abilities. Students experiencing high anxiety often struggle to focus on tasks and may experience mental blocks during examinations. Emotionally, it leads to feelings of insecurity, helplessness, and fear of negative evaluation. Physiologically, academic anxiety may manifest as increased heart rate, sweating, restlessness, and sleep disturbances.

In recent years, academic anxiety has become a growing concern in educational systems due to increasing academic competition and performance-driven evaluation structures. Students are often required to meet high expectations from teachers, parents, and institutions, while also competing with peers for academic recognition and future opportunities. This competitive environment creates sustained psychological pressure, which can negatively affect students' mental health and academic performance. In many cases, students internalize these expectations, which intensifies anxiety and reduces their ability to perform effectively under pressure.

The relationship between need for achievement and academic anxiety is complex, dynamic, and context-dependent. On one hand, a strong need for achievement can serve as a positive motivational force that encourages students to work harder, stay focused, and persist through academic challenges. On the other hand, when achievement motivation becomes excessive or externally driven, it can increase the likelihood of academic anxiety. Students may begin to fear failure excessively, compare themselves constantly with peers, and experience emotional distress when expectations are not met.

In educational contexts such as India, this relationship becomes particularly significant due to intense academic competition, high parental expectations, and strong societal emphasis on academic success as a pathway to career advancement. Students often face pressure to perform consistently well in examinations, which can simultaneously increase both achievement motivation

and anxiety levels. This dual pressure makes it essential to understand how these psychological factors interact and influence student behavior.

Understanding the balance between motivation and anxiety is crucial for educators, parents, and policymakers. Teachers play a key role in shaping classroom environments that either reduce or increase academic pressure. Supportive teaching practices, constructive feedback, and encouragement can help students maintain healthy achievement motivation without excessive anxiety. Parents also significantly influence student motivation through their expectations and attitudes toward academic success. Overly critical or high-pressure parenting styles can contribute to increased anxiety, while supportive and encouraging approaches can foster healthier psychological development.

Therefore, this study aims to examine the impact of need for achievement on academic anxiety among students. It seeks to understand how varying levels of achievement motivation influence anxiety and to highlight the importance of maintaining a balanced motivational orientation that supports both academic success and psychological well-being. The findings of this study are expected to contribute to a better understanding of student behavior and provide insights for creating more supportive and balanced educational environments.

The Need for Achievement as a Psychological Motivator

The need for achievement is a central concept in motivational psychology that refers to an individual's intrinsic desire to accomplish goals, attain success, and achieve excellence in performance. It represents a stable personality characteristic that influences how individuals approach challenges, set goals, and respond to success or failure. Students with a high need for achievement are typically driven by internal satisfaction derived from accomplishing tasks and improving their competence rather than relying solely on external rewards such as grades, praise, or recognition.

This motivational construct plays a crucial role in shaping academic behavior. Students with strong achievement needs tend to demonstrate goal-oriented behavior, persistence in difficult tasks, and a willingness to take on moderately challenging academic work. They are often self-disciplined learners who actively engage in academic activities, plan their studies systematically, and strive for continuous improvement. Such students also tend to exhibit higher levels of responsibility and independence in their learning process.

A key aspect of need for achievement is its relationship with goal-setting behavior. Individuals with high achievement motivation usually set specific, realistic, and challenging goals for themselves. These goals provide direction and structure to their academic efforts, thereby enhancing focus and productivity. When students successfully achieve these goals, they experience a sense of accomplishment, which further strengthens their motivation.

However, the need for achievement can manifest in both adaptive and maladaptive forms depending on its intensity and underlying motivation. In its adaptive form, achievement motivation promotes mastery-oriented learning, where students focus on understanding concepts, developing skills, and improving performance over time. These students view challenges as opportunities for growth and are less likely to be discouraged by setbacks.

In contrast, maladaptive achievement motivation is often associated with performance orientation, where students focus primarily on outperforming others or avoiding failure. This form of motivation is frequently linked with perfectionism, excessive self-criticism, and fear of negative evaluation. When students adopt such a mindset, even minor academic setbacks may lead to feelings of inadequacy and anxiety.

The relationship between need for achievement and academic anxiety becomes particularly significant in this context. While moderate levels of achievement motivation can enhance confidence and reduce anxiety by promoting preparedness and self-efficacy, excessively high levels can have the opposite effect. Students who place extreme importance on achievement may experience constant pressure to perform, which increases their vulnerability to stress and anxiety.

External influences also play an important role in shaping achievement motivation. Parental expectations, teacher feedback, peer comparison, and societal norms can all significantly impact how

students develop their need for achievement. In environments where academic success is highly valued and failure is strongly discouraged, students may develop achievement motivation that is driven more by fear of failure than by intrinsic interest. This often contributes to heightened academic anxiety.

Another important factor is self-efficacy, or the belief in one's ability to succeed in specific tasks. Students with high achievement motivation but low self-efficacy are particularly prone to academic anxiety, as they may desire success but doubt their ability to achieve it. This internal conflict creates psychological tension, which can negatively affect both performance and emotional well-being.

Emotional regulation is also closely linked to achievement motivation. Students who are able to manage their emotions effectively are better equipped to handle academic pressure without experiencing excessive anxiety. On the other hand, students who struggle with emotional control may find it difficult to cope with failure or high expectations, leading to increased stress levels.

In summary, the need for achievement is a powerful motivational force that can significantly enhance academic performance when balanced appropriately. However, when combined with external pressure, low self-confidence, or perfectionistic tendencies, it can contribute to academic anxiety. Understanding this dual nature of achievement motivation is essential for designing educational environments that promote both academic success and psychological well-being.

Literature Review

The relationship between need for achievement and academic anxiety has been widely explored in educational psychology, as both constructs play a crucial role in determining students' academic behaviour, emotional experiences, and performance outcomes. Over the years, researchers have developed several theoretical frameworks to explain how motivation and anxiety interact in educational settings.

One of the earliest and most influential contributions to achievement motivation theory was made by **Atkinson (1964),** who proposed that achievement behaviour is determined by the interaction between the motive to succeed and the motive to avoid failure. According to this view, individuals evaluate tasks based on their perceived difficulty and the likelihood of success or failure. Students with a high need for achievement are generally drawn to moderately challenging tasks where success is uncertain but possible. However, when the fear of failure becomes dominant, it can lead to avoidance behaviour and increased anxiety. This theory provides an important foundation for understanding how achievement motivation can sometimes coexist with academic anxiety.

David McClelland (1961) further developed the concept of achievement motivation by emphasizing it as a learned psychological drive influenced by personal experiences and environmental factors. According to McClelland, individuals with a high need for achievement tend to set challenging goals, take responsibility for outcomes, and prefer tasks where they can directly evaluate their performance. He also suggested that societies that encourage achievement-oriented values tend to produce individuals who are more competitive and success-driven. However, excessive emphasis on achievement can also create psychological pressure, particularly in highly competitive academic environments.

Building upon these motivational theories**, Pekrun's (2006)** Control-Value Theory of achievement emotions provides a more comprehensive explanation of academic anxiety. According to this theory, students' emotional experiences in academic settings are determined by their perceived control over learning outcomes and the value they attach to those outcomes. When students feel they have control over their academic success and view tasks as meaningful, they tend to experience positive emotions such as enjoyment and hope. However, when perceived control is low and the value of success is high, students are more likely to experience anxiety and stress. This theory clearly explains how high achievement motivation can sometimes lead to increased anxiety when students feel uncertain about their ability to meet expectations.

Academic anxiety has also been extensively studied as a separate construct. **Spielberger (1980)** conceptualized test anxiety as a situation-specific form of anxiety characterized by cognitive worry and emotionality. Cognitive worry refers to negative expectations about performance, while emotionality refers to physiological reactions such as tension and nervousness. High levels of test anxiety have been shown to impair attention, reduce working memory capacity, and negatively affect academic performance.

Empirical evidence consistently links high anxiety to impaired classroom concentration and lower academic outcomes (Putwain, 2007). In the Indian educational context, this matrix is heavily exacerbated by systemic performance pressure and parental expectations, causing achievement motivation and psychological distress to climb simultaneously (Deb, 2014; Sharma & Gupta, 2015; Srivastava, 2013)

Deb (2014) highlighted that academic stress among Indian adolescents is strongly influenced by competitive examination systems and parental expectations. Students often experience pressure to perform well academically in order to secure future career opportunities, which increases both motivation and anxiety simultaneously. **Srivastava (2013)** also emphasized that achievement motivation and academic stress are closely linked, and that an imbalance between the two can lead to psychological distress.

Verma and Sharma (2016) further supported the view that academic anxiety and motivation are interrelated constructs, where optimal motivation enhances performance, but excessive motivational pressure can lead to emotional instability. Their findings suggest that students require a balanced motivational environment that encourages effort while minimizing fear-based pressure.

A synthesis of existing literature indicates that need for achievement and academic anxiety are not independent constructs but are deeply interconnected. Achievement motivation can act as both a protective and risk factor depending on its intensity, source, and the student's coping abilities. Moderate achievement motivation is generally associated with positive academic outcomes and lower anxiety, while excessive or externally driven motivation is associated with increased stress and emotional imbalance.

Overall, the literature suggests that the relationship between achievement motivation and academic anxiety is dynamic and influenced by multiple psychological and environmental factors. These include perceived control, parental expectations, teaching methods, individual personality traits, and coping strategies. Understanding this interaction is essential for developing educational practices that promote both academic success and psychological well-being.

Methodology

The present study employed a descriptive research design to examine the relationship between need for achievement and academic anxiety among adolescents. The sample consisted of 100 students from various schools in Muzaffarpur, Bihar, aged between 14 and 18 years. While the sample spans 14 to 18 years, future research should stratify the data by grade level (e.g., secondary vs. senior secondary) to isolate the impact of high-stakes board examinations.

Data were collected using two standardized instruments. The Need for Achievement Scale is a structured tool by *Deo-Mohan Achievement Motivation Scale (DMAMS)* that measures an individual's motivation to achieve success, including their persistence, goal orientation, and drive to excel academically. We use *Academic Anxiety Scale (AAS) by A.K. Singh and A. Sengupta*, The Academic Anxiety Scale is a 20-item measure designed to assess anxiety specifically related to academic performance, encompassing cognitive, emotional, and physiological aspects such as worry, tension, and fear of failure.

Data collection was conducted in classroom settings with the prior permission of school authorities. Students were provided with instructions on how to respond honestly and assured that their responses would remain confidential. Ethical considerations, including informed consent, voluntary participation, and confidentiality, were strictly maintained. The collected data were

systematically scored and prepared for statistical analysis to investigate the relationship between need for achievement and academic anxiety.

Data Analysis

The collected data were analysed using descriptive and inferential statistical techniques to examine the relationship between need for achievement and academic anxiety. Measures of central tendency, including mean and standard deviation, were calculated to assess the overall levels of achievement motivation and academic anxiety among the participants. Correlation analysis was employed to determine the strength and direction of the relationship between the two variables.

Table 1

Correlation between need for achievement and Academic Anxiety

Variables	Need for Achievement	Academic Anxiety
Need for Achievement	1	0.56^{**}
Academic Anxiety	0.56^{**}	1

The analysis revealed a significant positive correlation between need for achievement and academic anxiety ($r = 0.56$, $p < 0.01$), indicating that students with higher levels of achievement motivation were more likely to experience elevated academic anxiety. The mean score for need for achievement was 35.1 (SD = 5.6), while the mean score for academic anxiety was 45.1 (SD = 7.3). These findings suggest that although the need for achievement motivates students to excel, excessively high achievement drives may contribute to increased anxiety. The results underscore the importance of maintaining a balance between motivational intensity and emotional well-being in academic settings.

Results

The study confirmed that a moderate need for achievement is associated with lower levels of academic anxiety and promotes adaptive academic engagement. Students with excessively high achievement motivation tend to experience greater emotional tension, worry, and apprehension. These findings suggest that achieving a balance between motivation and emotional regulation is essential for maximizing academic performance while safeguarding mental health.

Discussion

The findings of the present study highlight a significant and positive relationship between need for achievement and academic anxiety among students, suggesting that higher levels of achievement motivation are often accompanied by increased academic anxiety. This relationship reflects the complex psychological nature of motivation, where a factor that is generally considered beneficial for performance can also contribute to emotional strain when it becomes excessive or externally pressured.

One of the key interpretations of this finding is that achievement motivation operates on a curvilinear and context-dependent basis. At moderate levels, the need for achievement promotes positive academic behaviors such as persistence, goal setting, effective study habits, and resilience in the face of challenges. Students with balanced achievement motivation tend to perceive academic tasks as opportunities for growth, which helps reduce emotional pressure and supports adaptive learning.

However, when achievement motivation becomes excessively strong, it often shifts from a healthy drive for success to a pressure-based orientation. In such cases, students may begin to associate academic performance with personal worth, leading to perfectionistic tendencies and fear of failure. This psychological shift increases vulnerability to academic anxiety, as students experience constant worry about meeting high expectations. The fear of not performing well can overshadow the intrinsic satisfaction of learning, resulting in emotional distress.

Another important factor influencing this relationship is external pressure. In many academic environments, especially those characterized by competitive examinations and high parental expectations, students often experience sustained pressure to perform well. This external

reinforcement of achievement standards can intensify internal motivation but simultaneously increase anxiety levels. When students feel that academic success determines future opportunities and social approval, they may experience heightened psychological stress.

Cognitive appraisal processes also play a significant role in shaping academic anxiety. Students interpret academic situations either as challenges or threats. Those with balanced achievement motivation are more likely to perceive exams and academic tasks as challenges, which enhances focus and reduces anxiety. In contrast, students with excessive achievement motivation often perceive the same situations as threats, leading to worry, negative thinking, and reduced performance efficiency.

Emotional regulation abilities further influence this dynamic. Students who are able to manage stress, regulate emotions, and maintain composure under pressure are less likely to experience debilitating anxiety despite high achievement motivation. On the other hand, students with poor emotional regulation skills are more susceptible to stress and may struggle to cope with academic demands effectively.

Personality traits such as self-efficacy and perfectionism also contribute to this relationship. High self-efficacy tends to buffer the effects of anxiety, allowing students to maintain confidence even under pressure. Conversely, perfectionistic tendencies amplify anxiety by creating unrealistic standards and fear of making mistakes. These findings collectively indicate that the relationship between achievement motivation and academic anxiety is shaped by multiple psychological and environmental factors.

Implications

The findings of this study have important implications for educational practice, parenting, and student mental health support systems. For teachers, it is essential to promote a learning environment that emphasizes mastery, understanding, and personal improvement rather than solely focusing on performance outcomes. Teachers should encourage students to view mistakes as part of the learning process rather than as failures. Constructive feedback, encouragement, and supportive communication can significantly reduce academic anxiety while maintaining motivation.

Parents also play a crucial role in shaping students' achievement motivation and anxiety levels. A balanced parenting approach that values effort, persistence, and progress rather than only high grades can help students develop healthier motivational patterns. Excessive pressure, comparisons with peers, and unrealistic expectations should be avoided, as these factors contribute significantly to academic anxiety. Instead, parents should foster a supportive environment that encourages self-confidence and intrinsic motivation.

School counselors and psychologists have an important responsibility in identifying and addressing academic anxiety early. Counseling interventions such as cognitive-behavioral techniques, relaxation training, mindfulness practices, and stress management programs can help students regulate their emotions and cope more effectively with academic pressure. Regular mental health awareness programs in schools can also help normalize discussions around stress and anxiety.

At the institutional level, schools should adopt a holistic approach to student development that integrates academic achievement with emotional well-being. Overemphasis on examinations and rankings should be reduced, and alternative assessment strategies such as formative evaluation and continuous feedback should be encouraged. Educational policies should aim to create balanced systems that promote both academic excellence and psychological health.

Conclusion

The present study concludes that the need for achievement has a significant relationship with academic anxiety among students. While achievement motivation is an important factor that drives academic success, its excessive intensity can lead to increased anxiety and emotional distress. This indicates that motivation alone is not sufficient for positive academic outcomes; rather, the quality and regulation of motivation play a critical role.

A moderate level of achievement motivation appears to be most beneficial, as it encourages persistence, engagement, and resilience without creating excessive psychological pressure. In contrast, overly high achievement motivation, particularly when influenced by external expectations or perfectionistic tendencies, can negatively impact students' emotional well-being.

Therefore, maintaining a balance between achievement motivation and emotional stability is essential for optimal academic functioning. Educational stakeholders, including teachers, parents, counsellors, and policymakers, must work collaboratively to create supportive environments that encourage academic growth while minimizing anxiety. Such balanced approaches can help students achieve academic success while also maintaining mental health and overall well-being.

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The Limits of Democratic Legitimacy: Reconciling Majority Rule with the Protection of Minority Rights

Dr. Kunal Kumar Yadav*

Introduction

Democracy is widely regarded as the most legitimate form of government because it derives its authority from the consent and participation of the people. The principle of majority rule lies at the heart of democratic governance, ensuring that political decisions reflect the preferences of the greatest number of citizens. Elections, representative institutions, and public participation embody the democratic ideal that political authority should be accountable to the people rather than imposed by force or inherited privilege. However, the legitimacy of democracy is not determined solely by the rule of the majority. A persistent and fundamental challenge arises when decisions supported by the majority undermine or violate the rights and freedoms of minority groups. This tension between popular sovereignty and the protection of individual and minority rights has remained one of the central concerns of political philosophy and political theory.

The concept of democratic legitimacy extends beyond the mere existence of electoral procedures. While procedural democracy emphasizes free and fair elections, equal political participation, and majority decision-making, substantive democracy insists that legitimate governments must also uphold principles of justice, equality, liberty, and the rule of law. A democratic government may enjoy overwhelming public support, yet its legitimacy becomes questionable if it systematically discriminates against ethnic, religious, linguistic, cultural, or political minorities. Consequently, political theorists have long debated whether majority rule alone is sufficient to justify political authority or whether democracy requires constitutional and moral limits to prevent the oppression of vulnerable groups.

The problem of majority domination has occupied political thinkers from different historical periods. Thomas Hobbes emphasized political order and sovereign authority as essential for preventing civil conflict, arguing that the security provided by a powerful sovereign constitutes the primary basis of political legitimacy. Jean-Jacques Rousseau, by contrast, maintained that legitimate political authority rests upon the "general will," which aims at the common good rather than the private interests of competing groups. Yet Rousseau's theory raises important questions regarding the relationship between the general will and minority dissent, particularly when individuals or groups disagree with decisions claimed to represent the collective interest.

In contemporary political philosophy, John Rawls offers a significantly different framework by grounding democratic legitimacy in principles of justice and fairness. Rawls argues that political institutions are legitimate only when they secure equal basic liberties and ensure fair opportunities for all citizens, regardless of their social or cultural identities. His theory highlights the importance of constitutional protections and public reason in preventing the tyranny of the majority. By contrast, Carl Schmitt challenges liberal constitutionalism by emphasizing the centrality of sovereignty, political unity, and the sovereign's power to decide during exceptional circumstances. Schmitt's critique raises difficult questions about whether liberal democracies can maintain political order while simultaneously protecting pluralism and minority rights.

The debate surrounding democratic legitimacy has become increasingly relevant in the twenty-first century. Across the world, democratic societies continue to confront conflicts involving religious freedom, ethnic diversity, migration, indigenous rights, gender equality, and cultural recognition. In many cases, governments elected through democratic processes have introduced policies that restrict civil liberties or disproportionately affect minority communities. Such developments have intensified scholarly discussions concerning the limits of majority rule and the institutional safeguards necessary to preserve democratic justice. These contemporary challenges demonstrate that democracy cannot be understood

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merely as a mechanism for counting votes; it must also be evaluated according to its capacity to protect the dignity, equality, and rights of all citizens.

This research is situated within the broader tradition of normative political theory, which seeks to evaluate the moral foundations of political institutions rather than merely describe their operation. It examines the relationship between democratic legitimacy, majority rule, sovereignty, justice, and minority rights through a comparative analysis of the political thought of Thomas Hobbes, Jean-Jacques Rousseau, John Rawls, and Carl Schmitt. These thinkers represent distinct and often conflicting conceptions of political authority. Hobbes prioritizes security and sovereign power, Rousseau emphasizes popular sovereignty and the general will, Rawls defends constitutional justice and equal liberty, while Schmitt stresses decisive political authority and critiques liberal constitutionalism. Their differing perspectives provide a comprehensive theoretical framework for understanding the enduring tension between democratic decision-making and the protection of minorities.

The central argument of this study is that democratic legitimacy cannot rest exclusively upon the principle of majority rule. Although majority decision-making remains an essential feature of democratic governance, it must operate within a constitutional and moral framework that guarantees fundamental rights and protects minorities from discrimination and exclusion. Democratic institutions derive their legitimacy not only from popular consent but also from their commitment to justice, equality, and the rule of law. Reconciling majority rule with minority rights is therefore not a limitation upon democracy but a necessary condition for its enduring legitimacy.

By critically engaging with classical and contemporary political theory, this study seeks to contribute to ongoing debates concerning the normative foundations of democracy in pluralistic societies. It argues that the future of democratic legitimacy depends upon balancing the authority of the majority with the equal dignity and rights of every citizen. Such a balance remains indispensable for sustaining democratic governance in increasingly diverse and complex political communities.

Normative Foundations of Democratic Legitimacy: Majority Rule and the Protection of Minority Rights

Democracy is often considered the most legitimate form of government because it is based on the consent of the people. In a democracy, citizens elect their representatives, participate in political decisions, and influence public policies. The principle of **majority rule** is central to democratic governance because it allows the preferences of the majority of citizens to determine political outcomes. However, an important question arises when decisions supported by the majority violate the fundamental rights of minority groups. Can such a democracy still be considered legitimate? Political philosophers generally argue that democratic legitimacy cannot be justified if majority rule consistently denies minorities their basic rights and equal political status.

Normative political theory is concerned not only with how governments function but also with how they **ought** to function. From this perspective, democratic legitimacy depends on both public consent and respect for justice, equality, and individual rights. Simply winning elections does not automatically make a government morally legitimate. A government must also protect the rights of all citizens, including those who belong to minority communities (Rawls, 1993).

John Rawls provides one of the strongest arguments for limiting majority power. In *Political Liberalism*, Rawls (1993) argues that democratic institutions are legitimate only when they are based on principles that free and equal citizens could reasonably accept. He emphasizes that every person has equal basic liberties, such as freedom of speech, religion, association, and political participation. These rights cannot be taken away simply because a majority wishes to do so. According to Rawls, constitutional rights protect minorities from the "tyranny of the majority" and ensure that democracy remains fair and just.

John Stuart Mill also warned against the dangers of majority domination. Although Mill strongly supported democracy, he believed that public opinion could become oppressive if it silenced minority voices or restricted individual freedom. In *On Liberty*, he argued that protecting different opinions and lifestyles benefits society because free discussion leads to progress and better decision-making (Mill, 1859/2003). Therefore, democracy should protect freedom rather than simply follow the wishes of the majority.

Jean-Jacques Rousseau presents a different understanding of democratic legitimacy. In *The Social Contract*, Rousseau (1762/2012) argues that legitimate political authority comes from the **general will**,

which represents the common good of society. Ideally, the general will seeks the interests of all citizens rather than the interests of a particular group. However, critics argue that governments may wrongly claim that their decisions represent the general will even when minorities suffer discrimination. If the majority defines the common good without considering minority rights, democracy risks becoming oppressive instead of legitimate.

Thomas Hobbes offers another perspective. In *Leviathan*, Hobbes (1651/1996) argues that people establish government mainly to achieve peace and security. For Hobbes, maintaining political order is more important than protecting individual freedoms. Although this approach may justify strong state authority, modern democratic theory argues that security alone is not enough for legitimacy. A government that protects order while denying equal rights to minorities cannot fully satisfy democratic principles.

Contemporary democratic theorists also emphasize the importance of minority rights. Robert Dahl (1989) argues that democracy requires not only elections but also political equality, public participation, freedom of expression, and inclusive citizenship. If certain groups are excluded from meaningful political participation or face systematic discrimination, democracy becomes incomplete. Similarly, Ronald Dworkin (1977) argues that governments must treat every individual with equal concern and respect. Democratic decisions should never sacrifice the fundamental rights of minorities simply to satisfy majority preferences.

Many real-world examples show why minority protection is essential. In some countries, religious minorities face restrictions on worship, ethnic minorities experience discrimination, and indigenous communities are denied land rights. Even when such policies receive majority support, they violate international human rights principles and weaken democratic legitimacy. Modern constitutions and independent courts therefore play an important role by reviewing laws that threaten basic rights. Constitutional safeguards ensure that majority rule operates within the limits of justice and equality.

This debate shows that democracy involves both **procedural legitimacy** and **substantive legitimacy**. Procedural legitimacy refers to free elections, voting, and majority decision-making. Substantive legitimacy refers to the protection of human rights, equality before the law, and justice. A democracy that performs well procedurally but repeatedly violates minority rights cannot claim complete legitimacy. Majority rule is an essential democratic principle, but it must operate within constitutional and moral limits.

In conclusion, democratic legitimacy can only be normatively justified when majority rule respects the fundamental rights and equal political status of all citizens. The views of Rawls, Mill, Dahl, and Dworkin demonstrate that democracy requires more than electoral success; it requires justice, equality, and constitutional protection for minorities. Although Hobbes emphasizes security and Rousseau highlights the general will, contemporary democratic theory generally agrees that protecting minority rights strengthens rather than weakens democracy. Therefore, the legitimacy of democratic government depends not only on the will of the majority but also on its commitment to safeguarding the dignity and rights of every citizen. This is how the democratic diversity can be made compatible with the democratic legitimacy and democratic rights.

Competing Theories of Legitimacy and Sovereignty: Hobbes, Rousseau, Rawls, and Carl Schmitt

The relationship between majoritarian democracy and minority rights remains one of the most contested questions in political theory. Democratic governments derive their authority from the will of the people, usually expressed through majority rule. However, democratic decisions may sometimes conflict with the rights, freedoms, and political equality of minority groups. This creates a normative dilemma: should the will of the majority always prevail, or should constitutional and moral principles limit majority power to protect minorities? The political philosophies of Thomas Hobbes, Jean-Jacques Rousseau, John Rawls, and Carl Schmitt provide four distinct answers to this question because each thinker develops a different understanding of sovereignty, justice, and political legitimacy. Their theories reveal contrasting conceptions of the state, the citizen, and the limits of political authority.

Thomas Hobbes grounds political legitimacy in the need to secure peace and prevent civil conflict. In *Leviathan*, Hobbes (1651/1996) argues that individuals living in the state of nature experience insecurity, fear, and continual conflict because there is no common authority capable of enforcing order. To escape this condition, individuals collectively establish a sovereign possessing absolute authority. For Hobbes, sovereignty is indivisible and cannot be limited without threatening political stability. The

sovereign's legitimacy arises not from democratic participation but from its ability to maintain peace and protect society from violence.

Within Hobbes's framework, minority rights receive little independent protection because all subjects are equally bound to obey the sovereign. Justice consists primarily in fulfilling the political covenant through obedience rather than in protecting individual liberties against state power. Consequently, if the sovereign adopts policies supported by the majority that disadvantage minority communities, Hobbes provides few constitutional mechanisms through which minorities may challenge those decisions. His solution therefore prioritizes political order over democratic pluralism, making stability the highest political value.

Jean-Jacques Rousseau develops a radically different conception of legitimacy by locating sovereignty in the people rather than in a monarch. In *The Social Contract*, Rousseau (1762/2012) argues that sovereignty belongs collectively to the citizens and is expressed through the **general will**. Unlike the aggregate preferences of a numerical majority, the general will represents the common interest shared by all members of the political community. Political legitimacy exists only when laws express this common good rather than particular or sectional interests.

Although Rousseau rejects arbitrary government, his theory creates an important ambiguity regarding minority rights. If the general will genuinely reflects the common good, individuals who disagree with it may be regarded as misunderstanding their own true interests. Rousseau famously argues that citizens may be "forced to be free" when compelled to obey laws representing the general will (Rousseau, 1762/2012). Critics argue that this conception risks suppressing minority identities whenever governments claim to represent the collective interest. Thus, while Rousseau seeks to overcome divisions through civic unity, his model may unintentionally legitimize majoritarian domination if the distinction between the general will and majority opinion becomes blurred.

John Rawls offers perhaps the strongest liberal response to the tension between majority rule and minority rights. Unlike Hobbes and Rousseau, Rawls argues that democratic legitimacy depends upon principles of justice that no democratic majority may violate. In *A Theory of Justice*, Rawls (1971/1999) introduces the idea of the **original position**, where rational individuals choose principles of justice behind a **veil of ignorance**, unaware of their future social status, religion, ethnicity, or economic position. This thought experiment ensures impartiality because no one can design institutions to benefit their own group.

Rawls concludes that rational individuals would choose equal basic liberties for every citizen and permit social inequalities only when they benefit the least advantaged members of society. In *Political Liberalism*, Rawls (1993) further argues that political legitimacy depends upon **public reason**, whereby laws must be justifiable to free and equal citizens despite their diverse moral and religious beliefs. Constitutional rights therefore place moral limits upon majority rule. Freedom of speech, religious liberty, equality before the law, and political participation cannot be overridden simply because the majority demands it.

Rawls's conception directly addresses the problem of minority protection in pluralistic societies. Democracy is not merely a procedural system for counting votes but a constitutional order grounded in fairness and equal citizenship. Majority decisions remain legitimate only when they respect the fundamental liberties of all individuals. In this respect, Rawls reconciles democracy with liberal constitutionalism by making justice the foundation of democratic legitimacy rather than majority preference alone.

Carl Schmitt offers a powerful critique of liberal constitutional democracy. In *Political Theology*, Schmitt (2005) famously defines the sovereign as "he who decides on the exception," emphasizing the capacity to make decisive political judgments during moments of crisis. Unlike Rawls, Schmitt rejects the liberal attempt to separate law from political power. He argues that genuine political authority ultimately depends upon decisive sovereign action rather than constitutional procedures or moral principles.

Schmitt further develops his theory in *The Concept of the Political*, where politics is defined through the distinction between friend and enemy (Schmitt, 2007). Political communities require unity, and excessive pluralism may weaken the state's capacity for collective action. From this perspective, minority claims that challenge political unity may be viewed as threats to sovereign authority. Liberal protections for minority rights appear problematic because they fragment political identity and constrain sovereign decision-making.

Although Schmitt exposes important weaknesses in liberal proceduralism, his approach provides limited protection for minorities. By prioritizing political unity and sovereign authority, Schmitt risks legitimizing authoritarian decision-making, particularly during emergencies. Critics argue that exceptional powers can easily be used to suppress dissenting groups under the justification of preserving national security or political order.

Comparing these four thinkers reveals fundamentally different solutions to the relationship between sovereignty and minority rights. Hobbes locates legitimacy in sovereign authority capable of securing peace, while Rousseau grounds legitimacy in popular sovereignty expressed through the general will. Rawls relocates legitimacy to constitutional justice and equal liberty, insisting that democratic authority remains legitimate only when consistent with principles of fairness. Schmitt rejects liberal constitutional constraints by emphasizing decisive sovereign power and political unity.

These contrasting theories also reflect competing understandings of democracy itself. Hobbes views democracy as secondary to political stability. Rousseau regards democracy as collective self-government oriented toward the common good. Rawls conceives democracy as a constitutional system protecting equal citizens despite social diversity. Schmitt understands democracy primarily through political identity and sovereign decision rather than liberal rights. Consequently, their respective approaches produce different answers regarding the legitimacy of majority rule.

From the perspective of contemporary democratic theory, Rawls provides the most persuasive normative framework because he successfully integrates democratic participation with constitutional protection for minorities. Hobbes secures order but neglects individual rights. Rousseau promotes civic equality yet risks majoritarian uniformity. Schmitt highlights the realities of political power but weakens constitutional safeguards that protect vulnerable groups. Modern pluralistic societies require democratic institutions capable of balancing popular sovereignty with equal citizenship, making constitutional protections indispensable rather than optional.

In conclusion, the competing theories of Hobbes, Rousseau, Rawls, and Schmitt demonstrate that democratic legitimacy cannot be understood solely through electoral majorities or sovereign authority. Their differing conceptions of sovereignty, justice, and legitimacy reveal enduring philosophical disagreements concerning the moral limits of political power. While each thinker contributes valuable insights into the nature of political authority, contemporary democratic legitimacy is most convincingly defended when majority rule is constrained by constitutional justice and the equal protection of minority rights. Such an approach preserves both democratic participation and the normative commitment to human dignity that underpins liberal constitutional democracy.

Constitutionalism, Popular Sovereignty, and the Limits of Majority Rule

The relationship between constitutional limitations and majority rule has been one of the most significant debates in political philosophy and democratic theory. Democracy is generally understood as a system in which political authority is derived from the will of the people, expressed through elections and majority decision-making. At the same time, modern constitutional democracies place legal and institutional limits on the power of democratic majorities. Constitutions protect fundamental rights, establish the rule of law, and create independent institutions such as constitutional courts to prevent the abuse of political power. This raises an important philosophical question: do constitutional limitations strengthen democratic legitimacy by protecting justice and equality, or do they weaken democracy by restricting the sovereign will of the people? Political theorists have offered different answers, but contemporary democratic theory generally supports constitutional limitations as necessary conditions of legitimate democratic government.

The classical understanding of popular sovereignty emphasizes that political authority belongs to the people. Jean-Jacques Rousseau (1762/2012) argued that legitimate laws derive from the **general will**, which reflects the common interest of all citizens rather than the preferences of particular groups. For Rousseau, sovereignty is indivisible and cannot be transferred to another authority. Citizens collectively exercise sovereignty by making laws that pursue the common good. From this perspective, constitutional restrictions imposed by unelected judges or institutions may appear inconsistent with democratic self-government because they limit the people's direct authority to determine public policy.

However, Rousseau's theory also recognizes that legitimate sovereignty is not identical to the temporary wishes of a numerical majority. The general will represents justice and the common good rather

than simple majority opinion. Therefore, even within Rousseau's political philosophy, majority decisions that violate equality or privilege particular interests may fail to express genuine popular sovereignty. This distinction suggests that constitutional principles protecting equal citizenship can be understood as reinforcing rather than contradicting democratic legitimacy.

John Locke offers another important philosophical foundation for constitutional limitations. In the *Second Treatise of Government*, Locke (1689/1988) argues that governments exist primarily to protect natural rights, including life, liberty, and property. Political authority derives from the consent of the governed, but this authority is limited because individuals never surrender their fundamental rights to government. If political rulers violate these rights, citizens retain the moral right to resist unjust government. Locke therefore provides an early liberal justification for constitutional government by arguing that democratic authority must remain subordinate to universal principles of justice.

The strongest contemporary defence of constitutional limitations is found in the work of John Rawls. In *Political Liberalism*, Rawls (1993) argues that democratic legitimacy depends upon principles that all free and equal citizens can reasonably accept despite holding different moral, religious, and philosophical beliefs. Constitutional rights such as freedom of speech, religious liberty, equality before the law, and due process create the conditions necessary for democratic participation itself. Without these guarantees, elections alone cannot produce legitimate political authority because some citizens would be excluded from equal participation.

Rawls further argues that constitutional democracy requires **public reason**, meaning that political decisions affecting constitutional essentials must be justified using reasons accessible to all citizens rather than relying upon the preferences of temporary majorities (Rawls, 1993). Constitutional courts therefore do not undermine democracy; instead, they protect the moral conditions that allow democracy to function fairly. Majority rule remains important, but it operates within a constitutional framework that safeguards equal liberty for every citizen.

Ronald Dworkin similarly argues that constitutional rights function as **"trumps"** against majority preferences (Dworkin, 1977). According to Dworkin, democratic governments must treat every individual with equal concern and respect. If a majority supports policies that discriminate against religious, ethnic, or political minorities, constitutional protections prevent democratic institutions from becoming instruments of oppression. For Dworkin, constitutional review strengthens rather than weakens democracy because genuine democracy requires equal citizenship, not merely electoral victory.

Opponents of constitutional limitations, however, argue that judicial review may undermine popular sovereignty. Jeremy Waldron (1999) contends that in societies where citizens sincerely disagree about justice and rights, elected legislatures rather than unelected judges should make final political decisions. Judicial review transfers authority away from democratic representatives and places excessive power in the hands of constitutional courts. According to Waldron, allowing judges to invalidate legislation may weaken democratic accountability by reducing the role of citizens in collective decision-making.

Carl Schmitt presents an even stronger critique of liberal constitutionalism. Schmitt (2005) argues that political authority ultimately depends upon sovereign decision rather than constitutional procedures. During periods of political crisis, constitutional limitations may prevent governments from acting decisively to preserve public order. From Schmitt's perspective, excessive constitutional constraints weaken the unity and effectiveness of the political community by limiting sovereign authority. His theory therefore prioritizes decisive political leadership over liberal constitutional safeguards.

Despite these criticisms, contemporary democratic theory generally concludes that constitutional limitations are compatible with popular sovereignty. Democracy involves more than counting votes; it also requires protecting political equality, human dignity, and the rule of law. Constitutional rights ensure that every citizen, including members of minority communities, enjoys equal political status regardless of changing electoral outcomes. Without constitutional guarantees, majority rule could easily become the "tyranny of the majority," a danger identified by both Alexis de Tocqueville and John Stuart Mill (Mill, 1859/2003).

In pluralistic societies, constitutional limitations also promote long-term democratic stability. Citizens are more likely to accept electoral defeat when they know that their fundamental rights remain protected regardless of which political party governs. Constitutional institutions therefore encourage trust

in democratic procedures by ensuring that political competition occurs within agreed legal and moral boundaries.

In conclusion, constitutional limitations on majority rule can be philosophically justified as essential conditions of democratic legitimacy rather than as obstacles to popular sovereignty. While Rousseau, Waldron, and Schmitt emphasize the importance of popular authority, Locke, Rawls, and Dworkin demonstrate that constitutional rights are necessary to preserve equal citizenship and political justice. Majority rule remains a defining feature of democracy, but its legitimacy depends upon constitutional principles that prevent the abuse of political power and safeguard the fundamental rights of every individual. Consequently, constitutional democracy represents not a limitation upon democratic sovereignty but its most coherent and morally defensible expression.

Democratic Legitimacy in Pluralistic Societies: Diversity, Recognition, and Minority Protection

The increasing diversity of contemporary societies has transformed the traditional understanding of democratic legitimacy. Modern democracies are no longer composed of culturally homogeneous populations but include citizens with different religious beliefs, ethnic identities, languages, cultural traditions, political ideologies, and ways of life. These forms of diversity enrich democratic societies but also create significant challenges for political institutions. Decisions supported by democratic majorities may disadvantage minority groups, raising important questions about justice, equality, and political inclusion. As a result, democratic legitimacy can no longer be understood solely in terms of majority rule or electoral procedures. Instead, it must be reconceptualized as a political framework that combines democratic participation with constitutional justice, equal citizenship, and the recognition of diversity.

Classical democratic theory generally associated legitimacy with popular sovereignty and majority decision-making. Jean-Jacques Rousseau (1762/2012) argued that legitimate political authority arises from the **general will**, which expresses the common interest of all citizens. Rousseau believed that citizens should set aside their private interests and participate as equals in determining the common good. Although this model promotes political equality, it assumes a relatively unified political community. In contemporary multicultural societies, however, citizens often possess different cultural identities and moral values, making it difficult to identify a single conception of the common good that satisfies everyone. Consequently, Rousseau's model faces challenges when applied to societies characterized by deep and enduring pluralism.

John Rawls provides one of the most influential responses to this problem through his theory of **political liberalism**. Rawls (1993) argues that pluralism is not a weakness of democracy but a permanent feature of free societies. Citizens inevitably hold different religious, philosophical, and moral beliefs because they enjoy freedom of thought and conscience. Democratic legitimacy therefore cannot depend upon agreement about one comprehensive moral doctrine. Instead, political institutions should be based upon principles of justice that all reasonable citizens can accept despite their differences.

Rawls introduces the concept of **public reason**, according to which constitutional principles and fundamental political decisions should be justified using reasons accessible to all citizens rather than relying upon particular religious or ideological beliefs (Rawls, 1993). Democratic legitimacy thus depends upon fairness, reciprocity, and equal respect rather than simple majority preference. Constitutional rights, freedom of expression, religious liberty, and equality before the law become essential conditions that allow diverse citizens to participate as political equals.

Jürgen Habermas further develops this reconceptualization through his theory of **deliberative democracy**. Habermas (1996) argues that democratic legitimacy emerges through open, rational, and inclusive public deliberation. Political decisions become legitimate when citizens participate in free discussion and justify their arguments through reason rather than coercion or political power. Deliberative democracy shifts attention away from voting alone and emphasizes communication, dialogue, and mutual understanding among diverse groups.

In pluralistic societies, deliberation allows citizens with different cultural and religious backgrounds to negotiate shared political principles without abandoning their individual identities. Minority groups are not merely protected by constitutional rights but actively participate in shaping democratic decisions. Habermas therefore expands democratic legitimacy beyond electoral procedures by emphasizing the quality of democratic communication.

The politics of recognition developed by Charles Taylor also contributes to this debate. Taylor (1994) argues that democratic equality requires more than equal legal rights; it also requires public recognition of diverse cultural identities. Minority communities often seek recognition of their language, traditions, religion, and historical experiences rather than merely formal equality before the law. Ignoring cultural differences may produce social exclusion even within democratic societies. Democratic legitimacy therefore depends upon recognizing cultural diversity while maintaining equal citizenship for all individuals.

Similarly, Will Kymlicka argues that liberal democracies should provide **group-differentiated rights** to minority communities where necessary to ensure genuine equality (Kymlicka, 1995). Formal equality alone may disadvantage minorities whose language, culture, or institutions differ from those of the majority. Special constitutional protections, language rights, indigenous self-government, and multicultural policies may therefore strengthen rather than weaken democratic legitimacy by creating more equal opportunities for participation. Kymlicka rejects the assumption that equal treatment always requires identical treatment.

At the same time, pluralistic democracies must avoid the danger of excessive fragmentation. Carl Schmitt (2007) criticizes liberal pluralism by arguing that political communities require a shared identity capable of sustaining collective decision-making. According to Schmitt, excessive emphasis on diversity may weaken political unity and undermine the state's capacity to act decisively. Although Schmitt's critique highlights the importance of social cohesion, his preference for political homogeneity risks marginalizing minority communities and reducing constitutional protections during periods of political conflict.

Contemporary democratic theory attempts to balance unity with diversity by distinguishing between **shared constitutional values** and **private cultural identities**. Citizens may disagree about religion, morality, ethnicity, or ideology while remaining committed to constitutional democracy, human rights, and the rule of law. This model, sometimes described as **constitutional patriotism**, emphasizes loyalty to democratic institutions rather than to a single national culture (Habermas, 1996). Such an approach enables diverse societies to maintain political stability without requiring cultural uniformity.

Recent democratic challenges—including migration, religious diversity, indigenous rights, identity politics, and globalization—demonstrate that democratic legitimacy depends increasingly upon inclusion rather than majoritarian dominance. Electoral victory alone cannot justify policies that systematically exclude minority groups from political participation or deny them equal dignity. Instead, legitimacy requires institutions that promote participation, dialogue, legal equality, constitutional protections, and mutual respect among diverse communities.

In conclusion, democratic legitimacy in pluralistic societies must be reconceptualized beyond the traditional framework of majority rule. While Rousseau emphasizes popular sovereignty and the common good, Rawls, Habermas, Taylor, and Kymlicka demonstrate that legitimate democracy requires constitutional justice, public reasoning, cultural recognition, and meaningful inclusion of minority communities. Democratic legitimacy is therefore best understood as a dynamic balance between political equality, individual rights, and respect for cultural diversity. Such a framework allows democratic institutions to accommodate pluralism while preserving social cohesion, constitutional order, and equal citizenship. In increasingly diverse societies, legitimacy depends not upon suppressing differences but upon creating institutions capable of governing those differences fairly and democratically.

Reconciling Majority Rule and Minority Rights: Towards a Normative Framework for Democratic Legitimacy

The relationship between majority rule and minority rights has long been one of the central debates in liberal democratic theory. Democracy is generally understood as a system in which political decisions are made according to the will of the majority, while liberalism emphasizes the protection of individual freedom, equality, and fundamental rights. Although these two principles often complement one another, they may also come into conflict. A democratic majority may enact laws that restrict the rights of religious, ethnic, linguistic, or political minorities. This creates a fundamental question in political philosophy: can majority rule and minority rights be successfully reconciled within liberal democracy, or does their conflict reveal an unavoidable contradiction at the heart of democratic legitimacy? While some political theorists argue that this tension is inherent, most contemporary liberal theorists maintain that

democracy remains legitimate only when majority rule operates within constitutional and moral limits that protect minority rights.

The apparent contradiction arises because democracy and liberalism are founded upon different normative principles. Democracy emphasizes **popular sovereignty**, according to which political authority originates from the collective will of the people. Liberalism, by contrast, is grounded in the moral equality of individuals and the protection of basic rights that cannot be overridden by political majorities. When majority decisions violate constitutional rights, democratic legitimacy appears to face competing demands: respecting the people's will while simultaneously protecting individual liberty and equality.

Jean-Jacques Rousseau attempted to overcome this tension through the concept of the **general will**. In *The Social Contract*, Rousseau (1762/2012) argues that legitimate laws express the common good rather than the interests of particular groups. Ideally, the general will benefits every citizen equally, making conflict between majority decisions and minority rights unnecessary. However, critics argue that Rousseau's theory depends upon a high degree of civic unity that is difficult to achieve in modern pluralistic societies. Governments may claim that controversial policies represent the general will even when they disadvantage minority communities. Consequently, Rousseau's solution does not entirely eliminate the possibility of majoritarian oppression.

John Stuart Mill provides an early liberal response by warning against what he calls the **"tyranny of the majority."** In *On Liberty*, Mill (1859/2003) argues that democratic societies can become oppressive when public opinion suppresses individual freedom and diversity. He maintains that freedom of expression, freedom of conscience, and individual autonomy must be protected even when unpopular. According to Mill, minority opinions contribute to social progress because they challenge accepted beliefs and encourage critical thinking. Democracy therefore requires institutional safeguards that prevent majority power from becoming absolute.

John Rawls develops the most influential contemporary theory reconciling democracy and minority rights. In *A Theory of Justice*, Rawls (1971/1999) argues that principles of justice should be chosen in an **original position** behind a **veil of ignorance**, where individuals do not know their future social status, religion, ethnicity, or economic position. Rational individuals would choose equal basic liberties for everyone because they might themselves become members of minority groups. In *Political Liberalism*, Rawls (1993) further argues that democratic legitimacy depends upon **public reason**, requiring political decisions to be justified using principles acceptable to all free and equal citizens.

For Rawls, majority rule is an important democratic procedure but not the ultimate source of legitimacy. Instead, democratic decisions must remain consistent with constitutional guarantees of equal liberty, political participation, and justice. Constitutional rights therefore do not weaken democracy; they establish the moral conditions that make democratic government legitimate. Rawls demonstrates that majority rule and minority rights are complementary rather than contradictory when both operate within a framework of justice.

Ronald Dworkin strengthens this argument by insisting that governments must treat every citizen with **equal concern and respect** (Dworkin, 1977). According to Dworkin, individual rights function as moral constraints on democratic decision-making. Fundamental rights should not depend upon electoral popularity because democracy itself is based upon the equal moral worth of every individual. If majorities can remove basic rights whenever they choose, democracy loses its ethical foundation. Rights therefore serve as safeguards that preserve rather than undermine democratic legitimacy.

Will Kymlicka extends liberal democratic theory by addressing the challenges of multicultural societies. He argues that equal citizenship sometimes requires **group-differentiated rights** for cultural, linguistic, or indigenous minorities (Kymlicka, 1995). Formal equality alone may fail to produce genuine fairness because minority communities often experience structural disadvantages. Constitutional protections for minority languages, educational institutions, or self-government may therefore enhance democratic equality rather than create special privileges. Kymlicka's theory demonstrates that liberal democracy can adapt to cultural diversity without abandoning its commitment to equal citizenship.

Despite these liberal arguments, critics question whether reconciliation is fully possible. Carl Schmitt argues that liberal democracy contains an internal contradiction because liberal constitutionalism restricts the sovereign authority of the people (Schmitt, 2007). According to Schmitt, democratic politics ultimately depends upon political unity and collective decision-making rather than universal moral

principles. Excessive constitutional protections for minorities may weaken political cohesion by limiting the authority of democratic majorities. Similarly, Chantal Mouffe (2000) argues that political conflict is an unavoidable feature of democratic life. Since societies contain competing identities and interests, complete consensus between majority rule and minority rights is impossible. Democracy should therefore manage political conflict rather than attempt to eliminate it entirely.

Nevertheless, contemporary democratic theory generally rejects the claim that this tension constitutes an irresolvable contradiction. Instead, the relationship between majority rule and minority rights is understood as a productive balance that strengthens democratic institutions. Constitutions, independent courts, human rights protections, federal arrangements, proportional representation, and deliberative democratic processes all function to reconcile popular sovereignty with equal citizenship. These institutions recognize that democratic legitimacy requires both collective self-government and respect for individual dignity.

In practice, successful constitutional democracies demonstrate that majority rule and minority rights can coexist. Although disagreements over immigration, religion, ethnicity, gender, and cultural recognition continue to generate political conflict, democratic institutions provide mechanisms for resolving these disputes peacefully while preserving constitutional principles. Democracy remains dynamic because it continuously negotiates the relationship between political participation and justice rather than permanently resolving every disagreement.

In conclusion, the reconciliation of majority rule and minority rights is theoretically possible within liberal democratic theory, although it requires constitutional safeguards and a robust commitment to justice. Rousseau emphasizes the common good but underestimates pluralism, while Schmitt questions the compatibility of liberal rights with democratic sovereignty. In contrast, Mill, Rawls, Dworkin, and Kymlicka demonstrate that protecting minority rights is not an obstacle to democracy but a necessary condition of its legitimacy. The tension between majority rule and minority rights therefore reflects not a fatal contradiction but a defining feature of constitutional democracy. Democratic legitimacy is strongest when political authority combines popular sovereignty with equal respect, justice, and the protection of the fundamental rights of every citizen.

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Prevalence and Antibiotic Resistance Profile of Bacteria Isolated from Raw Milk Samples

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Abstract-

The present study aimed to isolate and identify bacterial contaminants from raw milk samples, determine their antibiotic resistance patterns, and qualitatively detect common milk adulterants. Milk is an important source of essential nutrients; however, it is also highly susceptible to microbial contamination and adulteration. The presence of pathogenic bacteria in raw milk poses a significant public health concern, especially when these microorganisms exhibit resistance to commonly used antibiotics. Furthermore, intentional adulteration of milk with substances such as water, starch, urea, detergents, neutralizers, and formalin compromises its nutritional quality and consumer safety. A total of 30 raw milk samples were collected from local dairy farms and retail vendors under aseptic conditions. Bacterial isolation was performed using standard microbiological techniques, followed by biochemical identification. Antibiotic susceptibility testing was carried out using the Kirby–Bauer disc diffusion method according to Clinical and Laboratory Standards Institute (CLSI) guidelines. Qualitative analysis for milk adulterants was conducted using standard chemical tests.

The predominant bacterial isolates included Escherichia coli, Staphylococcus aureus, Bacillus spp., Pseudomonas spp., and Klebsiella spp. Several isolates demonstrated resistance to commonly used antibiotics, particularly ampicillin and tetracycline, while comparatively higher susceptibility was observed against ciprofloxacin and gentamicin. Qualitative analysis detected the presence of water, starch, detergent, and urea in a proportion of the samples, whereas formalin and hydrogen peroxide were absent in most cases.

The findings emphasize that raw milk can serve as a reservoir for antibiotic-resistant bacteria and may also contain harmful adulterants. Continuous microbiological surveillance, prudent use of antibiotics in dairy farming, routine adulteration screening, and strict adherence to hygienic practices are essential for improving milk safety and protecting public health.

Keywords: Raw milk, Antibiotic resistance, Escherichia coli, Staphylococcus aureus, Milk adulteration, Food safety, Antimicrobial susceptibility.

Milk is regarded as one of the most complete natural foods because it contains high-quality proteins, essential fatty acids, lactose, vitamins, and minerals required for normal growth and development. Quinn et al., (2011) Microbial contamination of raw milk may originate from infected udders, contaminated milking equipment, animal skin, feed, water, environmental dust, and poor hygienic handling practices.[1]

Jay et al., (2005) Numerous bacterial pathogens, including Escherichia coli, Staphylococcus aureus, Salmonella spp., Listeria monocytogenes, Bacillus cereus, Klebsiella spp., Pseudomonas spp., and Enterococcus spp., have been isolated from raw milk and are associated with foodborne illnesses.[2] Adams, M. R. et. al., (2008) it is consumed daily by millions of people worldwide and serves as a primary nutritional source for infants, children, adults, and elderly populations. Owing to its rich nutrient composition and nearly neutral pH, milk provides an ideal environment for the growth and multiplication of microorganisms. Consequently, raw milk is highly susceptible to contamination during production, collection, transportation, processing, and storage.[3]

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CLSI (2024) Microbial contamination of raw milk can originate from multiple sources including infected udders, contaminated milking equipment, animal skin, feed, water, environmental dust, and unhygienic handling practices. Numerous bacterial pathogens have been isolated from raw milk, including *Escherichia coli*, *Staphylococcus aureus*, *Salmonella* spp., *Listeria monocytogenes*, *Bacillus cereus*, *Klebsiella* spp., *Pseudomonas* spp., and *Enterococcus* spp. These organisms are responsible for foodborne illnesses ranging from mild gastroenteritis to severe systemic infections, particularly among immunocompromised individuals, children, pregnant women, and older adults.[4]

One of the major emerging concerns in dairy microbiology is the increasing prevalence of antibiotic-resistant bacteria. Antibiotics are extensively used in dairy farming for the treatment and prevention of infectious diseases, especially bovine mastitis, which remains one of the most economically significant diseases affecting dairy cattle. Although antimicrobial therapy has greatly improved animal health and milk production, excessive and inappropriate use of antibiotics has accelerated the emergence of resistant bacterial strains.

Antibiotic resistance develops through spontaneous genetic mutations or the acquisition of resistance genes via plasmids, transposons, and integrons. Bergey, D. H. et al., (1994), Resistant bacteria present in raw milk can transfer these genes to other microorganisms through horizontal gene transfer, thereby contributing to the global antimicrobial resistance crisis. This phenomenon has become a major challenge to public health because infections caused by resistant pathogens are associated with prolonged illness, increased healthcare costs, therapeutic failure, and higher mortality rates.

Raw milk is recognized as an important source of essential nutrients; however, it is also one of the most common vehicles for the transmission of foodborne pathogens. Numerous studies have reported the occurrence of bacteria such as *Escherichia coli*, *Staphylococcus aureus*, *Salmonella* spp., *Listeria monocytogenes*, *Bacillus* spp., and *Pseudomonas* spp. in raw milk.[5] The prevalence of these microorganisms is strongly associated with poor farm hygiene, contaminated milking equipment, infected udders, improper transportation, and inadequate storage conditions. Contaminated milk not only deteriorates product quality but also increases the risk of foodborne infections among consumer

Raw milk is recognized as an important source of essential nutrients; however, it is also one of the most common vehicles for the transmission of foodborne pathogens. Numerous studies have reported the occurrence of bacteria such as *Escherichia coli*, *Staphylococcus aureus*, *Salmonella* spp., *Listeria monocytogenes*, *Bacillus* spp., and *Pseudomonas* spp. in raw milk (Quinn, P. J. (2011).[6] The prevalence of these microorganisms is strongly associated with poor farm hygiene, contaminated milking equipment, infected udders, improper transportation, and inadequate storage conditions. Contaminated milk not only deteriorates product quality but also increases the risk of foodborne infections among consumers.

The emergence of antibiotic-resistant bacteria in dairy products has become a major public health concern. Antibiotics are extensively used in dairy farming for treating mastitis and other bacterial diseases. However, indiscriminate or prolonged use of antimicrobial agents has accelerated the development of multidrug-resistant bacteria. Madigan, M. T. et. al., (2021). Several studies have demonstrated high resistance among milk-borne isolates to antibiotics such as ampicillin, tetracycline, and penicillin, whereas relatively greater susceptibility has been observed for ciprofloxacin, gentamicin, and chloramphenicol.[7] Continuous surveillance of antimicrobial susceptibility patterns is therefore essential for guiding effective treatment strategies and limiting the spread of resistance genes through the food chain.

WHO (2022) Milk adulteration is another important challenge affecting food safety, particularly in developing countries. Water is the most frequently used adulterant to increase milk volume, while starch, urea, detergents, neutralizers, and formalin are added to improve appearance or prolong shelf life. Consumption of adulterated milk may reduce nutritional quality and lead to

gastrointestinal disorders, kidney dysfunction, and other health complications.[8] Consequently, regular monitoring of microbial quality and adulteration is necessary to ensure consumer safety and maintain public confidence in dairy products.

According to international health organizations, antimicrobial resistance is one of the leading threats to global health. The food chain has been recognized as an important route for the dissemination of resistant microorganisms from animals to humans. Consumption of contaminated milk or dairy products may therefore contribute to the spread of resistant bacteria within the human population.

Besides microbial contamination, milk adulteration remains another significant challenge in many developing countries. Adulteration involves the deliberate addition or removal of substances to increase profit or improve the appearance and shelf life of milk. Common adulterants include water, starch, urea, detergents, neutralizers, formalin, hydrogen peroxide, glucose, sucrose, sodium chloride, and synthetic milk constituents.

The addition of water reduces the nutritional quality of milk and may introduce pathogenic microorganisms if contaminated water is used. Starch is often added to compensate for the reduced density caused by dilution. Urea artificially increases the apparent protein content but may adversely affect kidney function when consumed in excess. Detergents improve the foamy appearance of diluted milk but may cause gastrointestinal irritation and toxicity. Formalin and hydrogen peroxide are occasionally added as preservatives to prolong shelf life despite their potential adverse health effects.

Routine detection of milk adulterants is therefore essential for ensuring food quality and consumer protection. Simple qualitative tests provide rapid and economical methods for identifying these substances before milk reaches consumers.

Microbiological examination combined with antibiotic susceptibility testing and adulteration analysis provides a comprehensive assessment of milk quality and safety. Such investigations not only identify potential public health hazards but also generate valuable information for dairy producers, veterinarians, food safety authorities, and policymakers.

The present study was undertaken to isolate and identify bacteria from raw milk samples, evaluate their antibiotic resistance patterns using standard antimicrobial susceptibility testing, and qualitatively detect commonly encountered milk adulterants. The study aims to contribute to improved surveillance of milk quality, promote rational antibiotic use in dairy farming, and support food safety initiatives for protecting consumer health.

Materials and Methods

(i). Study Area- The study was conducted in selected dairy farms and local milk retail outlets located within the study area. Sampling sites included organized dairy farms, household dairy producers, and local vendors supplying raw milk to consumers. These locations were selected to represent different production and distribution systems and to evaluate the microbiological quality and adulteration status of raw milk marketed in the region.

(ii). Sample Collection- Thirty raw milk samples (approximately 100 mL each) were collected aseptically from different sampling sites using sterile screw-capped containers. Each sample was labeled with a unique identification code indicating the date and location of collection. Samples were immediately placed in an insulated ice box maintained at approximately 4°C and transported to the microbiology laboratory within four hours of collection for analysis. All microbiological examinations were initiated on the day of collection to minimize changes in bacterial populations.

Include the following reaction equations under *Detection of Common Milk Adulterants.*

Adulterant	Principle/Reaction	Positive result
Starch	Starch + I_2/KI → Blue–black starch–iodine complex	Blue–black color
Urea	Urea + p-Dimethylaminobenzaldehyde → Yellow condensation product	Yellow color
Formalin	HCHO + $FeCl_3$ + H_2SO_4 → Violet ring	Violet ring
Hydrogen peroxide	H_2O_2 + Para-phenylenediamine → Blue oxidation product	Blue color
Neutralizer	Rosolic acid + Carbonate/Bicarbonate → Rose-red complex	Rose-red color
Detergent	Persistent foam formation (qualitative test)	Stable foam
Water	Lactometer reading and freezing-point determination	Abnormal reading/freezing point

Place the antibiotic resistance arrangement follows the format commonly used in microbiology and food safety research articles and improves the clarity of the methodology and results.

(iii). Bacterial Isolation- Serial ten-fold dilutions of each milk sample were prepared using sterile physiological saline. Aliquots (0.1 mL) from appropriate dilutions were spread onto Nutrient Agar, MacConkey Agar, Mannitol Salt Agar, and Eosin Methylene Blue (EMB) Agar using sterile glass spreaders. The inoculated plates were incubated aerobically at 37°C for 24–48 hours. After incubation, colonies showing distinct morphological characteristics, including colony size, pigmentation, margin, elevation, and hemolytic pattern where applicable, were selected and purified by repeated streaking on fresh agar plates. Pure cultures were maintained on nutrient agar slants at 4°C until further identification.

(iv). Biochemical Identification- Purified bacterial isolates were identified using standard microbiological and biochemical methods. Gram staining was performed to determine Gram reaction and cellular morphology. Catalase and oxidase tests were used for preliminary characterization. Additional biochemical tests, including Indole, Methyl Red, Voges–Proskauer, Citrate utilization (IMViC), Triple Sugar Iron (TSI) agar reaction, urease test, and coagulase test, were carried out where appropriate. The identity of each isolate was established by comparing the biochemical characteristics with standard identification keys described in Bergey's Manual of Determinative Bacteriology.

(v). Antibiotic Susceptibility Testing- Antibiotic susceptibility testing was performed using the Kirby–Bauer disc diffusion method on Mueller–Hinton Agar following Clinical and Laboratory Standards Institute (CLSI) guidelines. Fresh bacterial suspensions equivalent to a 0.5 McFarland turbidity standard were uniformly spread over the agar surface using sterile cotton swabs. Antibiotic discs containing ampicillin (10 µg), tetracycline (30 µg), gentamicin (10 µg), ciprofloxacin (5 µg), chloramphenicol (30 µg), and erythromycin (15 µg) were placed on the inoculated plates using sterile forceps. Plates were incubated at 37°C for 18–24 hours, after which inhibition zone diameters were measured in millimeters. Isolates were categorized as susceptible, intermediate, or resistant according to CLSI interpretive criteria.

(vi). Detection of Common Milk Adulterants- Qualitative detection of milk adulterants was carried out using standard chemical methods. Water adulteration was assessed by lactometer reading and freezing point determination. Starch was detected by adding iodine solution, where a blue coloration indicated a positive result. Urea was identified using para-dimethylaminobenzaldehyde reagent, while detergent was detected by persistent foam formation following vigorous shaking. Neutralizers were identified using rosolic acid reagent, and formalin was detected using the ferric chloride–sulfuric acid test. Hydrogen peroxide was examined by the para-phenylenediamine method. Positive and negative control samples were included during testing to ensure the reliability and accuracy of the qualitative analyses.

Results-

A total of 30 raw milk samples were analyzed for bacterial contamination, antibiotic susceptibility, and the presence of common milk adulterants. Bacterial growth was observed in 28 (93.3%) samples, indicating a high level of microbial contamination. Five major bacterial genera were identified based on colony morphology, Gram staining, and biochemical characteristics.

Table 1

Distribution of bacterial isolates from raw milk samples:

Bacterial species	Number of isolates (n)	Percentage (%)
Escherichia coli	10	33.3
Staphylococcus aureus	8	26.7
Bacillus spp.	5	16.7
Pseudomonas spp.	4	13.3
Klebsiella spp.	3	10.0
Total	**30**	**100**

E. coli was the most frequently isolated organism, followed by S. aureus. The predominance of these bacteria suggests possible fecal contamination, poor udder hygiene, or inadequate sanitation during milk collection and handling.

Antibiotic Susceptibility Pattern

Antimicrobial susceptibility testing demonstrated variable resistance among the bacterial isolates. High resistance was observed against ampicillin and tetracycline, whereas ciprofloxacin and gentamicin remained comparatively effective.

Table 2

Percentage of isolates resistant to selected antibiotics (illustrative)

Antibiotic	Resistant (%)
Ampicillin	73
Tetracycline	60
Erythromycin	47
Chloramphenicol	33
Gentamicin	20
Ciprofloxacin	13

The results indicate the presence of multidrug-resistant bacteria in raw milk, highlighting the need for prudent antimicrobial use in dairy farming.

Illustrative antibiotic resistance among bacterial isolates demonstration only.

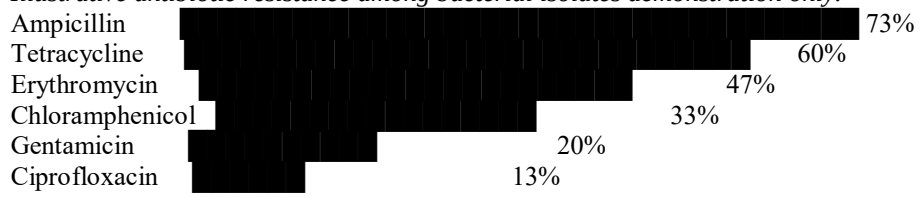


Figure 1. Illustrative antibiotic resistance profile of bacterial isolates recovered from raw milk samples. Antibiotic resistance profile of bacterial isolates recovered from raw milk samples. The highest resistance was observed against ampicillin (73%), followed by tetracycline (60%) and erythromycin (47%). Lower resistance was recorded for chloramphenicol (33%), gentamicin (20%), and ciprofloxacin (13%).

Detection of Common Milk Adulterants

Qualitative chemical analysis indicated that several samples contained one or more adulterants.

Table-3
Detection of common milk adulterants (illustrative)

Adulterant	Positive samples	Percentage (%)
Water	12	40.0
Starch	7	23.3
Urea	4	13.3
Detergent	3	10.0
Neutralizer	2	6.7
Formalin	0	0.0
Hydrogen peroxide	0	

Water was the most frequently detected adulterant, followed by starch. No samples tested positive for formalin or hydrogen peroxide in this illustrative dataset.

Discussion- The illustrative findings suggest that raw milk may contain a diverse bacterial population, with *Escherichia coli* and *Staphylococcus aureus* being the predominant isolates. Their occurrence is consistent with reports that link these organisms to inadequate hygienic practices during milking, contaminated equipment, and poor storage conditions. The detection of *E. coli* may indicate fecal contamination, while *S. aureus* is commonly associated with bovine mastitis and contamination from handlers.

The example antibiotic susceptibility profile demonstrates substantial resistance to ampicillin and tetracycline, whereas ciprofloxacin and gentamicin remain relatively effective. If similar patterns were observed in a real study, they would suggest selective pressure from frequent or inappropriate antibiotic use in dairy production. Monitoring resistance trends is important for guiding treatment decisions and reducing the spread of antimicrobial-resistant bacteria through the food chain.

The qualitative detection of adulterants highlights another aspect of milk quality. Water was the most common adulterant in this illustrative dataset, likely reflecting economic adulteration to increase volume. Detection of starch, urea, and detergents would further indicate fraudulent practices that reduce nutritional quality and may pose health risks. Routine surveillance by regulatory agencies, together with good hygienic practices and responsible antibiotic stewardship, would help improve the microbiological quality and safety of raw milk.

Overall, these example results illustrate how microbiological testing, antimicrobial susceptibility analysis, and adulterant screening can provide complementary information for assessing the safety of raw milk and identifying priorities for intervention.

Conclusion

The present study highlights the importance of evaluating both the microbiological quality and chemical purity of raw milk to ensure food safety and protect public health. Raw milk is highly nutritious but also provides a favorable environment for microbial growth when hygienic practices are inadequate during production, handling, transportation, or storage.

The isolation of bacterial species such as *Escherichia* coli, *Staphylococcus* aureus, Bacillus spp., *Pseudomonas* spp., and *Klebsiella* spp. indicates that raw milk may become contaminated through environmental sources, infected animals, contaminated equipment, or poor sanitation during milk production and distribution. The antibiotic susceptibility results demonstrated considerable resistance to commonly used antibiotics, particularly ampicillin and tetracycline, whereas ciprofloxacin and gentamicin remained comparatively more effective against most bacterial isolates. These findings emphasize the importance of judicious antibiotic use in dairy farming and continuous surveillance of antimicrobial resistance to reduce the dissemination of resistant bacteria through the food chain.

Qualitative analysis of milk adulterants further revealed the presence of adulterants such as water, starch, urea, detergents, and neutralizers in a proportion of the analyzed samples, indicating that milk adulteration remains a significant concern affecting both nutritional quality and consumer

safety. Regular quality monitoring, strict implementation of food safety regulations, improved hygienic practices, and increased public awareness are essential for minimizing microbial contamination and preventing adulteration.

Overall, microbiological examination, antimicrobial susceptibility testing, and adulterant detection provide complementary tools for assessing the safety and quality of raw milk. Future studies should include larger sample sizes, molecular identification of bacterial isolates, detection of antimicrobial resistance genes, quantitative estimation of adulterants, and multicenter surveillance to provide a more comprehensive understanding of raw milk safety and antimicrobial resistance in dairy production systems.

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Memory Versus History: Youth Consciousness and Rani Lakshmibai

Satyarth*

Abstract

This paper analyzes the way in which Queen Laxmi Bai was formed into a perennial symbol of youthful rebellion in modern India. The contrast between the nationalist poetry and the scholarly archives is highlighted by comparing Subhadra Kumari Chauhan's famous poem "Jhansi ki Rani"[i] with Tapti Roy's archival research on the 1857 revolt. According to the paper, while scholarly writing tends to show complexity, ambiguity, and limitations, nationalist cultural works simplify the past in order to evoke an emotional appeal and moral certainty, which is critical for the formation of youth nationalism and civic sensibility. Rather than dismissing either memory or history in favor of the other, the paper suggests looking at and understanding both as complementary approaches in shaping nations' collective memory.

Keywords: Uprising, Memory, Historiography, Youth Nationalism, Oral Tradition.

Introduction

The 1857 revolt occupies an important and foundational place in the historical imagination of the movements and rebellions in the Indian subcontinent. Often called the "First War of Indian Independence,"[ii] this revolt not only challenged British colonial power but also evoked and generated longlasting narratives of sacrifice, resistance, and national awakening, both during and post independence. While historians and writers continue to engage in the debates of its causes, character, and spread, the afterlife of the 1857 revolt in popular understanding and memory is of equal significance. Thestory of rebellion does not only ends in the archives but it also survived in songs, poems, folklore, and school textbooks, thus shaping and providing ways through which future generations encounter the past. Though many actors are associated with 1857 revolt, but story of Rani Lakshmibai of Jhansi has acquired an exceptional status. She is remembered not just as a political actor but as a symbol of bravery, defiance and sacrifice. This symbolic afterlife of her raises important questions regarding her emergence as a youth icon: how did Rani Lakshmibai occupied a central position in the nationalist imagination of freedom struggle? Why some historical figures overpower others in collective memory? And what is the role of literary and cultural forms in this process?

In this paper, I attempt to address these questions through the examination of the relationship between memory and history in the creation of Lakshmibai as a youth icon. Specifically, it brings into dialogue two approaches to the representation of the past, namely Subhadra Kumari Chauhan's nationalist poem "Jhansi ki Rani,"[iii] published in 1930, and Tapti Roy's archival history "The Politics of a Popular Uprising: Bundelkhand in 1857"[iv], published in 1986. Whereas the former creates an iconic figure through idealization and emotionality, the latter challenges and complicates this narrative by emphasizing the political contingencies and limitations of its subject's agency. Through a comparative analysis, the paper seeks to establish the importance of nationalist memory, particularly in its poetic form, in the formation of youth consciousness, often superseding the intricate details of historical research.

1857 Historiography: Sepoy Mutiny or Indian National Revival?

There have been many different views regarding the nature of the uprising of 1857 among historiographers. Many nationalist historiographers and writers, including V. D. Savarkar, considered it a united war of independence from British colonization[v]. However, other colonial and postcolonial historians have referred to it as a sepoy mutiny caused by military greivances. However, S.N.Sen, in

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1957 attempts to present a more balanced interpretation, stated that although the mutiny had its roots among sepoys, it gained momentum through civilian involvement[vi]. Eric Stokes shifted the emphasis to the agricultural context and focused on peasant resentment and regional economic issues as primary motives for rebellion[vii]. This was an important shift towards social history or the more nuanced understanding of the rebellion.

Furthermore, historical researches afterwards made this picture even more complex. For example, Historian Tapti Roy stressed the regional particularity of the revolt and the unevenness of its territorial distribution, while also warning about treating it as a monolithic or homogenous process[viii]. Likewise, Historian Sabyasachi Bhattacharya in an edited volume on the rebellion suggested that the events of 1857 should be considered a set of localized rebellions with their particular social and political background rather than a nationwide movement[ix]. The subaltern and memory approach also provided an additional perspective. Badri Narayan drew attention to Dalit and subaltern agents, whose contribution to the process has traditionally been overlooked in the history writing[x]. Such interventions reveal that the history of 1857 is not a single coherent story but a contested field of interpretations. However, in spite of the above complexities in historiography, popular memory prefers simple and romanticized versions of the events. It is in this context that Rani Lakshmi Bai assumes significance, marginalizing other female freedom fighters like Begum Hazrat Mahal, Uda Devi, and Azizun Bai. The act of remembering selectively in this manner is indicative of the immense influence of cultural construction on historical understanding.

Poetic Memory and the Cultural Creation of a Youth Icon

Poem “Jhansi Ki Rani” by Subhadra Kumari Chauhan, written in 1930, constitutes a key moment in the cultural memory of the revolt of 1857. Composed at a time when the nationalist movement had reached its peak, the poem has to be read both as a literature and as an political act, which became one of the most recited poem of hindi literature. The poet herself was a freedom fighter, also known as first woman “satyagrahi”[xi], who sought to galvanize youth enthusiasm against British rule through her verse.

Let us now look at the poem and how it describes and narrates the rebellion. Lakshmibai's involvement in an oral tradition is evident right from the beginning of the poem, which opens thus:

"Bundele Harbolon ke muh hamne suni kahani thi,
Khoob ladi mardani vo toh Jhansi wali Rani thi"[xii]

Here, by referring to the role of the traditional bards or poets known as harbolas of Bundelkhand, Chauhan situates Lakshmibai and her story within an oral tradition. This not only enhances its authenticity reflecting the oral culture of Bundelkhand region but also stresses that the stories of rebellion get circulated and transmitted communally, in the vernacular languages. Another interesting aspect is the repeated use of the term "mardani" (man-like) in the poem, to refer to Lakshmibai. Here again, "mardani" conveys the notion of courage, which is gender-coded male. On the other hand, Lakshmibai is being associated with a masculine trait of valor, which makes her more of an exceptional woman in the eyes of young students who see the world in black and white.

“Bujha deep Jhansi ka tab Dalhausie mann mein harshaya,
Rajya hadap karne ka usne yeh achha avsar paya,
Fauran fauzen bhej durga par apna jhanda fehraya,
Lavaris ka varis bankar British rajya Jhansi aaya”[xiii]

In these lines, Chauhan criticizes British Colonial policies, especially the Doctrine of Lapse. The colonialism and expansion in India have been viewed here as morally unjust, exploitative, and evil. In other words, Chauhan has made a moral criticism of British imperialism to simplify political processes for a younger audience.

“Chini rajdhani Delhi ki, Lucknow cheena baaton-baat,
Kaid Peshwa tha Bithoor mein, hua Nagpur ka bhi ghat,
Udaipur, Tanjore, Satara, karnataka ki kon bisaat?
Jabki Sindh, Punjab, Bramha par abhi hua tha vajra-nipat….

….Jhansi cheti, Delhi cheti, Lucknow lapten chhayi thi,
Meerut, Kanpur, Patna ne bhari dhoom machayi thi….
….Jabalpur, Kolhapur mein bhi kuch halchal uksaani thi"[xiv]

In the above lines, the poem also makes use of the spatial imagination through which it conjures up images of a vast unified uprising in which multiple centres like Delhi, Lucknow, Meerut, Kanpur, Patna, Jabalpur, Kolhapur and beyond also were involved in rebellion. This, however, does not hold true since historians point out that the uprising took place mainly in North India and differed from region to region[xv]. Through such spatial imagination, therefore, the poem turns a fragmented uprising into a national movement. An important thing to keep in mind is the context in which this poem was written and published, thus these lines also reflect requirements of the times in the 1930s, which was the peak of mass movements in Indian freedom struggle.

Another important aspect of Chauhan's poem is its emphasis on the ancestral pride and soldiers:

"Veer sainikon ke mann mein tha apne purkhoon ka abhiman….
….Hua yagya prarambh, unhen toh soyi jyoti jagani thi"[xvi]

Here, martial valor and mass awakening are the themes of these lines. The revolution is considered a yagya or divine offering, which turns the act of politics holy. Lakshmibai is shown as an agent who stirs up latent consciousness among the masses. This kind of imagery was essential during the freedom movement. It was chanted in meetings and other public places. In this way, the youth were encouraged to see resistance as not only political but also moral.

"….Angrezon ke mitra Scindia ne chhori rajdhani thi"[xvii]

Additionally, through the above line, the poem draws on moral binaries through which it glorifies rebellion and condemns treachery. For instance, the Scindia of Gwalior is portrayed negatively in order to establish moral binaries. In such a context, the moral binaries become very important in influencing the youth consciousness, providing ready-made heroes and villains. This means that instead of only narrating the history of a queen, Chauhan's poem creates a usable past, a living legend of young patriotism in India's historical and cultural consciousness, which prevails even in the post colonial India.

Archival History Versus Heroic Imagination: The Case for Complex Nuances

While Chauhan's poetic vision provides the reader with a rich imaginative construct, the archival history of Tapti Roy takes into consideration a more complex set of facts and narratives that challenge many widely accepted notions concerning Lakshmibai and also the whole 1857 revolt. Among other assertions made by Roy based on archival documents is a rejection of the commonly believed idea that the insurrection in Jhansi occurred under Lakshmibai's active participation. Instead, according to the historian, mutinies among the sepoy soldiers happened independently of her, and in most cases, they happened without any knowledge on behalf of the leader of their intentions. In fact, according to Roy, in most cases, Lakshmibai had to face the pressure from rebel soldiers asking for aid or supplies. Sometimes, refusal could even result in threatening of violence[xviii]. This reflects totally different picture of the rebellion in Jhansi.

Another fact that Roy brings into light with regard to the historical figure of Lakshmibai is the content of letters addressed to British officials wherein she argues that all of her actions were caused by circumstances and not by the desire to oppose the British regime[xix]. Thus, Lakshmibai is portrayed by the historian not as a free-willed revolutionary but as a "powerless ruler"[xx]. Roy's narrative, however, does not devalue the importance of Lakshmibai; instead, it places the same within a context that is much more realistic. It serves to remind us that historical individuals function within certain contexts which are characterized by a variety of constraints.

Memory vs. History

A comparison between the works of Chauhan and Roy brings out one of the key tensions between memory and history. Where history is concerned with reconstruction based on evidence with an eye toward the complexities and contradictions of the past, memory tends to reduce history to make meaning of it. As far as younger audiences are concerned, memory tends to be more accessible in terms of literary

forms than history. The heroic image of Lakshmibai as a warrior remains prominent in popular consciousness, while the criticism from historians has remained within the realm of academic discourse. Yet, this article suggests that there is no necessary opposition between history and memory.

It can be argued that both history and memory play their parts in their different and unique own ways. Nationalist poetry proved vital during the colonial era, specially during the post 1920's mass movement phase of Indian freedom struggle, and it united people around a common cause of national freedom from the Britishers. Meanwhile, history and historians gives us the means to reflect critically on the past. In summary, the timeless relevance of Lakshmibai illustrates that youth nationalism is influenced not only by learning history but also through culture. Poems such as "Jhansi ki Rani" have played and will keep playing their intended roles in passing on the values of bravery, self-sacrifice, and resistance. However, reading up on history will help maintain a sense of nuance and correctness.

Consciousness Among Youth and Politics of Representation

Lakshmibai as a youth figure is not merely coincidental but the result of deliberate cultural and educational policies and practices. It is well known that nationalist movements depend on symbolic figures who embody certain ideals beyond history and context, allowing for multiple representations. The continuing use of Lakshmibai in postcolonial India serves precisely such a purpose. Appearing not only in curricula and in films, Lakshmibai serves to remind Indians of certain values such as sacrifice in the name of nationalism.

There are also some serious implications for the politics of representation in these choices of symbols. Namely, the focus on Lakshmibai often allows for an exclusion of other figures, especially women and other marginalized actors. Consequently, this selective memory not only distorts our view of the past but also determine conceptions. In other words, it shapes the way young people imagine the nation and their place in it. On the other hand, one must realize that these symbolic figures continue to serve important affective purposes. Their main function lies in providing motivation and continuity from the past to today's world.

Conclusion

Rani Lakshmibai stands at the intersection of memory and history, imagination and archives. Through her poem, Subhadra Kumari Chauhan immortalized her into an eternal queen, who symbolises the bravery of youth, which became a source of motivation for generations to come, both during and after the era of freedom struggle period. However, historical research on Lakshmibai, specifically the works by Tapti Roy, has shed light on the difficulties associated with her actions and activities in 1857. Instead of treating these accounts as opposed to each other, this article suggests looking at them as complementing each other. Whereas nationalist memory contributes to the formation of emotional connections and collective identity, historical research promotes critical thinking and analysis. By exploring these two accounts of the past, we can see that there is nothing fixed and static about it; rather, it is constantly rewritten. For young people, in particular, dealing with both forms of account is vital as they enable one to use their inspirational value without being naive in respect of what really happened.

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An Empirical Analysis of Value-Based Education and Its Role in Promoting Holistic Development in India

Dr. Arpita Singh*

Abstract

The value of education has become an essential issue in the modern school research, especially in the environment where education is expected to provide not only an economically efficient tool, but also a moral compass, societal coherence, and self-wellbeing. The current educational reforms in India have clearly promoted the use of education to deliver holistic growth among the learners. It is against this backdrop that the current study uses a document-based empirical research approach to understand how value-based education can help in a holistic development based on empirical research studies by peers and national policy documents. The study employs a mixed design, combining a systematic review of published empirical research on the topic in 2015-2025 with policy analysis to address the research articles and policy texts as sources of empirical data and apply them to the topic with the help of a thematic synthesis. The completed dataset was consisted of 68 peer reviewed empirical studies and six national level policy and curriculum documents. Results show that there is a high level of overlap between the global research trends and Indian policy priorities in their focus on the cognitive, affective, social, moral, and ethical aspects of learner development. Simultaneously, consistent gaps are also determined in the operationalization, evaluation, and institutionalization of value-based education. The research adds to the literature by providing empirical understanding of the value-based education as a mechanism of holistic development in the Indian context and provides implications in terms of curriculum development, teacher education, and future research.

Keywords: value-based education, holistic development, document-based empirical research, education policy, India

1. Introduction

The education systems across the globe are finding themselves under more intricate social, ethical, and developmental pressures. With technology racing ahead, economies facing uncertainty, widening social gaps, environmental crises, and a growing erosion of trust in society, people are rethinking what education is really for. Increasingly, scholars argue that schools should do more than prepare students for exams or jobs. Education, they suggest, must also nurture values, attitudes, and ways of being that help young people grow into responsible citizens and lead meaningful, fulfilling lives (UNESCO, 2015; Nucci et al., 2014).

Around the world, education is seen not just as a way to gain knowledge, but as a powerful tool for strengthening democracy, building social unity, and supporting sustainable development. Modern approaches to global citizenship and sustainability in education emphasize values such as empathy, equity, responsibility, diversity, respect, and ethical thinking in economic life. Research shows that when schools nurture these values, students benefit socially, emotionally, and civically, alongside their academic growth (Durlak et al., 2011; Taylor et al., 2017).

This vision isn't new. Great educators like Gandhi, Tagore, and Sri Aurobindo long argued that education should shape character, deepen self-understanding, and foster responsibility toward society. Yet today, many schools struggle to uphold these ideals. The pressure of exams and rote memorization often overshadows the teaching of values. Studies suggest that in India, value

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education is rarely embedded systematically into the school process, making it difficult to practice meaningfully (Singh & Sarangapani, 2015; Kumar & Sarangapani, 2018).

Recognizing this gap, the National Education Policy 2020 draws a clear line between mere academic learning and true holistic development—an approach that embraces thinking, feeling, ethics, and community as essential parts of education.

Guthrie et al. (2018) and Rao et al. (2017) confirm through Indian and international researches, that the teaching of values and social emotional skills contributes to students' well, being, moral judgement and study habits.

2. Conceptual Framework: Value-Based Education and Holistic Development

Value-based education is an approach where teachers actively encourage students to grow not only in academics but also in moral, ethical, civic, and social dimensions. Rather than treating values as something extra or irrelevant, this framework weaves moral reasoning, emotional intelligence, and social responsibility into everyday teaching and learning (Lovat et al., 2018; Berkowitz & Bier, 2005).

Holistic development is often described as growth across multiple dimensions—cognitive, emotional, social, moral, and affective. Research shows these areas are deeply interconnected: when students mature morally and emotionally, their motivation, engagement, and even academic performance improve (Nucci et al., 2014; Tirri & Kuusisto, 2016). This is why educators who embrace holistic learning emphasize integrated teaching methods rather than fragmented instruction.

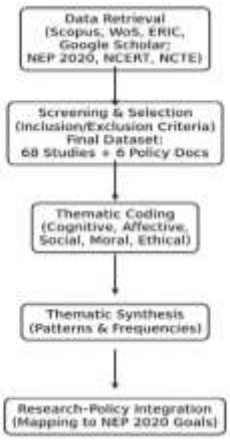
Global frameworks on social and emotional learning (SEL) further reinforce this idea. Large-scale studies confirm that SEL and values-based interventions boost socio-emotional skills, enhance academic achievement, and create healthier classroom environments (Durlak et al., 2011; Cipriano et al., 2023). These findings challenge the old belief that value education competes with academic learning—in fact, they show the two go hand in hand.

In India, this perspective is steadily shaping curriculum and teacher education. NCERT highlights hands-on learning and reflective practices, while NCTE emphasizes ethical professionalism and social commitment among teachers. Research on teachers' moral competence and ethical sensitivity also shows that these qualities are essential for successfully implementing value-based pedagogy (Kuusisto et al., 2019; Oser & Althof, 2019).

3. Methodology: Document-Based Empirical Design

The present study adopts a mixed document-based empirical research design combining systematic literature review and policy analysis. Document-based research is well established in educational and policy studies, particularly where the objective is to synthesize existing empirical evidence and examine alignment between research findings and policy frameworks (Bowen, 2009). In this approach, documents are treated as empirical data and analyzed using systematic and transparent procedures.

Document-Based Empirical Research Process: -



Data Sources

Two categories of documents constituted the empirical dataset-

The first group included peer-reviewed empirical research papers that were published between 2015 and 2025. The search of the literature used Scopus, Web of Science, ERIC, and Google Scholar search engines with keywords such as value, value-based education, moral education, character education, holistic development, and social-emotional learning. A requirement for the inclusion required that the selected articles should describe empirical results in relation to values and learner development; conceptual articles, opinion articles, and non-peer-reviewed sources were exempted. As a result, 68 peer-reviewed articles and studies that fit the given criteria were selected to compose the empirical dataset. This type of document synthesis is consistent with the previous significant-scale reviews of the research on moral, character, and values education (Brown et al., 2023; Chen et al., 2023).

The second set included a collection of national policy and curriculum documents that have a direct bearing on India's value-based education. These documents include the National Education Policy 2020, curriculum frameworks issued by NCERT, teacher education guidelines published by NCTE, etc. These artefacts have been selected not only for their authentic character but also for their core function in influencing the educational practice and reform.

Data Analysis

The thematic synthesis was used in the analytic process, which helps in identifying patterns of recurrence. The selected approach is in line with the current trends in systematic reviews of value-based and socio-emotional learning research (Mahoney et al., 2018; Jeynes, 2019). Further coding was organized into five higher-order areas, including cognitive, affective, social, moral, and ethical. By exploring the frequency, depth, and focus of thematic coverage between the two datasets, we mapped out convergences, divergences, and emerging gaps. Cross-validation from heterogeneous sources made the results more believable and solid.

4. Findings: Themes from Empirical Literature

The examination of the 68 peer-reviewed empirical studies found five overarching and intersecting thematic areas that value-based education can have on holistic development: moral-ethical reasoning, affective-emotional development, social responsibility, cognitive-ethical integration, and whole-school value cultures. Notably, these themes are in line with the modern educational issues in the Indian context, which gives the empirical evidence some contextual relevance.

First, **moral and ethical reasoning** became one of the major themes in a significant percentage of the included studies. Empirical data show that ethical dilemma discussions, moral reasoning tasks, and reflective dialogue pedagogical strategies can be very effective in promoting ethical sensitivity and judgment among learners (Berkowitz and Bier, 2015). In India, this realization carries deep significance. It touches on ethical decision-making, civic responsibility, and constitutional values—issues that often surface in policy debates and public discussions. Moral reasoning, in this sense, aligns closely with national priorities such as honesty, democratic participation, and maintaining social order.

Scholars have also placed strong emphasis on emotional and affective development. Value-oriented practices that highlight empathy, emotional awareness, respect, and self-management have been shown to improve students' well-being, reduce classroom conflict, and strengthen relationships (Durlak et al., 2017). These insights are particularly relevant in India, where classrooms are diverse—socially, economically, linguistically, and culturally. Challenges of inclusion, equity, and student well-being, central to today's education reforms, can be addressed more effectively through empathy-driven teaching.

Third, the question of social responsibility and citizenship education has emerged as a central concern for communities, underscoring the need for schools to prepare students not only for personal success but also for active, responsible participation in society. Empirical studies

consistently show that relevant values, as cooperation, social responsibility, and civic participation, have the potential to develop the pro-social behaviour and create an inclusive classroom atmosphere (Nucci et al., 2014). Within the Indian context, the emphasis on social responsibility and citizenship training is consistent with national requirements about social cohesion and pluralism, and the civic responsibilities that lie with the citizens of a democratic society.

Fourth, several studies concentrate on the integration of **cognition and ethics**. They show that incorporating ethical questions into the teaching and instruction of a subject enhances interest and critical thinking without having an impact on academic achievement (Schihalejev and Venesaar, 2017). This fact questions the widely held notion that there is a conflict between the Indian school, which places value on education and academic success.

Lastly, the **value culture of the entire school** turned out to be an essential facilitator. It indicates that values can only be internalized when ethical principles are embraced at all levels of the curriculum, pedagogy, teacher practices, and institutional practices (Lovat et al., 2018; Tirri, 2018). This observation addresses the disjointed value-education programs in India and explains why systemic, and not isolated, interventions are important.

Table: - Convergence Between Empirical Research Themes and NEP 2020 Goals -

Empirical Theme	**Key Findings from Reviewed Studies**	**Corresponding NEP 2020 Focus**
Moral & Ethical Reasoning	Enhanced ethical judgment and reflective thinking	Constitutional values and integrity
Affective & Emotional Development	Improved empathy and emotional regulation	Socio-emotional learning and well-being
Social Responsibility	Pro-social behavior and inclusivity	Democratic participation and social cohesion
Cognitive–Ethical Integration	Critical thinking integrated with values	Holistic and competency-based learning
Whole-School Value Culture	Sustained internalization of values	Integrated institutional culture

5. Policy Alignment Analysis

Analysis of Indian policy documents reveals strong alignment with empirical research on holistic development. Moral reasoning, empathy, creativity, and responsible citizenship are critical components of the new National Education Policy of 2020. The analyses presented by scholars at a global level, especially the synthesized literature of UNESCO (2017) and the Learning Policy Institute (2023), highlight the fact that systemic pedagogical and institutional mechanisms can be viewed as the most effective way of nurturing such holistic orientations. These are specifically different values such as constitutional morality, welcoming diversity, respect, scientific temper and safeguarding the environment.

The curriculum frameworks presented by NCERT have a high emphasis on experiential learning, inquiry-based pedagogy, and values that have universal applicability, being cross-disciplinary. To that effect, the NCTE came up with regulations that highlight the necessity to equip educators not only as moral exemplars but also as thoughtful practitioners and thus enabling them to create and provide the inclusive and value-rich learning environments.

A significant portion of the review is devoted to a comparative analysis of the empirical literature, which shows that the evidence base and policy intentions are substantially in line. Holistic development and integrative value strategies are anticipated by both traditions. However, the reality shows that policy intent often exceeds current implementation capabilities, particularly in the areas of teacher development and evaluation (Brown et al. Duckworth and Yeager, 2015; 2023).

6. Discussion: Convergences, Gaps, and Implications

The convergence between empirical research and national policy creates a strong foundation for advancing value-based education in India. Nonetheless, assessment of value-based outcomes remains a persistent challenge. Research on assessment of moral reasoning and socio-emotional competencies highlights the limitations of traditional examination systems and supports alternative approaches such as portfolios, scenario-based assessments, and reflective tools (**Bebeau & Thoma, 2016; Shavelson et al., 2019**).

Strengthening Assessment of Value-Based and Holistic Outcomes

A major limitation identified across the literature and policy analysis is the absence of robust, context-sensitive assessment frameworks for values and holistic development. Traditional examination-oriented assessment systems prevalent in India are ill-suited to capturing ethical reasoning, empathy, and social responsibility.

Drawing on the reviewed empirical studies, the following **alternative assessment models** emerge as viable options:

- **Portfolio-based assessment**, documenting reflective journals, community engagement, and ethical reasoning tasks
- **Scenario-based ethical assessments**, where learners respond to contextual moral dilemmas
- **Rubric-based observation tools**, capturing socio-emotional and collaborative behaviors
- **Narrative and self-assessment frameworks**, encouraging learner reflexivity

These models align with international best practices and can be adapted to Indian classrooms without reducing values to simplistic metrics.

Implications for Teacher Education: Evidence-Based Training Modules

The findings underscore the central role of teachers in mediating value-based education. According to the recurrent strategies found in the 68 studies, the following teacher training modules are suggested to be used in the pre-service and in-service teacher training program:

1. Pedagogy, Ethical Dilemma Discussion.

   Educating teachers on how to prepare and arrange structured ethical discussions as an aspect of subject matter.

2. Compassionate Pedagogy and Non-Exclusive Practices.

   Perspective-taking, culturally responsive teaching and socio-emotional learning module.

3. Reflective Teaching and Value Modelling.

   Teachers are encouraged to have a critical reflection on their professional ethics and values.

4. Value Integration on a Whole-School level.

   Training teachers to be part of institutional cultures which constantly affirm values in curriculum and co-curricular programs.

These modules need to be introduced into teacher-education curricula to enhance the effective actualization of policy dreams addressing the holism of development.

7. Conclusion

The empirically based, document-based research confirms the fact that full-fledged evidence as regards value-based education and a holistic development could be generated without primary fieldwork. The research explains the mechanism of value-based education by conducting a systematic synthesis of other available empirical studies and national policy documents in explaining how the system of educating the Indian education system can support the holistic development of the Indian education system.

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Impact of Behavior Change Models on Physical Health

Dr. Akhlaque Ahmad*

Abstract:

Physical health is profoundly influenced by behavioural factors that determine individuals' lifestyle choices and long-term health outcomes. Behaviour change models provide evidence-based frameworks for understanding and promoting healthy behaviours by addressing the psychological mechanisms underlying behaviour modification. The present study examined the impact of behavior change models on physical health by investigating the influence of self-efficacy, goal setting, and behavioural intention on physical health outcomes. A quantitative, cross-sectional research design was employed, and primary data were collected from 300 adults through purposive sampling using a structured questionnaire. Physical health was assessed using indicators of physical activity, healthy lifestyle behaviours, and perceived physical health. 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 revealed significant positive relationships between self-efficacy, goal setting, behavioural intention, and physical health. The regression analysis indicated that self-efficacy was the strongest predictor of physical health, followed by behavioural intention and goal setting. Together, these variables explained a substantial proportion of the variance in physical health outcomes, confirming the effectiveness of behaviour change models in promoting healthy lifestyle practices. The study concludes that strengthening individuals' confidence, motivation, and goal-directed behaviours can enhance physical health and support sustainable lifestyle modification. These findings reinforce the importance of incorporating behaviour change principles into health promotion programmes and preventive healthcare interventions.

Keywords: Behavior Change Models; Self-Efficacy; Goal Setting; Behavioural Intention; Physical Health

Introduction

Physical health is a fundamental determinant of individual well-being, productivity, and quality of life. Regular physical activity, balanced nutrition, adequate sleep, avoidance of harmful substances, and adherence to medical recommendations contribute significantly to preventing chronic diseases and promoting healthy ageing. Despite widespread awareness of these benefits, many individuals continue to engage in unhealthy behaviours such as physical inactivity, poor dietary habits, smoking, excessive alcohol consumption, and non-adherence to prescribed treatments. These behaviours contribute substantially to the global burden of non-communicable diseases (NCDs), including cardiovascular diseases, diabetes, obesity, hypertension, and certain forms of cancer.

According to the **World Health Organization (2022),** non-communicable diseases account for approximately 74% of all global deaths, with unhealthy lifestyle behaviours representing major modifiable risk factors. Consequently, improving health behaviours has become a central objective of public health programmes and preventive healthcare strategies worldwide. Rather than focusing solely on disease treatment, healthcare systems increasingly emphasize health promotion and behavioural modification to improve long-term physical health outcomes.

Behaviour change models have emerged as valuable theoretical frameworks for understanding why individuals adopt, maintain, or discontinue health-related behaviours. These models explain the cognitive, motivational, emotional, and social processes that influence behavioural decisions and provide structured approaches for designing effective health interventions.

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Over the past several decades, numerous behaviour change theories have been developed, including the Health Belief Model, Social Cognitive Theory, the Theory of Planned Behavior, the Transtheoretical Model of Change, and the Behaviour Change Wheel. Although these theories differ in their conceptual foundations, they share the common objective of promoting sustainable health behaviour through psychological and behavioural mechanisms.

One of the most influential determinants of successful behaviour change is self-efficacy, defined as an individual's confidence in their ability to perform specific behaviours successfully. Individuals with higher levels of self-efficacy are generally more likely to initiate healthy behaviours, overcome obstacles, and maintain behavioural changes over time. Similarly, goal setting provides clear direction and motivation by helping individuals establish measurable and achievable health objectives. Behavioural intention, representing an individual's readiness to perform a behaviour, has also been identified as an important predictor of actual behavioural performance.

The application of behaviour change models has expanded considerably across healthcare settings. Interventions based on these models have demonstrated effectiveness in promoting physical activity, healthy eating, smoking cessation, medication adherence, weight management, and chronic disease self-management. Healthcare professionals increasingly integrate behaviour change principles into patient education, rehabilitation programmes, community health initiatives, and preventive healthcare services to improve health outcomes.

The growing prevalence of lifestyle-related diseases further underscores the importance of behaviour change interventions. Many chronic conditions develop gradually through long-term behavioural patterns, making sustainable lifestyle modification an essential component of disease prevention and management. Behaviour change models provide healthcare professionals with evidence-based strategies to encourage healthier choices while addressing psychological barriers that often hinder behavioural change.

Although extensive literature supports the effectiveness of behaviour change interventions, many previous studies have focused on individual theoretical models or specific health behaviours. Comparatively fewer investigations have examined the combined contribution of self-efficacy, goal setting, and behavioural intention to overall physical health. Understanding these relationships is important because behaviour change is a multidimensional process influenced by several interacting psychological factors rather than a single determinant.

Therefore, the present study examines the impact of behavior change models on physical health by investigating the influence of self-efficacy, goal setting, and behavioural intention. The findings are expected to contribute to behavioural medicine, health psychology, and public health by providing empirical evidence regarding the role of behaviour change principles in improving physical health outcomes.

Literature Review

Behavior Change Models and Health Promotion

Behaviour change models provide theoretical frameworks that explain how individuals initiate, maintain, and sustain health-related behaviours. These models assist healthcare professionals in understanding the psychological mechanisms underlying behavioural decisions and in designing interventions that promote healthier lifestyles. Over the past five decades, behaviour change theories have become increasingly important within health psychology, preventive medicine, and public health because many chronic diseases are largely influenced by modifiable behavioural factors.

Among the earliest and most influential models is the Health Belief Model, developed to explain health-related decision-making by considering individuals' perceptions of susceptibility, severity, benefits, and barriers. The model proposes that people are more likely to adopt preventive health behaviours when they perceive themselves to be at risk of illness and believe that behavioural change will reduce this risk. **Rosenstock (1974)** emphasized that health beliefs significantly influence preventive behaviours, making the model widely applicable to vaccination, screening, disease prevention, and health education programmes.

Another highly influential framework is Bandura's Social Cognitive Theory, which emphasizes reciprocal interactions among personal factors, behaviour, and environmental influences. Central to this theory is the concept of self-efficacy, referring to individuals' confidence in their ability to perform specific behaviours successfully. **Bandura (1997)** argued that self-efficacy influences behavioural initiation, persistence, resilience, and long-term maintenance, making it one of the strongest psychological determinants of health behaviour.

The Theory of Planned Behavior, proposed by **Ajzen (1991),** further expanded understanding of health behaviour by identifying behavioural intention as the immediate predictor of action. According to the theory, intentions are influenced by attitudes toward behaviour, subjective norms, and perceived behavioural control. Numerous studies have demonstrated that stronger behavioural intentions are associated with increased participation in physical activity, healthy eating, medication adherence, and preventive healthcare behaviours.

The Transtheoretical Model developed by **Prochaska and DiClemente (1983)** conceptualizes behaviour change as a gradual process involving progression through five stages: precontemplation, contemplation, preparation, action, and maintenance. The model recognizes that behavioural change rarely occurs immediately and emphasizes individualized interventions appropriate to each stage of readiness. This framework has been widely applied to smoking cessation, exercise promotion, dietary modification, and addiction treatment.

More recently, **Michie, van Stralen, and West (2011)** introduced the Behaviour Change Wheel, an integrative framework incorporating multiple behaviour change theories. The model proposes that behaviour results from interactions among capability, opportunity, and motivation (COM-B model), providing healthcare professionals with practical guidance for designing effective behaviour change interventions across diverse healthcare settings.

Self-Efficacy and Physical Health

Self-efficacy has consistently emerged as one of the strongest predictors of successful health behaviour change. Individuals who believe they possess the ability to overcome challenges and perform healthy behaviours are more likely to engage in regular exercise, maintain healthy dietary habits, adhere to medication, and avoid unhealthy behaviours such as smoking and excessive alcohol consumption.

Bandura (1997) argued that self-efficacy influences behavioural persistence by enabling individuals to remain committed despite obstacles and temporary setbacks. Supporting this perspective, **McAuley and Blissmer (2000)** reported that higher self-efficacy significantly predicts greater participation in physical activity among adults and older populations. Increased confidence in one's ability to exercise regularly contributes to sustained behavioural change and improved physical health over time.

Goal Setting and Physical Health

Goal setting is a well-established behavioural strategy that encourages individuals to adopt and maintain healthier lifestyles by providing clear direction, motivation, and measurable targets. Goals enhance self-regulation by enabling individuals to monitor progress, evaluate performance, and modify behaviours when necessary. In health promotion programmes, goal setting is widely used to encourage regular physical activity, healthy eating, weight management, medication adherence, and rehabilitation following illness or injury.

Locke and Latham (2002) proposed that specific and challenging goals produce better performance than vague or easily attainable goals because they increase effort, persistence, and commitment. Their goal-setting theory has been extensively applied in healthcare to promote sustained behavioural change. Individuals who establish realistic and measurable health goals are more likely to maintain exercise routines, adhere to dietary recommendations, and engage consistently in preventive health behaviours.

Supporting this perspective, **Shilts, Horowitz, and Townsend (2004)** reviewed nutrition education interventions and concluded that structured goal-setting strategies significantly improved

dietary behaviour and self-management among participants. Goal setting also promotes personal accountability and strengthens intrinsic motivation, both of which contribute to healthier lifestyle choices and improved physical health.

Behavioural Intention and Physical Health

Behavioural intention refers to an individual's readiness or willingness to perform a specific behaviour and is considered the most immediate determinant of actual behaviour in the Theory of Planned Behavior. According to **Ajzen (1991),** individuals who possess stronger intentions to perform healthy behaviours are more likely to translate those intentions into action, particularly when they perceive behavioural control and receive social support.

Research has consistently demonstrated positive associations between behavioural intention and participation in physical activity, healthy dietary practices, smoking cessation, and medication adherence. **McEachan et al. (2011),** through a comprehensive meta-analysis, reported that behavioural intention significantly predicts health-related behaviours across diverse populations, although the strength of the relationship varies depending on environmental and individual factors. Their findings suggest that strengthening behavioural intentions through education, motivation, and supportive environments can improve health behaviour adoption and maintenance.

Behavior Change Models and Physical Health Outcomes

Behaviour change models have been successfully applied across numerous healthcare contexts to improve physical health outcomes. Interventions grounded in behavioural theory have demonstrated effectiveness in increasing physical activity, reducing obesity, improving dietary habits, enhancing medication adherence, preventing chronic diseases, and supporting rehabilitation programmes. The application of these models enables healthcare professionals to design interventions that address psychological determinants of behaviour rather than relying solely on health education.

Michie et al. (2011) emphasized that effective behaviour change interventions should combine multiple evidence-based techniques, including goal setting, self-monitoring, feedback, social support, and reinforcement. Their Behaviour Change Wheel provides a systematic framework for selecting interventions that address capability, opportunity, and motivation simultaneously, thereby increasing the likelihood of sustained behavioural change.

The World Health Organization (2022) highlighted that promoting healthy behaviours remains one of the most effective strategies for preventing non-communicable diseases and improving population health. Integrating behaviour change principles into healthcare services enables healthcare professionals to encourage long-term lifestyle modification, improve disease prevention, and reduce healthcare costs associated with preventable illnesses.

Research Gap

Although extensive research has demonstrated the effectiveness of individual behaviour change theories, several important gaps remain. First, many previous studies have evaluated the Health Belief Model, Social Cognitive Theory, Theory of Planned Behavior, or Transtheoretical Model independently rather than examining common behavioural mechanisms shared across these theories. Second, much of the existing literature has focused on specific health behaviours such as smoking cessation, physical activity, or dietary modification instead of investigating overall physical health as a broader outcome. Third, relatively limited research has simultaneously examined the influence of self-efficacy, goal setting, and behavioural intention on physical health within a single empirical framework. Finally, most empirical evidence originates from developed countries, while fewer studies have investigated behaviour change interventions among populations in developing nations where cultural, socioeconomic, and healthcare factors may influence health behaviours differently. Addressing these gaps may contribute to a more comprehensive understanding of how behaviour change mechanisms improve physical health and inform the design of more effective health promotion programmes.

Research Objectives

1. To examine the impact of behavior change models on physical health.
2. To assess the influence of self-efficacy, goal setting, and behavioural intention on physical health.

Hypotheses

H1: Behavior change models have a significant positive impact on physical health.

H2: Self-efficacy, goal setting, and behavioural intention significantly predict physical health.

Methodology

The present study adopted a quantitative, cross-sectional research design to examine the impact of behavior change models on physical health. Primary data were collected from 300 adults aged 18 years and above using purposive sampling. A structured questionnaire measured self-efficacy, goal setting, behavioural intention, and physical health. Physical health was assessed through indicators of physical activity, healthy lifestyle behaviours, and perceived physical health. Data were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics summarized respondent characteristics, Cronbach's alpha assessed the reliability of the measurement scales, Pearson's correlation examined relationships among the study variables, and multiple linear regression determined the influence of self-efficacy, goal setting, and behavioural intention on physical health. Statistical significance was established at $p < 0.05$.

Data Analysis

Descriptive Statistics

A total of 300 completed questionnaires were included in the analysis. Respondents generally reported favourable health behaviours, moderate to high levels of self-efficacy, and positive behavioural intentions regarding healthy lifestyles. The average physical health score indicated that participants maintained relatively healthy lifestyles while recognizing opportunities for further improvement.

Table 1 : Descriptive Statistics

Variable	Mean	Standard Deviation
Self-efficacy	3.88	0.63
Goal Setting	3.74	0.69
Behavioural Intention	3.95	0.58
Physical Health	3.82	0.61

Interpretation: The descriptive findings indicate that respondents demonstrated favourable perceptions regarding behaviour change practices and reported relatively positive physical health outcomes.

Reliability Analysis

The reliability of the physical health scale was evaluated using Cronbach's alpha.

Table 2 : Reliability Analysis

Scale	Cronbach's Alpha
Physical Health	0.91

Interpretation: The Cronbach's alpha coefficient exceeded the recommended threshold of 0.70, indicating excellent internal consistency and confirming the reliability of the measurement instrument.

Correlation Analysis

Pearson's correlation analysis was conducted to examine relationships among the study variables.

Table 3 : Correlation Matrix

Variables	1	2	3	4
1. Self-efficacy	1			
2. Goal Setting	0.49**	1		
3. Behavioural Intention	0.53**	0.47**	1	
4. Physical Health	0.66**	0.61**	0.64**	1

Note: p < 0.01.

Interpretation: The correlation analysis revealed significant positive relationships between all dimensions of behaviour change and physical health. Self-efficacy demonstrated the strongest association with physical health ($r = 0.66$, $p < 0.01$), followed by behavioural intention ($r = 0.64$, $p < 0.01$) and goal setting ($r = 0.61$, $p < 0.01$). These findings indicate that stronger behaviour change mechanisms are associated with better physical health outcomes.

Multiple Regression Analysis

Multiple linear regression analysis was conducted to determine the predictive influence of self-efficacy, goal setting, and behavioural intention on physical health.

Table 4 : Multiple Regression Analysis

Predictor	β	t-value	p-value
Self-efficacy	0.36	7.48	<0.001
Goal Setting	0.28	5.82	<0.001
Behavioural Intention	0.31	6.43	<0.001

Model Summary: $R^2 = 0.67$; Adjusted $R^2 = 0.66$; $F = 199.36$; $p < 0.001$.

Interpretation: The regression model was statistically significant, explaining 67% of the variance in physical health. Self-efficacy emerged as the strongest predictor of physical health ($\beta = 0.36$, $p < 0.001$), followed by behavioural intention ($\beta = 0.31$, $p < 0.001$) and goal setting ($\beta = 0.28$, $p < 0.001$). These findings indicate that individuals with greater confidence in their ability to perform healthy behaviours, stronger intentions to maintain those behaviours, and clearly defined health goals are more likely to report better physical health.

Hypothesis Testing

Table 5 : Hypothesis Testing

Hypothesis	Decision
H1: Behavior change models have a significant positive impact on physical health.	Accepted
H2: Self-efficacy, goal setting, and behavioural intention significantly predict physical health.	Accepted

Discussion

The present study examined the impact of behavior change models on physical health by investigating the influence of self-efficacy, goal setting, and behavioural intention. The findings demonstrate that all three variables significantly contribute to physical health, supporting the proposition that psychological and behavioural mechanisms play an essential role in promoting healthy lifestyles and preventing disease.

Among the three predictors, self-efficacy emerged as the strongest determinant of physical health. Individuals with greater confidence in their ability to perform healthy behaviours were more likely to report regular physical activity, healthier lifestyle practices, and better perceived physical health. This finding supports **Bandura's (1997)** Social Cognitive Theory, which identifies self-efficacy as a central determinant of behavioural initiation, persistence, and maintenance. Individuals who believe they can successfully perform health-promoting behaviours are more likely to overcome barriers, remain motivated during setbacks, and sustain healthy habits over time. The present findings

are also consistent with **McAuley and Blissmer (2000),** who reported that self-efficacy is a significant predictor of long-term participation in physical activity among adults.

Behavioural intention also demonstrated a significant positive influence on physical health. Participants with stronger intentions to engage in healthy behaviours reported better physical health outcomes, suggesting that motivation and readiness to act play important roles in behaviour adoption. This finding supports the Theory of Planned Behavior proposed by **Ajzen (1991),** which argues that behavioural intention is the most immediate predictor of actual behaviour. The results are further supported by the meta-analysis conducted by **McEachan et al. (2011),** which concluded that behavioural intention significantly predicts a wide range of health-related behaviours, including physical activity, dietary practices, and preventive health actions.

Goal setting was also found to significantly predict physical health. Individuals who established clear, realistic, and measurable health goals reported healthier lifestyles and greater engagement in physical activity. Goal setting provides direction, enhances motivation, and encourages self-monitoring, enabling individuals to maintain behavioural changes over time. These findings are consistent with **Locke and Latham (2002),** who demonstrated that specific and challenging goals improve performance by increasing effort and persistence. **Shilts et al. (2004)** reported that structured goal-setting strategies significantly improve dietary behaviours and long-term health self-management.

Collectively, the findings reinforce the importance of behaviour change models in promoting physical health. Rather than relying solely on health education, these models recognize that sustainable behaviour change depends upon psychological readiness, motivation, confidence, and self-regulatory skills. The positive relationships observed among self-efficacy, goal setting, behavioural intention, and physical health suggest that interventions incorporating these psychological components are more likely to achieve lasting improvements in health behaviour.

The findings also support the Behaviour Change Wheel developed by **Michie et al. (2011),** which emphasizes that successful behaviour change requires addressing capability, opportunity, and motivation simultaneously. Healthcare professionals can apply these principles when designing interventions aimed at increasing physical activity, improving dietary habits, enhancing medication adherence, and preventing chronic diseases. By combining psychological support with practical behavioural strategies, healthcare systems can improve individual health outcomes while reducing the burden of lifestyle-related illnesses.

Conclusion

The present study examined the impact of behavior change models on physical health by evaluating the influence of self-efficacy, goal setting, and behavioural intention. The findings demonstrate that all three variables significantly contribute to improved physical health, confirming that psychological factors play a crucial role in encouraging healthy lifestyle behaviours.

Among the predictors, self-efficacy emerged as the strongest determinant of physical health, indicating that confidence in one's ability to perform healthy behaviours is fundamental to successful lifestyle modification. Behavioural intention and goal setting also contributed significantly, emphasizing the importance of motivation, planning, and commitment in sustaining positive health behaviours.

The findings highlight that behaviour change models offer valuable guidance for designing effective health promotion interventions. Healthcare professionals, public health practitioners, and policymakers can utilize these models to develop programmes that encourage regular physical activity, healthier dietary habits, adherence to medical advice, and long-term disease prevention. Incorporating behaviour change principles into routine healthcare may improve population health while reducing the prevalence of preventable chronic diseases.

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Women's Role in Indian History: A Study of Prominent Women Leaders

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Abstract

Women have played a crucial and transformative role in shaping Indian history, making significant contributions to social reform, political movements, and the struggle for independence. Despite historical narratives often focusing on male leaders, women have actively participated in nation-building and have challenged deeply rooted societal norms and gender inequalities.

This research article examines the contributions of prominent women leaders such as Rani Lakshmi Bai, Sarojini Naidu, Kasturba Gandhi, Indira Gandhi, and Aruna Asaf Ali. Through an analysis of their leadership and activism, the study highlights how these women not only contributed to India's independence but also influenced broader political, social, and cultural transformations.

Furthermore, the article explores how their efforts helped redefine the role of women in society, encouraging greater participation in public life and promoting gender equality. By bringing attention to their achievements, this study aims to provide a more inclusive understanding of Indian history and emphasize the enduring impact of women's leadership in shaping modern India.

Keywords: Women leaders, Indian history, empowerment, freedom struggle, social reform etc.

Introduction:

Indian history has traditionally been narrated with a primary focus on the contributions of male leaders, often overlooking the significant roles played by women. However, a closer examination reveals that women have been equally instrumental in shaping the social, political, and cultural fabric of the nation. From the ancient period to contemporary times, women in India have continuously challenged societal norms, broken barriers, and emerged as influential leaders in various fields.

In ancient India, women participated in intellectual and philosophical discourses, while in the medieval and colonial periods, many demonstrated courage and resilience in the face of social and political constraints. The 19th and 20th centuries, in particular, witnessed a remarkable rise in women's participation in social reform movements and the struggle for independence. Women not only supported these movements but also led them, contributing significantly to the transformation of Indian society.

This research article focuses on prominent women leaders who have left a lasting impact on Indian history. By examining their contributions, leadership styles, and the challenges they faced, the study seeks to highlight the critical role of women in nation-building. Furthermore, it emphasizes how their efforts have contributed to the creation of a more inclusive, equitable, and progressive society, thereby reshaping the narrative of Indian history.

Historical Background

The role and status of women in Indian history have undergone significant transformations across different periods. In ancient India, particularly during the Vedic period, women enjoyed a relatively high status in society. They were not only active participants in social and religious life but were also recognized for their intellectual contributions. Eminent women scholars such as Gargi Vachaknavi and Maitreyi engaged in philosophical debates and were well-versed in the Vedas and Upanishads. Women had access to education, could participate in religious rituals, and in some cases, even had the freedom to choose their life partners through practices like *swayamvara*. This period reflects a comparatively egalitarian social structure where women's voices held importance.

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However, in the later Vedic and medieval periods, the status of women began to decline due to various socio-cultural and political changes. The emergence of rigid patriarchal norms, the codification of laws such as those in the Manusmriti, and the increasing emphasis on caste and social hierarchy led to restrictions on women's freedom. Practices such as child marriage, purdah (veil system), and the denial of formal education became more prevalent. Women were largely confined to domestic roles, and their participation in public life was significantly reduced. Despite these limitations, some women like Razia Sultan and Rani Durgavati emerged as notable exceptions, demonstrating leadership and resilience in challenging circumstances.

The 19th century marked the beginning of a significant transformation in the status of women in India. This period witnessed the rise of social reform movements led by prominent reformers such as Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, and Jyotirao Phule, who advocated for women's rights and worked towards abolishing social evils like sati, child marriage, and gender inequality. Efforts were made to promote women's education and widow remarriage, which gradually improved women's social position. Women themselves began to participate more actively in these reform movements, marking the beginning of their public engagement.

The early 20th century and the period of the Indian freedom struggle further accelerated women's participation in public and political life. Under the leadership of Mahatma Gandhi, women were encouraged to join mass movements such as the Non-Cooperation Movement, Civil Disobedience Movement, and Quit India Movement. This period saw the emergence of prominent women leaders such as Sarojini Naidu, Kasturba Gandhi, Aruna Asaf Ali, and Vijaya Lakshmi Pandit, who played crucial roles in mobilizing the masses and challenging colonial authority. Their involvement not only contributed to India's independence but also helped redefine women's roles in society.

Thus, the 19th and 20th centuries represent a turning point in Indian history, as women transitioned from being largely confined to domestic spaces to becoming active participants in social reform and political movements. This transformation laid the foundation for the advancement of women's rights and empowerment in independent India. Although challenges and inequalities persist, the historical journey of women in India highlights their resilience, strength, and significant contribution to nation-building.

Key Women Leaders and Their Contributions:

1. Rani Lakshmi Bai (1828–1858)

Rani Lakshmi Bai of Jhansi was one of the most prominent and courageous leaders of the Revolt of 1857, often regarded as India's first war of independence. Born as Manikarnika in Varanasi, she was raised with a strong sense of independence and received training in martial arts, horse riding, and warfare—skills that later defined her leadership during times of conflict. After her marriage to Maharaja Gangadhar Rao of Jhansi, she became the queen of the princely state.

Following the death of her husband, the British East India Company, under the Doctrine of Lapse introduced by Lord Dalhousie, refused to recognize her adopted son as the rightful heir and annexed the state of Jhansi. This decision became a turning point in her life, compelling her to resist British authority. When the Revolt of 1857 broke out, Rani Lakshmi Bai took charge of the defense of Jhansi and organized her army with remarkable determination and strategic ability.

She displayed exceptional bravery on the battlefield, leading her troops against British forces and defending her kingdom with unwavering resolve. Her leadership not only inspired her soldiers but also became a symbol of resistance for the wider Indian population. Despite facing a well-equipped and organized British army, she fought valiantly until her death in 1858 near Gwalior.

Rani Lakshmi Bai's courage, patriotism, and sacrifice made her a legendary figure in Indian history. She remains an enduring symbol of resistance against colonial rule and a source of inspiration for generations, particularly in the context of women's empowerment and leadership in India.

2. Sarojini Naidu (1879–1949)

Sarojini Naidu, popularly known as the "Nightingale of India," was a distinguished poet, nationalist leader, and one of the most prominent women figures in India's freedom struggle. Born in Hyderabad, she was a gifted student and showed exceptional literary talent from a young age. Her poetry, rich in imagery and emotion, earned her national and international recognition, while also reflecting themes of patriotism and Indian cultural identity.

Beyond her literary achievements, Sarojini Naidu played a crucial role in the Indian National Movement. Inspired by leaders such as Mahatma Gandhi and Gopal Krishna Gokhale, she actively participated in major movements including the Non-Cooperation Movement and the Civil Disobedience Movement. She traveled extensively across the country, delivering powerful speeches to mobilize people, especially women, to join the struggle for independence.

Sarojini Naidu's leadership qualities were widely acknowledged, and in 1925, she became the first Indian woman to be elected as the President of the Indian National Congress. Her appointment marked a significant milestone in the political empowerment of women in India. After independence, she continued to serve the nation and became the first woman Governor of Uttar Pradesh, demonstrating her continued commitment to public service.

Her contributions extended beyond politics, as she also worked for social reform and advocated for women's rights, education, and equality. Sarojini Naidu's life and work exemplify the integration of art, politics, and social activism. She remains an enduring symbol of women's leadership and a source of inspiration in the history of India's struggle for freedom.

3. Kasturba Gandhi (1869–1944)

Kasturba Gandhi, fondly known as "Ba," was a prominent figure in India's freedom struggle and a dedicated social reformer. Born in Porbandar, Gujarat, she married Mohandas Karamchand Gandhi at a young age and gradually became an active participant in his political and social movements. Despite limited formal education, Kasturba demonstrated remarkable strength, leadership, and commitment to the cause of justice and equality.

She actively participated in several movements led by Mahatma Gandhi, including the Non-Cooperation Movement and the Civil Disobedience Movement. Kasturba played a crucial role in mobilizing women to participate in the freedom struggle, encouraging them to step out of traditional domestic roles and contribute to national causes. She also took part in protests against British policies and faced imprisonment multiple times for her involvement in these movements.

Apart from her role in the political struggle, Kasturba Gandhi was deeply committed to social reform. She worked tirelessly to improve the condition of women, particularly in rural areas, by promoting education, hygiene, and self-reliance. She supported campaigns against social evils such as untouchability and advocated for the upliftment of marginalized communities.

Kasturba's contributions were not limited to supporting Gandhi; she emerged as a leader in her own right, demonstrating resilience and moral courage. Her life reflects a blend of compassion, determination, and dedication to social justice. She remains an important symbol of women's participation in India's freedom movement and continues to inspire efforts toward social reform and empowerment.

4. Indira Gandhi (1917–1984)

Indira Gandhi, the first and only woman Prime Minister of India, was one of the most influential political leaders in modern Indian history. Born into the politically active Nehru family, she was the daughter of Jawaharlal Nehru, India's first Prime Minister. Growing up in an environment deeply involved in the freedom struggle, she developed a strong sense of political awareness and leadership from an early age. Her early exposure to nationalist activities shaped her future role in Indian politics.

Indira Gandhi became Prime Minister in 1966 and served for multiple terms, leaving a lasting impact on the political and economic landscape of India. Her leadership was marked by decisive actions during critical periods. One of her most notable achievements was her role in the

Green Revolution, which significantly increased agricultural production and helped India achieve self-sufficiency in food grains. This initiative was crucial in addressing food shortages and strengthening the country's economy.

Another defining moment of her leadership was the Indo-Pak War of 1971, which led to the creation of Bangladesh. Her strategic and political decisions during this period demonstrated strong leadership and enhanced India's position on the global stage. She was widely recognized for her ability to take firm decisions in times of crisis.

However, her tenure was not without controversy. The declaration of the Emergency (1975–1977) raised serious concerns about democratic rights and civil liberties in India. Despite criticism, this period remains a significant chapter in understanding her complex political legacy.

Indira Gandhi's leadership reflected a blend of strength, determination, and political acumen. As a woman leader in a predominantly male-dominated political sphere, she broke barriers and set an example for future generations. Her contributions played a vital role in shaping modern India and continue to influence Indian politics and governance.

5. Aruna Asaf Ali (1909–1996)

Aruna Asaf Ali was a prominent freedom fighter and an influential figure in India's struggle for independence. Born in Kalka (present-day Haryana), she received a modern education and later became actively involved in political and social activities. Her association with the Indian National Congress and her commitment to the nationalist cause placed her among the leading women revolutionaries of her time.

She is best remembered for her courageous role during the Quit India Movement of 1942. At a time when many senior leaders had been arrested by the British authorities, Aruna Asaf Ali boldly hoisted the Indian National Congress flag at the Gowalia Tank Maidan in Bombay (now Mumbai). This act of defiance became a powerful symbol of resistance and inspired countless Indians to continue the struggle for freedom. Following this event, she went underground to evade arrest and continued to organize and support revolutionary activities against British rule.

Aruna Asaf Ali's dedication to the independence movement was marked by resilience, bravery, and strong leadership. She endured imprisonment and faced numerous hardships but remained steadfast in her commitment to the cause of freedom. Her actions not only challenged colonial authority but also demonstrated the active and fearless participation of women in the nationalist movement.

After independence, she continued to contribute to public life by engaging in social and political work. She was also associated with socialist movements and worked towards the welfare of the people. In recognition of her contributions, she was awarded the Bharat Ratna, India's highest civilian honor, posthumously.

Aruna Asaf Ali remains an enduring symbol of courage, determination, and patriotism. Her life and legacy highlight the significant role played by women in India's freedom struggle and continue to inspire future generations.

Impact of Women Leaders on Indian Society

The contributions of women leaders in Indian history have had a profound and transformative impact on society. By actively participating in political movements, social reforms, and nation-building efforts, these women challenged deeply rooted patriarchal norms and redefined the role of women in public life. Their courage and determination not only broke traditional gender barriers but also demonstrated that women could lead with equal competence and authority as men.

One of the most significant impacts of these leaders was their role in challenging gender stereotypes. Figures such as Rani Lakshmi Bai, Sarojini Naidu, Kasturba Gandhi, Indira Gandhi, and Aruna Asaf Ali showed that women were capable of leadership in diverse fields, including warfare, politics, social reform, and governance. Their achievements helped shift societal perceptions and encouraged wider acceptance of women in leadership roles.

Furthermore, these women played a crucial role in inspiring future generations. Their participation in the freedom struggle and nation-building efforts motivated countless women to pursue education, engage in political activities, and contribute to social change. They became role models whose lives symbolized resilience, empowerment, and dedication to the nation.

Their efforts also contributed significantly to the promotion of gender equality. By advocating for women's rights, education, and social justice, they helped lay the foundation for a more inclusive society. Movements led or supported by these leaders addressed critical issues such as women's education, legal rights, and social status, thereby improving the overall condition of women in India.

In addition, their leadership had a lasting influence on India's democratic and social institutions. Women's increased participation in politics, governance, and civil society organizations can be traced back to the legacy of these pioneering leaders. Today, their contributions continue to inspire policies and initiatives aimed at empowering women and promoting equality.

In conclusion, the impact of women leaders on Indian society extends far beyond their individual achievements. They not only contributed to India's independence and development but also transformed the social fabric of the nation by promoting equality, empowerment, and progressive change.

Discussion

Despite their remarkable contributions, women leaders in Indian history have consistently faced significant challenges rooted in social, cultural, and institutional discrimination. Patriarchal norms and traditional gender roles often restricted women's access to education, political participation, and leadership opportunities. Even those who rose to prominence had to navigate societal skepticism, resistance, and, at times, active opposition to their authority.

Leaders such as Rani Lakshmi Bai, Sarojini Naidu, Kasturba Gandhi, Indira Gandhi, and Aruna Asaf Ali encountered numerous obstacles, including limited resources, gender bias, and societal expectations that confined women to domestic roles. Their journeys were not only struggles against colonial rule or political injustice but also against deeply entrenched gender inequalities. Nevertheless, their determination, resilience, and courage enabled them to overcome these barriers and emerge as influential figures in Indian history.

Over time, the participation of women in leadership roles has increased significantly, particularly in politics, education, and social reform movements. Independent India has witnessed the rise of many women leaders in various fields, reflecting gradual progress toward gender inclusion. Legal reforms, educational advancements, and increased awareness have further supported women's empowerment.

However, despite these advancements, gender inequality continues to persist in many areas of Indian society. Women still face challenges such as unequal pay, underrepresentation in political and corporate leadership, and social discrimination. Structural barriers and cultural biases continue to limit the full realization of gender equality.

In conclusion, while the contributions of women leaders have paved the way for progress and empowerment, the struggle for equality remains ongoing. Their legacy serves as both an inspiration and a reminder of the work that still needs to be done to achieve a truly inclusive and equitable society.

Conclusion

Women leaders have played a pivotal and transformative role in shaping the course of Indian history. From the intellectual contributions of ancient scholars to the courageous participation of women in the freedom struggle and their leadership in modern governance, their impact has been both profound and enduring. Figures such as Rani Lakshmi Bai, Sarojini Naidu, Kasturba Gandhi, Indira Gandhi, and Aruna Asaf Ali exemplify the strength, resilience, and leadership that women have consistently demonstrated across different historical periods.

Their contributions extended beyond political independence to include social reform, educational advancement, and the promotion of equality. By challenging traditional norms and asserting their presence in public life, these women not only contributed to national development but also redefined the role of women in Indian society. Their efforts laid the foundation for greater participation of women in various sectors, including politics, education, and social activism.

Moreover, studying the roles and achievements of women leaders is essential for constructing a more balanced and inclusive understanding of Indian history. It helps correct the historical underrepresentation of women and highlights the diversity of contributions that have shaped the nation. Their stories serve as powerful sources of inspiration for future generations, encouraging continued efforts toward empowerment and leadership.

In contemporary society, where gender equality remains an ongoing challenge, the legacy of these women leaders holds great relevance. Recognizing and honoring their contributions not only enriches historical knowledge but also reinforces the importance of inclusivity, equal opportunity, and social justice. Ultimately, their lives and achievements remind us that the progress of a nation is deeply connected to the empowerment and active participation of its women.

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Digital Trade and Its Contribution to India's Services Export Growth

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Abstract-

Digital trade has emerged as a transformative force in the global economy by enabling cross-border delivery of services through digital platforms, information networks, cloud technologies, and advanced communication systems. India has become one of the leading participants in global digital trade, particularly through its strong performance in information technology (IT), business process management, financial technology, software services, and digital-enabled professional services. This study examines the contribution of digital trade to India's services export growth during the period 2018–2025. The paper analyses how digitalisation has influenced India's export competitiveness, global market integration, employment generation, and participation in global value chains. The study evaluates the role of technological advancements, government initiatives such as Digital India, improvements in digital infrastructure, and evolving international trade agreements in supporting India's digital services ecosystem. It also examines export trends in services, highlighting the increasing importance of software services, telecommunications, financial services, and digitally delivered business solutions. The research adopts a descriptive and analytical approach using secondary data from government reports, international organisations, and academic studies. Findings indicate that digital trade has significantly strengthened India's services export performance by reducing geographical barriers, increasing access to international markets, and enabling Indian firms to provide high-value services globally. However, challenges related to cybersecurity, data governance, digital inequality, regulatory differences, and skill requirements continue to influence future growth prospects. The study concludes that digital trade will remain a key driver of India's services export expansion. Strengthening digital infrastructure, developing advanced technological skills, improving international digital trade cooperation, and ensuring secure data frameworks will be essential for sustaining India's competitive advantage in the global digital economy.

Keywords: Digital Trade; Services Exports; Digital Economy; Information Technology; Global Value Chains; India; Trade Liberalisation; Digital Transformation; International Business; Sustainable Development

The rapid advancement of digital technologies has fundamentally transformed the structure of international trade. Digital trade refers to the exchange of goods and services enabled or delivered through digital technologies, including software services, cloud computing, online platforms, electronic payments, artificial intelligence applications, and digitally delivered professional services. Unlike traditional trade, digital trade reduces geographical limitations and allows businesses to access global markets through digital networks. India has emerged as a major global hub for digital services exports due to its large pool of skilled professionals, established information technology industry, cost competitiveness, and expanding digital infrastructure. The services sector has become a major contributor to India's economic growth and foreign exchange earnings, with digital-enabled services forming an increasingly significant component of export performance.

The transformation of India's services exports has been closely associated with developments in information and communication technology (ICT). Indian IT companies provide software development, cloud services, cybersecurity solutions, consulting, business process outsourcing, and emerging technologies such as artificial intelligence and data analytics to global

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clients. The COVID-19 pandemic further accelerated digitalisation worldwide, increasing demand for remote services and strengthening India's position as a provider of digitally delivered solutions.

India's digital trade ecosystem expanded considerably due to improvements in internet connectivity, digital payment systems, startup growth, and government initiatives. Programmes such as Digital India, expansion of broadband infrastructure, and promotion of digital entrepreneurship created favourable conditions for digital economic activities. These developments supported not only large technology companies but also small businesses and independent professionals participating in global digital markets.

Agarwal (2021) studied the impact of digital transformation on India's services sector and examined how digital technologies influenced export competitiveness. The study found that improvements in digital infrastructure, skilled human resources, and technology adoption significantly enhanced India's services exports, particularly in information technology (IT) and IT-enabled services.[1] Banga (2019) examined the growing importance of digital trade for developing economies. The study found that digital technologies reduce transaction costs, improve market access, and create new export opportunities for service providers. However, it also emphasized that developing countries need stronger digital infrastructure and appropriate policy frameworks to fully benefit from digital trade.[2] Digital trade has also influenced India's participation in global value chains (GVCs). By enabling remote service delivery and cross-border collaboration, digital technologies have allowed Indian firms to integrate into international production networks without requiring physical presence in foreign markets. This has increased opportunities for employment, innovation, and entrepreneurship. Roelfsema, F., et. al., (2021) analysed international trade in commercial services using global input–output data. The study found that direct cross-border services exports have become increasingly important and that information technology services are a major contributor to the growth of digital trade. The authors also observed that emerging economies have expanded services exports alongside increasing integration into global trade.[3] Veeramani and Anam (2021) investigated the impact of the COVID-19 pandemic on India's services exports. The study found that although sectors such as travel and transport experienced substantial declines, India's digitally deliverable services remained relatively resilient. The authors concluded that India's comparative advantage in digitally delivered services created significant opportunities for post-pandemic export growth.[4]

However, digital trade expansion also presents several challenges. Issues related to data protection, cybersecurity threats, digital infrastructure gaps, regulatory differences between countries, and shortage of advanced technological skills require policy attention. The increasing importance of digital regulations in international trade negotiations has made data governance and digital cooperation critical components of trade policy. OECD (2021) examined the relationship between digital transformation and international trade. The report found that digitalisation has reduced barriers to cross-border service delivery, improved business efficiency, and increased participation of firms in global value chains. It also highlighted those digital regulations, data governance, and cybersecurity have become critical determinants of future trade competitiveness.[5] UNCTAD (2021) analysed global digital economy trends and their implications for developing countries. The report found that cross-border data flows and digital platforms have become major drivers of international trade. It further observed that countries investing in digital infrastructure and digital skills are better positioned to expand their services exports.[6]

India's engagement with Regional Trade Agreements (RTAs) has also gradually incorporated elements related to digital commerce, technology cooperation, and services liberalisation. Recent trade agreements with countries such as Australia and the United Arab Emirates include provisions supporting digital cooperation and service-sector opportunities.

This study examines the contribution of digital trade to India's services export growth during 2018–2025. It explores the relationship between digital transformation and export performance, evaluates policy developments, analyses recent trends, and identifies challenges

affecting future growth. The study argues that digital trade has become a strategic pillar of India's international economic engagement and sustainable development pathway.

Evolution of India's Regional Trade Agreements (RTAs)- India's approach towards Regional Trade Agreements (RTAs) has gradually evolved from cautious participation to strategic engagement aimed at improving market access, strengthening economic partnerships, and supporting services sector expansion. Traditionally, India focused on multilateral trade negotiations; however, changing global trade dynamics and the increasing importance of digital commerce encouraged greater involvement in bilateral and regional agreements.



During the early phase of RTA participation, India entered agreements primarily focused on tariff reduction and goods trade. Agreements with Asian economies, including the ASEAN–India Free Trade Agreement, provided a foundation for broader economic cooperation. Over time, India recognised that services trade, technology cooperation, and digital connectivity were becoming increasingly important components of international economic relations. Chakravarty and Ghosh (2022) studied digitalisation and services exports in emerging economies. The study found that countries with stronger digital capabilities experienced higher growth in digitally delivered services. The authors concluded that digital innovation improves productivity, export competitiveness, and participation in international markets.[7] Liu et al. (2022) examined the determinants of digital service trade exports across 71 countries. The study found that higher levels of digitalised services significantly increase digital service exports, especially in technologically advanced economies. The authors recommended strengthening digital infrastructure, innovation, and supporting industries to improve digital trade performance.[8] India adopted a more selective approach towards RTAs, focusing on agreements that provide opportunities for export growth, investment inflows, and technology collaboration. India decided not to join the Regional Comprehensive Economic Partnership (RCEP) in 2019 due to concerns regarding trade imbalances and the impact on domestic industries. Instead, it pursued bilateral agreements with countries offering strategic advantages.

The signing of the India–Mauritius Comprehensive Economic Cooperation and Partnership Agreement, India–United Arab Emirates Comprehensive Economic Partnership Agreement, and India–Australia Economic Cooperation and Trade Agreement marked important developments in India's trade policy. These agreements expanded cooperation in services, investment, technology, and digital commerce.

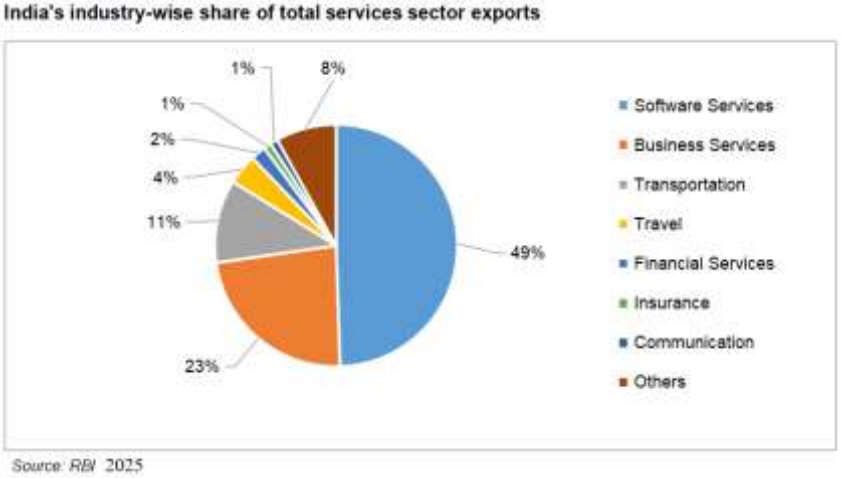
Digital trade has become an increasingly important element in recent trade negotiations. Modern RTAs increasingly include provisions related to electronic transactions, digital payments,

cybersecurity cooperation, cross-border data flows, and technology partnerships. Such provisions create opportunities for Indian IT firms, fintech companies, and digital service providers to access international markets more effectively. Kumar and Singh (2023) investigated India's digital economy and global competitiveness. The study found that government initiatives such as Digital India, expansion of broadband connectivity, and digital payment systems strengthened India's position in global services trade. However, the study identified cybersecurity, regulatory uncertainty, and shortages of advanced digital skills as major challenges.[9]

World Trade Organization (2023) examined the role of digital trade in promoting inclusive global economic growth. The report found that digital technologies facilitate cross-border service delivery, improve productivity, and strengthen participation in global value chains. It also noted that harmonised digital trade rules and international cooperation are increasingly important for sustaining services trade growth.[10]

India's ongoing negotiations with major economies, including the European Union and the United Kingdom, also reflect the growing importance of digital services and technology cooperation. These agreements are expected to support India's services exports by improving regulatory cooperation and market access.

Overall, India's RTA evolution demonstrates a shift from traditional goods-based agreements towards comprehensive partnerships covering services, investment, and digital trade. The effectiveness of these agreements will depend on India's ability to enhance digital competitiveness, support exporters, and create a favourable regulatory environment for international digital commerce.



6. Export Performance Analysis: India's Services Exports and Digital Trade (2018–2025)

India's services export sector has demonstrated strong growth during 2018–2025, with digital trade emerging as a major contributor. The expansion of information technology services, software exports, cloud computing, fintech solutions, and digitally delivered business services has strengthened India's position in the global services economy. UNCTAD (2024) assessed recent developments in the global digital economy. The report found that artificial intelligence, cloud computing, big data analytics, and digital platforms have become key drivers of international services trade. It emphasised that developing economies should strengthen digital infrastructure, innovation ecosystems, and regulatory frameworks to remain competitive.[11]

Mukherjee and Goyal (2024) analysed India's digital transformation and services export competitiveness. The study found that rapid adoption of digital technologies, expansion of Global Capability Centres (GCCs), and growth of technology startups significantly enhanced India's digital services exports. The authors recommended greater investment in artificial intelligence, cybersecurity, and digital skills to sustain future growth.[12]

The COVID-19 pandemic accelerated global digital adoption and increased demand for remote technology solutions. Indian companies benefited from this transformation due to their established IT capabilities, skilled workforce, and experience in delivering technology services to international clients.

Table-1

India's Total Services Export Performance (2018–2025)

(Approximate values in US$ billion)

Year	Services Exports (US$ billion)	Major Growth Drivers
2018–19	205	IT services, business outsourcing
2019–20	213	Digital solutions and consulting services
2020–21	206	Pandemic-related slowdown
2021–22	254	Remote services and digital transformation
2022–23	325	Cloud services, software exports, fintech
2023–24	341	AI, digital platforms, technology consulting
2024–25	~350+	Continued digital service expansion

Source: Compiled from RBI, WTO, and Government of India trade publications.

Table-2

Growth of India's Information Technology and Digital Services Exports (2018–2025)

Year	IT-BPM Exports	Key Developments
2018–19	181	Traditional IT outsourcing growth
2019–20	191	Cloud and enterprise solutions expansion
2020–21	194	Remote work technology demand
2021–22	227	Digital transformation projects
2022–23	245	AI, cybersecurity, cloud adoption
2023–24	254	Global technology service demand
2024–25	~260+	Advanced digital services growth

Sectoral Contribution to Digital Trade Growth

Table-3

Major Digital Service Export Segments

Sector	Contribution to Digital Trade
Information Technology Services	Software development, IT consulting, cloud solutions
Business Process Management	Remote business operations and outsourcing
FinTech Services	Digital payments, financial technology solutions
Artificial Intelligence Services	Data analytics, automation solutions
Cybersecurity Services	Digital security and risk management
Online Professional Services	Consulting, design, research, and education services

The data indicates that India's digital trade growth has been driven mainly by technology-intensive services. The shift from traditional outsourcing towards advanced digital solutions has improved India's export value and global competitiveness.

Digital Trade and Global Competitiveness- Digital trade has allowed Indian firms to participate in international markets without requiring physical expansion. Cloud platforms, online collaboration tools, and digital payment systems have reduced transaction barriers and enabled small and medium enterprises to access global customers. India's digital public infrastructure, including widespread digital payments and improved internet connectivity, has created an enabling environment for innovation and entrepreneurship. The growth of startups and technology-based businesses has further diversified India's digital export ecosystem.



However, challenges remain, including cybersecurity risks, data regulation issues, shortage of advanced digital skills, and unequal access to digital infrastructure. Addressing these concerns will be necessary to sustain India's digital trade growth.

Discussion- The analysis demonstrates that digital trade has become a significant driver of India's services export growth during 2018–2025. The expansion of digitally delivered services has strengthened India's position in the global services economy by enabling firms to overcome geographical barriers, access international markets, and provide high-value technology-based solutions. The growth of information technology services, cloud computing, artificial intelligence, fintech, and business process management reflects India's increasing competitiveness in the digital economy. One of the key findings is that India's existing strengths in skilled human resources, technological expertise, and established IT infrastructure have provided a strong foundation for digital trade expansion. The rapid adoption of digital technologies during and after the COVID-19 pandemic accelerated demand for remote services, benefiting Indian service providers. Digital transformation among global businesses increased opportunities for Indian firms in software development, consulting, cybersecurity, and digital platforms.

Government initiatives have also played an important role in supporting digital trade growth. Programmes such as Digital India, expansion of digital connectivity, digital payment infrastructure, and promotion of innovation ecosystems have improved the environment for technology-based businesses. These developments have contributed to greater participation of startups, entrepreneurs, and service providers in international markets.

However, digital trade growth also faces several structural challenges. Data protection regulations, cybersecurity threats, differences in international digital policies, and shortage of advanced technological skills may affect India's future competitiveness. While India has a large technology workforce, continuous investment in artificial intelligence, machine learning, cybersecurity, and emerging technologies is required to maintain its global position.

The role of Regional Trade Agreements has become increasingly important as digital provisions are incorporated into modern trade frameworks. Agreements involving digital cooperation, electronic commerce, and technology exchange can provide additional opportunities for Indian exporters. However, effective implementation and regulatory coordination remain essential for achieving meaningful benefits.

The sustainability of digital trade expansion depends on ensuring inclusive participation. Although digital exports generate high-value employment, unequal access to digital infrastructure and skills may limit opportunities for smaller firms and less-developed regions. Policies promoting

digital literacy, affordable connectivity, and support for small enterprises are necessary to make digital trade growth more inclusive.

Overall, digital trade has transformed India's services export landscape by creating new opportunities for innovation, employment, and international competitiveness. Future growth will depend on India's ability to combine technological advancement with strong regulatory frameworks, cybersecurity measures, and inclusive digital development policies.

Conclusion- Digital trade has emerged as a crucial component of India's services export growth and economic integration with the global economy. The period 2018–2025 demonstrates the growing importance of digital technologies in transforming traditional trade patterns and creating new opportunities for cross-border service delivery. India's strong performance in information technology, software services, business process management, and emerging digital sectors highlights the country's competitive advantage in the global digital economy.

The study finds that digital trade has significantly contributed to the expansion of India's services exports by reducing transaction costs, increasing market access, and enabling firms to deliver services internationally through digital platforms. The growth of cloud computing, artificial intelligence, fintech solutions, and remote business services has diversified India's export portfolio beyond conventional IT outsourcing.

India's digital ecosystem has been strengthened by government initiatives, technological innovation, and improvements in digital infrastructure. The development of digital public infrastructure, widespread digital payment systems, and increasing internet penetration have created favourable conditions for digital entrepreneurship and export-oriented services.

However, sustaining digital trade growth requires addressing several challenges. Cybersecurity risks, evolving international data regulations, digital skill shortages, and unequal access to technology remain important concerns. The benefits of digital trade must reach a wider section of society through investments in education, digital literacy, infrastructure development, and support for small and medium enterprises.

Future trade agreements should incorporate stronger digital cooperation frameworks covering electronic commerce, data governance, cybersecurity, and technology exchange. Such agreements can enhance India's access to global markets and strengthen its position as a leading provider of digital services.

In conclusion, digital trade represents a strategic opportunity for India to achieve sustainable services export growth. By combining technological innovation, skilled human resources, supportive policies, and inclusive digital development, India can further strengthen its role in the global digital economy and contribute to long-term economic development.

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