
Registration No. V-36244/2008-09

ISSN :- 2395-0390

The journal has been listed in 'UGC Approved List of Journals' with Journal No. – 48402 in previous list of UGC

JIFE Impact Factor – 5.21

Varanasi Management Review

A Multidisciplinary Quarterly International Peer Reviewed Referred Research Journal

Editor in Chief

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Associate Professor & Dean (R&D)
School of Management Sciences
Varanasi

Volume - XI

No. - 1

(January - March) 2025

Published by
Future Fact Society
Varanasi (U.P.) India

*Varanasi Management Review - A Multidisciplinary Quarterly International
Refereed Research Journal, Published by : Quarterly*

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Managing Editor
Avinash Kumar Gupta

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ISSN : 2395-0390

Printed by

Interface Computer, B 31/13-6, Malviya Kunj, Lanka, Varanasi-221005 (U.P.)

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

Editor



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Psychological Mechanisms and Impacts of Gender Discrimination: A Comprehensive Analysis

Dr. Md. Fakhra Shayan*

Abstract

Gender discrimination is a pervasive global issue embedded in historical, cultural, and social structures, affecting education, employment, healthcare, politics, and personal relationships. From a psychological perspective, it influences mental health, cognitive development, and social behavior, reinforcing systemic inequalities. This paper examines gender discrimination through psychological frameworks, including social learning theory, cognitive biases, stereotype threat, and social identity theory. It also reviews empirical research on its impact and discusses intervention strategies such as policy reforms, implicit bias training, and media representation. Understanding these psychological mechanisms is crucial for developing effective approaches to reducing bias, promoting inclusivity, and fostering gender equality.

Keywords: Psychological mechanisms, Cognitive biases, Mental health, Systemic inequality

Introduction

Gender discrimination is a global issue that influences various aspects of life, including education, employment, healthcare, politics, and personal relationships. It is deeply rooted in historical, cultural, and social structures, reinforcing biases that impact both men and women differently. From a psychological perspective, gender discrimination is not only a social injustice but also a factor that significantly affects mental health, cognitive development, and social behavior. Understanding the psychological mechanisms underlying gender discrimination is crucial to developing strategies for reducing bias and promoting equality. Gender discrimination refers to the unjust or prejudicial treatment of individuals based on their gender, which can include their sex, gender identity, gender expression, or sexual orientation. This type of discrimination can affect anyone, regardless of their gender, and can occur in various settings, including education, employment, healthcare, and social services. Gender discrimination is a deep-rooted social issue that affects individuals across various domains, including education, workplace, healthcare, and personal relationships. Despite significant legal and societal advancements, gender biases persist due to cultural conditioning, psychological mechanisms, and institutional barriers. From a psychological perspective, gender discrimination is not just a matter of social injustice but also a cognitive, emotional, and behavioral phenomenon that influences self-perception, mental health, and social structures. This chapter explores gender discrimination through psychological theories, empirical research, and strategies for promoting gender equality. This chapter explores gender discrimination from multiple psychological perspectives, including cognitive biases, social learning, identity formation, stereotype threat, and emotional consequences. Additionally, we examine empirical research and case studies to highlight the impact of gender discrimination and discuss intervention strategies for reducing bias.

Forms of Gender Discrimination

Gender discrimination can take many forms, including:

1. Sexism: Prejudice or discrimination based on a person's sex, often resulting in unequal treatment or opportunities.
2. Gender Stereotyping: Making assumptions or generalizations about individuals based on their gender, which can limit their opportunities or perpetuate inequality.

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3. Gender-Based Harassment: Unwelcome or unwarranted behavior, including verbal, nonverbal, or physical conduct, that is based on a person's gender.
4. Gender-Based Violence: Physical, emotional, or psychological harm inflicted on individuals based on their gender, including domestic violence, rape, and other forms of violence.
5. Discrimination Against LGBTQ+ Individuals: Prejudice or discrimination against individuals who identify as lesbian, gay, bisexual, transgender, queer, or other sexual orientations or gender identities.
6. Pregnancy Discrimination: Unfair treatment or discrimination against pregnant women or new mothers, including denial of benefits, leave, or job opportunities.
7. Pay Discrimination: Paying individuals differently based on their gender, often resulting in women earning less than men for similar work.

Gender discrimination can occur in various settings, including:

1. Workplace: Discrimination in hiring, promotion, pay, benefits, or job assignments.
2. Education: Discrimination in admissions, academic programs, or extracurricular activities.
3. Healthcare: Discrimination in access to healthcare services, treatment, or benefits.
4. Social Services: Discrimination in access to social services, including housing, welfare, or other benefits.
5. Community: Discrimination in public accommodations, including restaurants, stores, or other businesses.

Effects of Gender Discrimination

Gender discrimination can have severe and long-lasting effects on individuals, including:

1. Emotional Distress: Anxiety, depression, or post-traumatic stress disorder (PTSD).
2. Economic Instability: Loss of income, benefits, or job opportunities.
3. Social Isolation: Exclusion from social activities, relationships, or community engagement.
4. Physical Harm: Injury or illness resulting from gender-based violence or harassment.

Prevention and Response

Preventing and responding to gender discrimination requires a multifaceted approach, including:

1. Education and Awareness: Promoting understanding and awareness of gender discrimination.
2. Policy Development: Establishing and enforcing policies that prohibit gender discrimination.
3. Training and Capacity Building: Providing training and capacity-building programs to address gender discrimination.
4. Support Services: Offering support services, including counseling, advocacy, and legal assistance, to individuals who experience gender discrimination.

Theoretical Perspectives on Gender Discrimination

1. Social Learning Theory

Albert Bandura's Social Learning Theory (1977) posits that individuals acquire behaviors, attitudes, and values through observation and imitation of role models. Gender roles are learned through reinforcement by parents, teachers, peers, and media. From an early age, children are socialized into specific gender norms, which reinforce discriminatory attitudes. For example, studies have shown that parents often encourage boys to engage in competitive, leadership-oriented activities while expecting girls to be nurturing and cooperative (Bussey & Bandura, 1999). These early experiences create ingrained beliefs about gender roles that persist into adulthood and influence workplace dynamics, career choices, and social behaviors.

2. Cognitive Biases and Gender Stereotypes

Cognitive psychology emphasizes how mental shortcuts, or heuristics, contribute to gender bias. One of the most studied biases in gender discrimination is the Implicit Bias Theory (Greenwald et al., 1998), which suggests that individuals unconsciously associate men with competence and leadership and women with nurturing and domesticity. Stereotypes, such as the assumption that men are better at math and science while women excel in care giving professions, influence hiring

decisions, promotions, and educational opportunities. These biases often operate at an unconscious level, making them difficult to detect and correct (Nosek et al., 2002).

3. Social Identity Theory

Henri Tajfel and John Turner's Social Identity Theory (1979) explains how people categorize themselves into social groups, leading to in-group favoritism and out-group discrimination. Gender is one of the most salient social categories, and individuals tend to favor their own gender group while holding biases against others. Research suggests that men, especially those in positions of power, often exhibit in-group favoritism by mentoring and promoting other men (Eagly & Karau, 2002). This behavior perpetuates the cycle of gender discrimination in leadership and executive positions.

4. Role Congruity Theory

Eagly and Karau (2002) proposed the Role Congruity Theory, which argues that discrimination occurs when individuals violate traditional gender role expectations. For example, women in leadership positions are often perceived as less likable or competent because leadership traits (e.g., assertiveness, decisiveness) are stereotypically associated with men. Conversely, men in caregiving roles may face skepticism and social stigma.

5. Stereotype Threat and Performance

Stereotype Threat Theory (Steele & Aronson, 1995) explains how awareness of negative stereotypes can negatively impact an individual's performance. Research shows that when women are reminded of gender biases in STEM fields, their performance on math and science tests declines (Spencer et al., 1999). This phenomenon reinforces gender disparities in high-paying and prestigious careers.

Psychological Effects of Gender Discrimination

Gender discrimination can have severe and long-lasting effects on individuals, including:

1. **Anxiety and Depression:** Gender discrimination can lead to increased anxiety and depression in individuals who experience it.
2. **Low Self-Esteem:** Gender discrimination can lead to decreased self-esteem and self-confidence in individuals who experience it.
3. **Post-Traumatic Stress Disorder (PTSD):** Gender-based violence and harassment can lead to the development of PTSD in individuals who experience it.
4. **Social Isolation:** Gender discrimination can lead to social isolation and decreased social connections in individuals who experience it.

Psychological Impact of Gender Discrimination

1. Mental Health Consequences

Gender discrimination has been linked to serious mental health issues, including:

- Increased levels of depression and anxiety (Schmitt et al., 2002).
- Higher stress levels in workplace environments where gender bias is prevalent (Cortina et al., 2002).
- The development of low self-esteem and feelings of inferiority among marginalized gender groups (Fitzgerald et al., 1997).

2. Impostor Syndrome and Self-Doubt

Impostor Syndrome (Clance & Imes, 1978) is particularly common among women and marginalized gender groups in male-dominated fields. Those affected doubt their abilities despite evident success and attribute achievements to luck rather than competence.

3. Career and Economic Consequences

- **Gender wage gap:** Women earn less than men for the same work (Bertrand et al., 2019).
- **Limited career progression:** Women face the 'glass ceiling' phenomenon, limiting leadership opportunities (Heilman, 2012).
- **Occupational segregation:** Women are underrepresented in high-status professions like engineering and finance.

Intervention Strategies for Reducing Gender Discrimination

Several intervention strategies can be effective in reducing gender discrimination, including:

1. **Education and Awareness:** Educating individuals about the effects of gender discrimination and promoting awareness about the issue can help to reduce it.
2. **Policy Development:** Developing and enforcing policies that prohibit gender discrimination can help to reduce it.
3. **Training and Capacity Building:** Providing training and capacity-building programs for individuals and organizations can help to reduce gender discrimination.
4. **Support Services:** Providing support services, including counseling and advocacy, can help to support individuals who experience gender discrimination.

Empirical Research on Gender Discrimination

1. Workplace Discrimination

- Koch et al. (2015) found that women are less likely to be hired or promoted in male-dominated fields.
- Moss-Racusin et al. (2012) found that science faculty members rated male applicants as more competent than equally qualified female applicants.

2. Educational Inequality

- Research by Spencer et al. (1999) demonstrated that stereotype threat significantly affects women's performance in math and science.
- Gender biases in teacher expectations lead to differential treatment of male and female students (Sadker & Sadker, 1994).

3. Psychological Well-being

- Schmitt et al. (2002) found that gender discrimination correlates with higher levels of psychological distress.

Strategies to Reduce Gender Discrimination

1. Implicit Bias Training

Educational and corporate institutions can implement training programs to reduce unconscious bias (Devine et al., 2012).

2. Policy and Legal Reforms

- Enforcing equal pay laws and gender quotas in leadership positions (Bertrand et al., 2019).
- Encouraging flexible work policies to support gender equality.

3. Promoting Allyship and Inclusion

- Men and women should actively support gender equality initiatives (Drury & Kaiser, 2014).
- Organizational mentorship programs can promote diversity in leadership roles.

4. Media Representation and Cultural Change

- Media plays a crucial role in shaping gender norms; diverse representation can challenge stereotypes.

Conclusion

Gender discrimination is a complex and pervasive issue that affects individuals and communities worldwide. It is a multifaceted problem that encompasses various aspects of life, including education, employment, healthcare, politics, and personal relationships. From a psychological perspective, gender discrimination is not only a social injustice but also a factor that significantly affects mental health, cognitive development, and social behavior. Understanding the psychological mechanisms underlying gender discrimination is crucial to developing strategies for reducing bias and promoting equality. From a psychological perspective, gender discrimination is deeply rooted in cognitive biases, learned behaviors, and social identity processes. The consequences extend beyond social injustices, impacting mental health, career growth, and self-perception. Addressing gender discrimination requires a multi-pronged approach, incorporating policy changes, educational interventions, and societal transformation. Understanding these psychological mechanisms allows for informed efforts to create a more equitable society. In conclusion, gender

discrimination is a deeply ingrained societal issue with significant psychological implications. It affects cognitive processes, mental health, and social behavior, reinforcing systemic inequalities. Understanding the psychological mechanisms such as cognitive biases, social learning, stereotype threat, and social identity theory helps in developing effective strategies to combat discrimination. Addressing gender bias requires a multifaceted approach, including education, policy changes, and psychological interventions to promote equality and inclusivity. By fostering awareness and challenging discriminatory norms, societies can work towards reducing gender disparities and ensuring equal opportunities for all individuals.

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The Slowing Growth Trajectory of Nifty 50 Companies: A Sectoral Analysis of Q3FY25 Performance

Dr. Deepa B.*

Abstract

This research paper analyzes the performance of Nifty 50 companies in Q3FY25, highlighting the four-year low in topline growth (4.5% YoY) that marks a continuous deceleration trend. The study examines sector-wise contributions, with Consumer Discretionary being the standout performer, contributing 26.5% to YoY growth despite the overall slowdown. Energy and Financials, accounting for approximately 50% of aggregate revenues, registered modest growth rates of 2.3% and 2.7% YoY respectively. While operating margins improved by 36bps YoY to reach a five-quarter high of 20.8%, the performance across sectors remains uneven. The research explores the underlying factors, including declining raw material costs, operational efficiencies, and sector-specific challenges that shaped the corporate earnings landscape in the December 2024 quarter.

Keywords: Nifty 50, Corporate Earnings, Revenue Growth, EBITDA, Sectoral Analysis, Indian Stock Market, Q3FY25, Operating Margins, Consumer Discretionary, Energy Sector

1. Introduction

The corporate earnings season often serves as a barometer for the broader economic health of a nation. In India, the quarterly results of Nifty 50 companies, representing the country's largest and most liquid stocks, provide critical insights into the state of the economy and corporate profitability. The third quarter of the financial year 2024-25 (Q3FY25) has witnessed a notable slowdown in the growth trajectory of these bellwether companies, raising concerns about the sustainability of corporate earnings momentum.

The December 2024 quarter marked the third consecutive quarterly decline in topline growth for Nifty 50 companies, reaching a four-year low of 4.5% year-on-year (YoY). This deceleration is particularly significant when compared to the 10.5% growth recorded in Q4FY24, indicating a clear moderation in business activity. However, the sequential improvement of 2.3% quarter-on-quarter (QoQ) after two quarters of decline offers a silver lining.

This research paper aims to provide a comprehensive analysis of the performance of Nifty 50 companies in Q3FY25, examining sectoral contributions, margin trends, cost structures, and the factors driving divergent performances across different segments of the Indian economy. The study also seeks to contextualise this performance against historical averages and pre-pandemic growth rates to offer a more nuanced understanding of current corporate earnings trends.

2. Review of Literature

The analysis of corporate earnings and their determinants has been a subject of extensive research in financial literature. Several studies have examined the factors influencing earnings growth and their implications for market performance.

Agarwal and Chakrabarti (2021) analyzed the impact of macroeconomic variables on Nifty 50 earnings, finding that GDP growth, inflation, and interest rates significantly influence corporate profitability. Their research highlighted the sensitivity of different sectors to these macroeconomic indicators, with consumer-facing industries showing greater resilience during economic slowdowns.

Mohanty (2023) examined the post-pandemic recovery patterns across different sectors of the Indian economy, noting that export-oriented sectors like IT and pharmaceuticals demonstrated stronger growth compared to domestic consumption-driven sectors. The study also observed that companies with higher operational efficiency and lower debt levels weathered economic challenges more effectively.

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Singh et al. (2024) investigated the relationship between raw material costs and corporate margins in the Indian manufacturing sector, documenting a strong negative correlation between input costs and profitability. Their findings suggest that companies with greater pricing power and diversified supply chains maintain more stable margins during periods of input cost volatility.

Garg and Prasad (2024) conducted a comprehensive sectoral analysis of Indian corporate performance, highlighting the growing divergence between consumer discretionary and staples segments. Their research indicated that festive season demand significantly influences quarterly performance in consumer-facing industries, with discretionary spending exhibiting higher sensitivity to consumer sentiment.

Kapur and Mishra (2025) analyzed the impact of global commodity price movements on the profitability of Indian companies, particularly in the energy and materials sectors. Their study established a direct relationship between international crude oil prices and the operating margins of energy companies, emphasizing the importance of hedging strategies in maintaining stable earnings.

3. Methodology

This research employs a quantitative analytical approach to assess the performance of Nifty 50 companies for the quarter ending December 2024. The primary data source is the National Stock Exchange (NSE) Market Pulse report for February 2025, which provides comprehensive financial data for companies constituting the Nifty 50 index as of December 31, 2024.

The analysis focuses on key financial metrics including:

- Topline (revenue) growth on both YoY and QoQ basis
- EBITDA growth and margin trends
- Sectoral contributions to overall growth
- Raw material and operating cost structures
- Pre-pandemic versus current performance comparison

The research examines both aggregate Nifty 50 performance and sector-wise variations to provide a granular understanding of corporate earnings trends. Additionally, the study analyzes various sub-aggregates including Nifty 50 ex-Energy, Nifty 50 ex-Financials, and Nifty 50 ex-Energy ex-Financials to isolate the impact of these significant sectors on overall index performance.

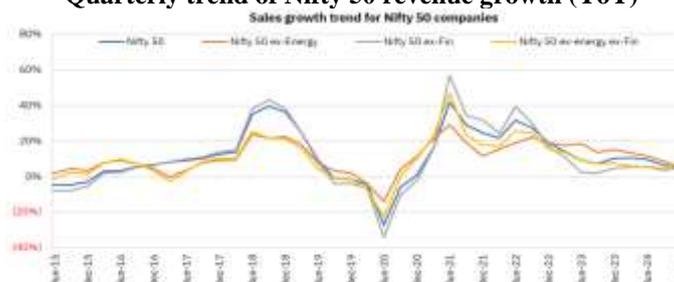
The sectoral classification follows the Global Industry Classification Standard (GICS), with companies grouped into ten sectors: Communication Services, Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, and Utilities.

4. Results and Analysis

4.1 Topline Growth Trends

The Nifty 50 companies experienced a marked slowdown in revenue growth during Q3FY25, with YoY growth dropping to 4.5% - the lowest in 16 quarters. This represents a continued deceleration from 10.5% in Q4FY24, 9.6% in Q1FY25, and 6.6% in Q2FY25. However, QoQ growth showed signs of recovery at 2.3%, following declines in the previous two quarters.

Figure 1
Quarterly trend of Nifty 50 revenue growth (YoY)



Source: CMIE Prowess, LSEG Workspace, NSE EPR Jun-18 Dec-18 Jun-19 Dec-19 Jun-20 Note: The above chart includes companies in the Nifty 50 index as on end of respective quarters

This chart effectively illustrates the downward trajectory in YoY growth rates across different Nifty 50 aggregates since late 2021, providing visual context for the current slowdown. The chart clearly shows the convergence of growth rates across different sub-aggregates in the recent quarter.

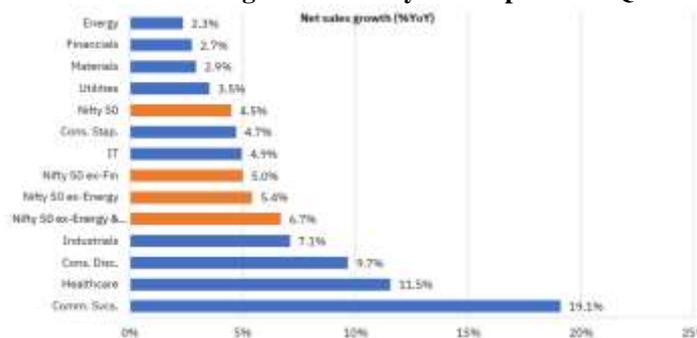
When compared to pre-pandemic performance, the current growth rate falls significantly short of the average YoY/QoQ growth rates of 10.2%/4.7% observed during the same quarter in the five years preceding the pandemic (2015-2019). For the first nine months of FY25 (9MFY25), topline grew by 6.9% YoY to Rs 55.8 lakh crore.

Within the Nifty 50 index, 41 companies reported YoY growth in net sales in Q3FY25, while 31 companies recorded QoQ growth, compared to 40 and 36 companies, respectively, in the previous quarter. This indicates a slight deterioration in the breadth of growth across the index constituents on a sequential basis.

4.2 Sectoral Performance and Contributions

The performance across sectors remained markedly uneven in Q3FY25, with significant variations in growth rates and contributions to the overall Nifty 50 performance.

Figure 2
Sector-wise net sales growth of Nifty 50 companies in Q3FY25



Source: CMIE Prowess, LSEG workspace, NSE EPR Note: The above chart provides data for companies in the Nifty 50 index as on December 31st, 2024.

This bar chart provides a clear visual comparison of YoY growth rates across different sectors, highlighting the outperformance of Communication Services, Healthcare, and Consumer Discretionary relative to the overall Nifty 50 average.

4.2.1 Consumer Discretionary

The Consumer Discretionary sector emerged as a significant contributor to Nifty 50 growth in Q3FY25, accounting for approximately 26.5% of the YoY growth and 49.5% of the QoQ growth in overall revenue. The sector registered a growth rate of 9.7% YoY and 9.4% QoQ, reversing a declining trend observed over the past five quarters. This performance was primarily driven by strong demand for automobiles and consumer durables during the festive season.

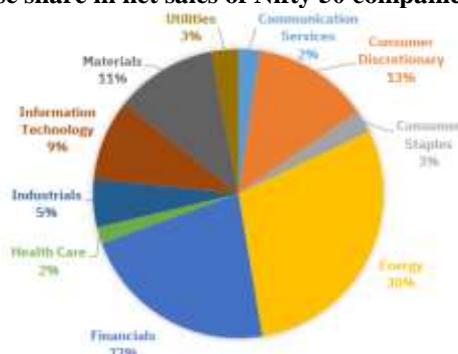
4.2.2 Energy and Financials

Energy and Financials, which together account for approximately 50% of the aggregate Nifty 50 revenues, registered modest topline growth of 2.3% and 2.7% YoY respectively. These sectors contributed 15.7% and 13.7% to the overall Nifty 50 topline growth in the December quarter.

The Financials sector recorded its weakest growth in the last 10 quarters, weighed down by investment losses in the Insurance segment. However, companies in the Banking (gross interest income) and Diversified Financials segments performed well, growing by 11% and 22% YoY respectively.

Revenue growth for the Energy sector improved QoQ, albeit off a low base, partly offset by lower realizations due to falling crude prices and muted demand.

Figure 3
Sector-wise share in net sales of Nifty 50 companies in Q3FY25



Source: CMIE Prowess, LSEG workspace, NSE EPR

Note: The above chart provides data for companies in the Nifty 50 index as on December 31st, 2024.

This pie chart effectively visualizes the relative size of each sector within the Nifty 50 index, highlighting the dominance of Energy (30%) and Financials (22%), which together constitute more than half of the index's revenue base.

4.2.3 Communication Services

The Communication Services sector posted a strong 19.1% YoY growth, its highest in eight quarters, contributing nearly 9% to the Nifty 50's topline growth in the December quarter. This performance was partly driven by strong demand for communication and data services, combined with the consolidation of Indus Tower's business into Bharti Airtel's financials – the sole sector representative in the Nifty 50 index.

4.2.4 Export-Oriented Sectors

Export-oriented sectors, namely Information Technology (4.5% YoY/0.9% QoQ) and Healthcare (11.5% YoY/2% QoQ), contributed 10% and 3.5% to the YoY Nifty 50 topline growth respectively. These sectors benefited from strong export demand, particularly from the US markets, and currency tailwinds.

4.2.5 Materials Sector

The Materials sector (2.9% YoY/2.4% QoQ) exhibited a mixed performance during the quarter. Cement companies performed well, benefiting from increased construction activity and infrastructure spending, while metal companies struggled due to lower realizations.

Table 1
Sector-wise net sales growth of Nifty 50 companies

Sector	QoQ growth			YoY growth			9HS Y25	
	Dec-23	Sep-24	Dec-24	Dec-23	Sep-24	Dec-24	(Rs lakh crore)	Growth (%)
Communication Services	2.3	7.7	8.8	5.9	12.0	19.1	1.3	11.3
Consumer Discretionary	3.0	(0.6)	9.4	21.7	3.2	9.7	6.9	7.4
Consumer Staples	(0.8)	6.4	(4.4)	2.2	8.7	6.7	1.5	6.3
Energy	5.4	(4.5)	6.3	0.3	1.7	2.3	16.3	3.1
Financials	0.3	4.3	(5.6)	35.9	19.8	2.7	12.8	14.9
Health Care	1.5	5.7	2.0	10.6	10.9	11.5	1.0	10.6
Industrials	12.3	4.4	-5.7	15.4	13.8	7.1	2.9	10.3
Information Technology	1.5	2.9	0.9	1.8	5.6	4.9	5.1	4.6
Materials	(0.6)	(3.1)	2.4	2.8	(0.1)	2.9	6.4	1.4
Utilities	(3.3)	(6.0)	0.6	(2.7)	(0.5)	3.5	1.7	4.3
Nifty 50	4.4	(0.1)	2.3	10.7	6.6	4.5	55.8	6.9
Nifty 50 ex-Energy	4.0	1.8	0.8	15.8	0.7	5.4	39.5	8.5
Nifty 50 ex-Financials	3.3	(1.4)	4.8	5.0	3.5	5.0	43.0	4.7
Nifty 50 ex-energy ex-fm	2.0	0.6	4.0	8.3	4.6	6.7	26.7	5.7
Nifty 50 excl HDFCBK	4.4	(0.2)	2.3	8.9	6.4	4.3	30.1	8.3

Source: CMIE Prowess, LSEG workspace, NSE EPR. Note: The above table provides data for companies in the Nifty 50 index as on December 31st, 2024.

This comprehensive table provides detailed growth figures across multiple timeframes (QoQ and YoY for different quarters, as well as 9MFY25 data), allowing for a thorough temporal analysis of sectoral performance trends.

4.3 EBITDA Growth and Margin Analysis

EBITDA growth for non-financial Nifty 50 companies rebounded in Q3FY25, rising 6.9% YoY – a three-quarter high – outpacing the 5% revenue growth. On a QoQ basis, EBITDA surged 6.8% – the highest in seven quarters – against 4.8% revenue growth.

Of the 39 non-financial Nifty 50 companies, 30 saw YoY EBITDA expansion (vs. 28 in Q2), while 26 posted QoQ growth (vs. 20 in Q2). Margin expansion and cost efficiencies supported the recovery, with operating margins improving by 36bps YoY/38bps QoQ to 20.8% – a five-quarter high. However, 9MFY25 EBITDA growth remained modest at 2.6% YoY.

4.4 Cost Structure Analysis

Raw material costs for the Nifty 50 (ex-Financials) saw only a 0.5% YoY increase and 0.7% QoQ decline, reducing the raw material cost-to-net sales ratio by 211bps YoY/265bps QoQ. This reflects improved operational efficiency despite subdued revenue growth.

The Energy sector led cost savings, driving an 8.4% YoY and 14.7% QoQ EBITDA rise and 98bps YoY/132bps QoQ margin expansion. The wage bill grew 4.7% YoY and 0.4% QoQ, while its share of net sales declined by 3bps YoY/53bps QoQ. Total operating expenses rose modestly by 2.5% YoY and 1% QoQ, mitigated by Energy sector cost savings.

Table 2
Sector-wise contribution of Nifty 50 companies to net sales growth in Q3FY25

Sector	Net sales (Rs crore)	Contribution to net sales growth	
		% QoQ	% YoY
Communication Services	45,129	0.2	0.4
Consumer Discretionary	2,44,603	1.1	1.2
Consumer Staples	48,424	(0.1)	0.1
Energy	5,55,028	1.7	0.7
Financials	4,16,360	(1.3)	0.6
Health Care	34,657	0.0	0.2
Industrials	1,01,250	0.3	0.4
Information Technology	1,71,231	0.1	0.4
Materials	2,13,952	0.3	0.3
Utilities	56,286	0.0	0.1
Nifty 50	18,86,921	2.3	4.5
Nifty 50 ex-Energy	13,31,892	1.1	3.8
Nifty 50 ex-Financials	14,70,561	7.1	3.9
Nifty 50 ex-energy ex-fin	9,15,532	3.9	3.2

Source: CMIE Prowess, LSEG workspace, NSE EPR

Note: The above table provides data for companies in the Nifty 50 index as on December 31st, 2024.

This table offers valuable insights into the absolute revenue figures and relative contributions of each sector to both QoQ and YoY growth, highlighting which sectors are driving or dragging overall index performance.

4.5 Performance Excluding Key Sectors

Excluding the Energy sector, EBITDA growth slowed to 6.2% YoY – an eight-quarter low – and 3.4% QoQ, with margins contracting by 11bps YoY/13bps QoQ to 22.8%. Materials, Consumer Staples, and Utilities weighed on overall growth, with declining operating profits and margins.

Similarly, the Nifty 50 ex-Energy topline growth stood at 5.4% YoY and 0.8% QoQ, while Nifty 50 ex-Financials recorded 5.0% YoY and 4.8% QoQ growth. The Nifty 50 ex-Energy ex-

Financials, which provides a view of the broader economy excluding these two dominant sectors, registered 6.7% YoY and 4.0% QoQ growth in Q3FY25.

5. Discussion

The Q3FY25 corporate earnings of Nifty 50 companies present a complex picture of India's economic landscape. The continued deceleration in topline growth to a four-year low of 4.5% YoY raises concerns about the momentum of economic activity, especially when compared to pre-pandemic growth rates averaging 10.2% for the same quarter.

Several factors appear to be influencing this slowdown. First, the high base effect from the post-pandemic recovery period may be partially responsible for the YoY deceleration. Second, the global economic uncertainties, including geopolitical tensions and inflationary pressures, may be impacting export-oriented sectors and overall business sentiment.

The significant divergence in sectoral performance highlights the uneven nature of the current economic environment. The Consumer Discretionary sector's strong performance, driven by festive season demand, suggests that urban consumption remains relatively resilient. This aligns with Garg and Prasad's (2024) findings on the increasing divergence between consumer discretionary and staples segments, and the influence of festive season demand on quarterly performance.

The modest growth in the Energy sector (2.3% YoY) despite falling crude prices reflects Kapur and Mishra's (2025) observations on the impact of global commodity price movements on the profitability of energy companies. The sequential improvement in the sector's EBITDA, driven by cost savings and operational efficiencies, demonstrates companies' adaptive strategies in managing volatile input costs.

The Financial sector's weakest growth in 10 quarters, particularly weighed by the Insurance segment, while Banking and Diversified Financials performed well, indicates structural challenges within specific sub-sectors. This aligns with Agarwal and Chakrabarti's (2021) findings on the differing sensitivities of various sectors to macroeconomic indicators.

The recovery in EBITDA growth (6.9% YoY) outpacing revenue growth (4.5% YoY) highlights the focus on cost optimization and operational efficiency in a challenging growth environment. The reduction in raw material costs as a percentage of net sales by 211bps YoY supports Singh et al.'s (2024) documentation of the strong negative correlation between input costs and profitability.

The performance of export-oriented sectors like IT and Healthcare, which grew by 4.5% and 11.5% YoY respectively, benefiting from strong US demand and currency tailwinds, aligns with Mohanty's (2023) observations on the stronger growth demonstrated by these sectors compared to domestic consumption-driven sectors in the post-pandemic period.

6. Conclusion

The Q3FY25 performance of Nifty 50 companies indicates a continuing slowdown in topline growth, reaching a four-year low of 4.5% YoY. However, the sequential improvement of 2.3% QoQ after two quarters of decline suggests a potential stabilization in growth trajectory. The uneven sectoral performance, with Consumer Discretionary emerging as a significant contributor while traditionally dominant sectors like Energy and Financials posting modest growth, reflects the evolving dynamics of the Indian economy.

The improvement in operating margins to a five-quarter high of 20.8%, driven by cost efficiencies and operational optimization, demonstrates corporate India's adaptability in navigating a challenging growth environment. The reduction in raw material costs as a percentage of revenue highlights the benefits of falling commodity prices and supply chain efficiencies.

Looking ahead, the sustainable recovery of corporate earnings will likely depend on several factors, including:

1. Revival of consumption demand beyond festive seasons to support continued growth in the Consumer Discretionary sector
2. Recovery in global commodity prices to boost the Energy and Materials sectors

3. Stabilization of the Insurance segment within Financials to support overall sector growth
4. Sustained export demand and favorable currency movements for IT and Healthcare sectors

The current slowdown in topline growth, while concerning, needs to be viewed in the context of the exceptional growth witnessed during the post-pandemic recovery phase. The focus on operational efficiency, as evidenced by improved margins despite subdued revenue growth, positions corporate India well to capitalize on any future uptick in demand conditions.

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Comparative Analysis of Institutional versus Individual Investor Diversification Behaviour in NSE Listed Companies

Dr. Syamlal G.S.*

Abstract

This study examines the diversification patterns of institutional investors versus individual investors in the National Stock Exchange of India (NSE) listed companies, using the Herfindahl-Hirschman Index (HHI) as a measure of portfolio concentration. Analysis of data spanning over two decades reveals significant differences in diversification strategies between these investor categories. Individual investors consistently demonstrate lower portfolio concentration (HHI of 62 as of December 2024) compared to institutional investors such as Foreign Portfolio Investors (HHI of 236), Domestic Mutual Funds (HHI of 141), and Banks, Financial Institutions & Insurance companies (HHI of 222). The research also uncovers sector-specific concentration trends and investigates how diversification patterns have evolved post-pandemic. The findings provide valuable insights for understanding investor behaviour, market microstructure, and potential implications for financial market stability and capital allocation efficiency.

Keywords: Portfolio Diversification, Herfindahl-Hirschman Index, Institutional Investors, Individual Investors, Market Concentration, National Stock Exchange of India, Foreign Portfolio Investors, Investment Behaviour, Market Microstructure, Mid-cap Stocks, Small-cap Stocks

1. Introduction

Portfolio diversification remains one of the fundamental principles of investment management, enabling investors to optimize risk-return trade-offs by spreading investments across different securities. Different investor categories, however, may exhibit distinct diversification behaviours based on their investment objectives, risk tolerance, regulatory constraints, and access to information. Understanding these differences is crucial for market participants, regulators, and policymakers to comprehend market dynamics and formulate appropriate strategies and policies.

This research paper presents a comparative analysis of diversification behaviours exhibited by institutional investors (Foreign Portfolio Investors, Domestic Mutual Funds, and Banks, Financial Institutions & Insurance companies) versus individual investors in companies listed on India's National Stock Exchange. We employ the Herfindahl-Hirschman Index (HHI), a widely accepted measure of market concentration, to quantify the degree of portfolio diversification across these investor categories.

The analysis covers more than two decades of data, with particular attention to recent trends including the post-pandemic period. This study is timely and relevant as India's equity markets have witnessed significant structural changes in recent years, including increased retail participation, growing mutual fund assets under management, and evolving regulatory frameworks for foreign investments.

By examining these diversification patterns, this research aims to provide insights into:

1. How diversification strategies differ across investor categories
2. How these patterns have evolved over time, particularly after the COVID-19 pandemic
3. Sector-specific concentration patterns across investor categories
4. The relationship between portfolio concentration and exposure to companies of different market capitalizations

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The findings of this study contribute to the understanding of investor behaviour in emerging markets and offer practical implications for investment management, market microstructure analysis, and regulatory policy formulation.

2. Review of Literature

The literature on investor diversification behaviour reveals notable differences between institutional and individual investors across global markets. Goetzmann and Kumar (2008) found that while individual investors often hold under-diversified portfolios, diversification tends to improve with investor wealth, age, and education. Kamara et al. (2016) demonstrated that institutional investors typically employ more sophisticated trading strategies, affecting stock price behaviour and market liquidity differently than retail investors. In the Indian context, Chakrabarti et al. (2019) analyzed how foreign portfolio investments respond to macroeconomic indicators and policy changes, while Patnaik and Shah (2014) documented FII evolution toward greater mid-cap and small-cap exposure over time. Dhar and Goetzmann (2006) examined psychological factors in investment decisions, finding that institutional investors generally maintain more disciplined approaches with formal risk management frameworks compared to individual investors. Mukherjee and Roy (2011) revealed differences in sector preferences and investment horizons across institutional investor categories in India, providing context for sector-wise concentration patterns.

Further research by Kumar and Lee (2006) shows that retail investors tend to trade in correlated ways, potentially due to shared sentiment, while Bose (2012) analyzed the relationship between mutual fund investments, FII investments, and stock market returns in India, noting the growing importance of domestic mutual funds and their increasingly diversified approaches. Barber and Odean (2013) reviewed individual investor behaviour, highlighting both common biases and the evolution toward greater diversification awareness over time. Particularly relevant to our study, Anagol and Pareek (2018) examined the growing participation of retail investors in the Indian market, documenting their increasing sophistication and expanding portfolio diversification, which helps explain the historically low and declining HHI values of individual investor portfolios observed in our research. Collectively, these studies provide a theoretical foundation for understanding the diversification differences between institutional and individual investors in the Indian context, while highlighting gaps in comprehending the detailed mechanisms behind these patterns—a gap our research aims to address.

3. Data and Methodology

3.1. Data Sources

The data for this study is sourced from the NSE Market Pulse Report (February 2025, Vol. 7, Issue 2), which compiles information from CMIE Prowess and NSE EPR (Exchange Participation Report). The dataset covers quarterly data spanning from December 2001 to December 2024, providing a comprehensive long-term view of investor behaviour across different categories in the Indian equity market.

3.2. Investor Categories

The study examines four primary investor categories:

1. Foreign Portfolio Investors (FPIs)
2. Domestic Mutual Funds (DMFs)
3. Banks, Financial Institutions & Insurance companies (BFIs)
4. Individual investors

3.3. Measurement of Portfolio Concentration

We employ the Herfindahl-Hirschman Index (HHI) as the primary measure of portfolio concentration. The HHI is calculated as the sum of squared market shares of all entities in a market and is widely used to measure market concentration. In the context of this study, the HHI measures the concentration of investment portfolios across different stocks.

The HHI is calculated as: $HHI = \sum (\text{Market Share of Stock } i)^2$

Where market share represents the proportion of investment in each stock relative to the total portfolio value.

The HHI can range from close to zero (indicating perfect diversification) to 10,000 (indicating complete concentration in a single stock). According to standard interpretations, an HHI below 1500 indicates a high degree of diversification, while values above 2500 suggest significant concentration.

3.4. Analytical Approach

Our analytical approach encompasses:

1. Temporal analysis of HHI trends across investor categories
2. Comparison of diversification patterns between institutional and individual investors
3. Sector-wise analysis of portfolio concentration
4. Examination of diversification in relation to market cap exposure
5. Analysis of the breadth of investment (number of companies with ownership) across investor categories

4. Findings and Analysis

4.1. Temporal Trends in Portfolio Concentration

Our analysis reveals distinct temporal trends in portfolio concentration across different investor categories from 2001 to 2024, with a notable shift in recent years toward greater diversification.

Figure 1



Source : CMIE Prowess, NSE EPR.

The data shows that the HHI of FPI portfolio in NSE listed companies has fluctuated significantly over the past two decades. Starting from levels above 500 in the early 2000s, FPI portfolio concentration peaked at nearly 800 in certain periods between 2001-2004. There was a subsequent decline to approximately 222 by around 2007, followed by a period of relative stability with HHI hovering between 200-300 for several years. A notable spike occurred post-pandemic, reaching 411, before declining again to the current level of 236 in December 2024.

This trend indicates that FPIs have generally moved toward greater diversification over the long term, despite temporary increases in concentration during periods of market stress such as the COVID-19 pandemic.

Figure 2



Source : CMIE Prowess, NSE EPR.

The data demonstrates that DMFs have maintained relatively lower concentration levels compared to FPIs. From an initial HHI of around 434 in December 2001, DMF portfolio concentration decreased to approximately 187 by mid-2020s, before further declining to 141 in December 2024. Notably, there was a temporary increase in concentration around 2012-2013, when the HHI reached a peak of about 434, before declining steadily. The current HHI of 141 represents a near-historical low, indicating significant diversification in DMF portfolios.

Figure 3



Source : CMIE Prowess, NSE EPR.

BFI's exhibited extremely high concentration in the early 2000s, with HHI values approaching 700. This concentration decreased dramatically by 2004, stabilizing between 200-400 for much of the subsequent period. The latest HHI of 222 represents a 17-year low, indicating a sustained trend toward greater diversification among these institutional investors.

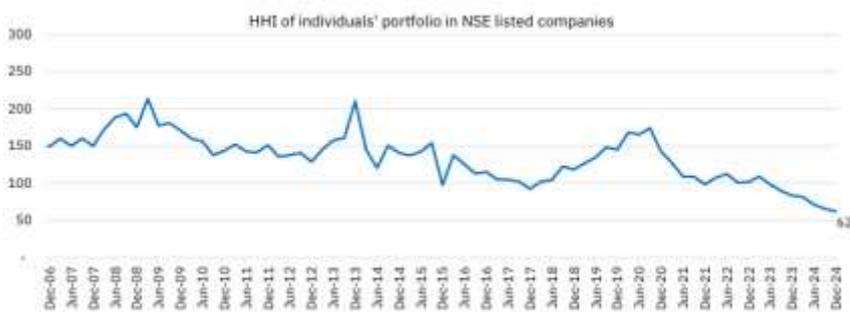
Figure 4



Source : CMIE Prowess, NSE EPR

The overall institutional portfolio (combining all institutional investor categories) has maintained HHI values generally below 250 since 2005, with some fluctuations. The current HHI of 175 is close to historical lows, reflecting the collective diversification trend across institutional investors.

Figure 5



Source : CMIE Prowess, NSE EPR

Individual investors have consistently maintained the lowest HHI values among all investor categories. From levels around 150-200 in 2006-2010, individual portfolio concentration has steadily declined to reach an all-time low of 62 in December 2024. This represents the seventh consecutive quarterly decline and the lowest concentration level recorded since 2001.

These temporal trends collectively indicate:

1. A general movement toward greater diversification across all investor categories
2. A temporary increase in concentration immediately following the pandemic, followed by renewed diversification
3. Consistently lower concentration among individual investors compared to institutional investors
4. Varying degrees of diversification among institutional investors, with DMFs showing the lowest concentration and FPIs the highest

4.2. Comparative Analysis of Investor Categories' Diversification (December 2024)

The latest HHI values as of December 2024 provide a clear hierarchy of diversification levels across investor categories:

**Table 1
Hierarchy of Diversification Levels**

Investor Category	HHI (Dec 2024)	Interpretation
Individual Investors	62	Extremely high diversification
Domestic Mutual Funds	141	Very high diversification
Overall Institutional	183	Very high diversification
Banks, FIs & Insurance	222	High diversification
Foreign Portfolio Investors	236	High diversification

Source : CMIE Prowess, NSE EPR

This comparison reveals that individual investors maintain significantly more diversified portfolios than institutional investors, with an HHI less than half that of BFIs and FPIs. The striking difference suggests fundamentally different investment approaches and constraints between individual and institutional investors.

4.3. Sector-wise Analysis of Portfolio Concentration

Our analysis of sector-wise HHI values reveals significant variations in concentration patterns across sectors and investor categories:

**Table 2
Sector-wise HHI of FPI portfolio in NSE listed companies**

Sector	Dec-04	Dec-09	Dec-14	Dec-19	Dec-24
Comm. Services	3,912	1,564	1,564	2,213	5,158
Cons. Disc.	1,384	1,266	1,266	803	630
Cons. Staples	3,422	1,842	1,842	1,322	1,032
Energy	3,637	2,640	2,640	6,284	5,540
Financials	1,582	1,231	1,231	1,311	1,571
Health Care	1,663	1,319	1,319	616	669
Industrials	1,983	819	819	1,060	444
IT	3,508	2,722	2,722	2,557	1,997
Materials	1,003	554	554	637	417
Real Estate	4,979	1,353	1,353	1,765	1,378
Utilities	2,584	1,764	1,764	1,370	1,329
Total	350	242	242	369	236

Source : CMIE Prowess, NSE EPR

Table 3
Sector-wise of DMF portfolio in NSE listed companies

Sector	Dec-04	Dec-09	Dec-14	Dec-19	Dec-24
Comm. Services	1,672	1,999	1,500	4,164	4,643
Cons. Disc.	552	516	598	370	346
Cons. Staples	5,931	3,787	6,385	1,549	1,352
Energy	1,595	2,199	1,665	2,984	3,807
Financials	1,325	833	791	999	1,062
Health Care	739	735	759	700	504
Industrials	860	1,091	1,205	1,027	487
IT	1,213	1,969	1,722	2,615	1,486
Materials	587	446	281	380	337
Real Estate	3,982	1,347	1,901	1,242	1,139
Utilities	1,901	1,197	1,134	2,242	1,823
Total	182	167	219	195	141

Source : CMIE Prowess, NSE EPR

Table 4
Sector-wise HHI of Individuals' portfolio in NSE listed companies

Sector	Dec-04	Dec-09	Dec-14	Dec-19	Dec-24
Comm. Services	8,802	1,176	6,720	789	849
Cons. Disc.	376	415	404	425	304
Cons. Staples	2,003	1,496	1,562	1,252	966
Energy	2,677	5,096	3,650	5,971	4,405
Financials	451	482	474	639	444
Health Care	835	770	602	382	243
Industrials	659	1,162	1,146	996	272
IT	2,308	2,049	1,639	1,798	700
Materials	500	420	281	320	166
Real Estate	1,207	1,260	643	1,225	498
Utilities	2,338	1,074	840	636	700
Total	497	171	141	145	62

Source : CMIE Prowess, NSE EPR

Table 5
Sector-wise HHI of Banks, Financial Inst. & Insurance portfolio in NSE listed companies

Sector	Dec-04	Dec-09	Dec-14	Dec-19	Dec-24
Comm. Services	2,482	2,607	3,705	5,851	6,431
Cons. Disc.	978	1,338	1,329	1,235	742
Cons. Staples	3,495	4,399	6,498	4,510	4,098
Energy	2,161	3,366	2,808	3,274	3,990
Financials	1,329	1,224	1,135	1,195	825
Health Care	2,130	1,271	1,376	1,440	736
Industrials	1,634	2,212	2,434	2,310	1,645
IT	1,941	2,869	3,535	3,356	2,245
Materials	806	856	666	590	458
Real Estate	2,329	2,956	996	1,014	1,396
Utilities	1,990	1,450	1,920	2,219	1,072
Total	209	236	306	322	222

Source : CMIE Prowess, NSE EPR

Key observations from the sector-wise analysis:

1. **High-Concentration Sectors:** Communication Services and Energy exhibit extremely high concentration across all investor categories, with HHI values far exceeding the 2500 threshold that indicates significant concentration. For Communication Services, the HHI ranges from 849 for individuals to an extraordinary 6,431 for BFIs. Similarly, Energy sector

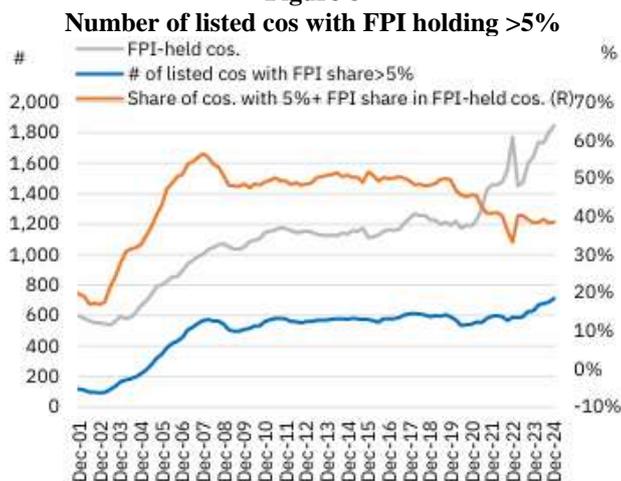
concentration is notably high across all categories, ranging from 3,807 for DMFs to 5,540 for FPIs.

2. **Low-Concentration Sectors:** Materials and Consumer Discretionary consistently demonstrate the lowest concentration across investor categories. Materials sector HHI ranges from just 166 for individuals to 458 for BFIs, while Consumer Discretionary ranges from 304 for individuals to 742 for BFIs.
3. **Investor-Specific Patterns:**
 - **FPIs:** Show highest concentration in Energy (5,540) and Communication Services (5,158)
 - **DMFs:** Exhibit high concentration in Communication Services (4,643) and Energy (3,807)
 - **BFIs:** Demonstrate extreme concentration in Communication Services (6,431) and significant concentration in Consumer Staples (4,098)
 - **Individuals:** Maintain relatively moderate concentration even in the typically concentrated Energy sector (4,405) and show remarkably low concentration in most other sectors
4. **Evolution of Sector Concentration:** Tables 24-27 also provide historical data (Dec-04, Dec-09, Dec-14, Dec-19, and Dec-24) for sector-wise HHI across investor categories. This historical view reveals:
 - A general decline in concentration across most sectors for all investor categories
 - Persistent high concentration in Communication Services and Energy sectors
 - Significant reduction in concentration in sectors like IT, Financials, and Consumer Discretionary

The sector-wise analysis highlights that while overall portfolio diversification is high across all investor categories, significant concentration exists in certain sectors, primarily due to structural market factors such as the presence of fewer companies or dominant market leaders in these sectors.

4.4. Expanding Investment Breadth and Mid/Small-Cap Exposure

Figure 6



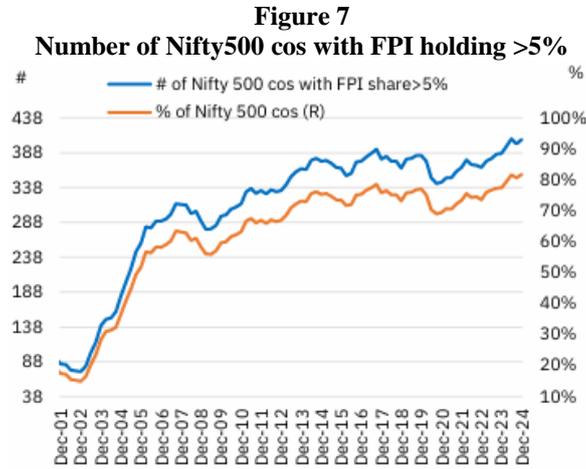
Source : CMIE Prowess, NSE EPR

The data shows a significant expansion in FPI investment breadth:

- FPIs now have ownership in 1,845 stocks as of December 2024, compared to approximately 1,200 four years ago
- The number of companies where FPIs hold more than a 5% stake has increased to 712

- The ratio of companies with >5% FPI stake to total FPI-held companies stands at 38.6%, slightly higher than 38.3% in the previous quarter

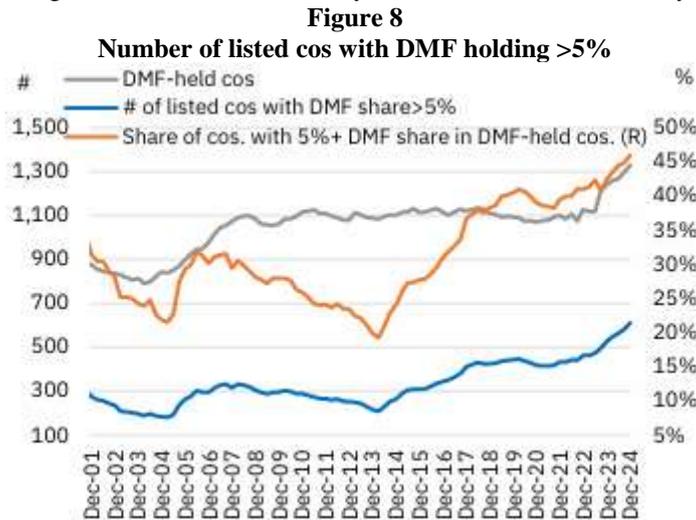
This expanding investment breadth corresponds directly with the declining HHI values observed for FPI portfolios, confirming the relationship between widening exposure to more companies and increased diversification.



Source : CMIE Prowess, NSE EPR

The data on FPI holdings in Nifty500 companies reveals:

- A steady increase in the percentage of Nifty500 companies with significant FPI ownership
- Currently, approximately 75-80% of Nifty500 companies have FPI ownership exceeding 5%
- This percentage has increased substantially from around 30% in the early 2000s

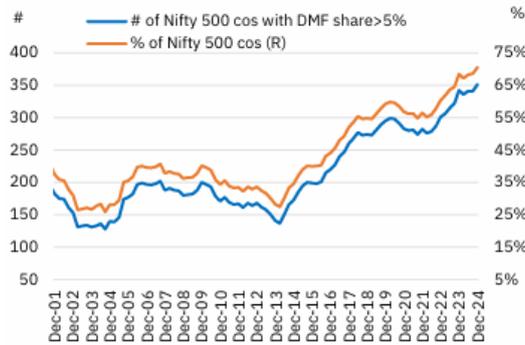


Source : CMIE Prowess, NSE EPR

Similar patterns are observed for DMFs:

- DMFs now hold stakes in 1,330 companies as of December 2024, the highest ever
- Of these, DMFs own more than 5% share in 611 companies
- The ratio of companies with >5% DMF stake to total DMF-held companies has reached an all-time high of 45.9%

Figure 9
Number of Nifty500 cos with DMF share >5%

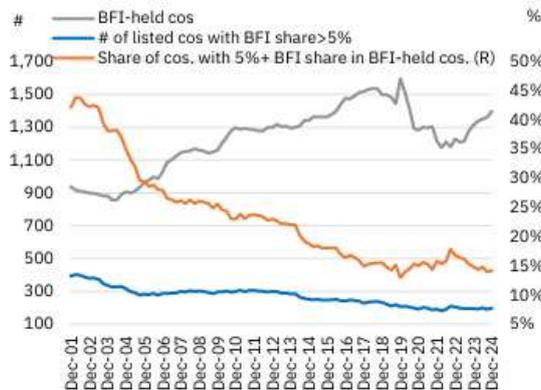


Source : CMIE Prowess, NSE EPR

Similarly, for DMFs:

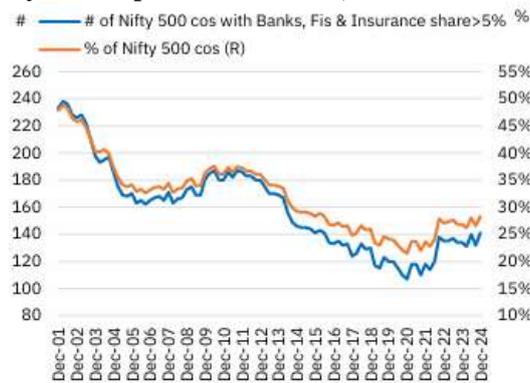
- The percentage of Nifty500 companies with DMF ownership exceeding 5% has increased from approximately 25% in 2001 to 65-70% currently
- This trend accelerated particularly after 2015

Figure 10
Number of listed companies with Banks, FIs & Insurance holding >5%



Source : CMIE Prowess, NSE EPR

Figure 11
Number of Nifty500 companies with Banks, FIs & Insurance holding >5%



Source : CMIE Prowess, NSE EPR

These findings establish a clear relationship between declining HHI values and increasing exposure to mid- and small-cap stocks. As institutional investors expand beyond traditional large-cap focus to include more mid- and small-cap companies, their portfolio concentration naturally decreases. This is explicitly confirmed in the Market Pulse report, which notes that "falling HHI level of the FPI portfolio also corroborates with their declining allocation to the top decile stocks, that fell to over 14-year low during the December quarter."

5. Discussion

5.1. Drivers of Divergent Diversification Patterns

Several factors may explain the consistently lower portfolio concentration observed among individual investors compared to institutional investors:

1. **Investment Constraints:** Institutional investors often face various constraints including:
 - Mandate restrictions limiting investment universe
 - Regulatory requirements for certain sectors or security types
 - Liquidity considerations necessitating larger positions in more liquid stocks
 - Benchmark-relative performance objectives encouraging certain concentration patterns
2. **Investment Sizes and Market Impact:** Institutional investors manage significantly larger portfolios than typical individual investors, potentially limiting their ability to take meaningful positions in smaller companies without affecting market prices or facing liquidity challenges.
3. **Information Asymmetry and Specialization:** Institutional investors may concentrate investments in areas where they possess informational advantages or specialized expertise, leading to naturally higher concentration in certain sectors or security types.
4. **Risk Management Approaches:** Individual investors may prioritize naive diversification as a risk management strategy, while institutional investors might employ more sophisticated risk management techniques that allow for greater concentration within controlled risk parameters.
5. **Post-Pandemic Evolution:** The data shows a significant decrease in HHI values (increased diversification) for institutional investors since the pandemic, suggesting an ongoing convergence toward more diversified portfolios:
 - FPI HHI decreased from 411 post-pandemic to 236
 - DMF HHI maintained near historic lows at 141
 - BFI HHI reduced to a 17-year low of 222
 - Individual investor HHI consistently decreased to an all-time low of 62

5.2. Sector-Specific Concentration Patterns

The extreme concentration observed in certain sectors (particularly Communication Services and Energy) warrants further discussion:

1. **Structural Market Factors:** These sectors feature fewer listed companies and often include dominant market leaders, naturally leading to higher concentration regardless of investor category. For example, the Energy sector is dominated by a few large players such as Reliance Industries, ONGC, and a limited number of other significant companies.
2. **Regulatory Considerations:** Energy and Communication Services sectors often face higher regulatory constraints, potentially limiting the investment universe and leading to greater concentration.
3. **Category-Specific Preferences:** The notably high concentration of BFIs in Consumer Staples (HHI of 4,098) compared to other investor categories suggests different investment priorities, potentially related to risk preferences or specialized knowledge.
4. **Individual Investor Advantage:** Individual investors maintain relatively lower concentration even in typically concentrated sectors, possibly due to:
 - Lower position sizes allowing for broader diversification

- Fewer regulatory constraints
- Greater willingness to invest in smaller companies within these sectors

5.3. Implications for Market Efficiency and Stability

The divergent diversification patterns across investor categories have several implications for market efficiency and stability:

1. **Price Discovery Process:** The increasing diversification across investor categories, particularly the expanding exposure to mid- and small-cap stocks, may enhance price discovery and market efficiency in these segments.
2. **Liquidity Distribution:** As institutional investors broaden their investment universe, liquidity may improve across a wider range of stocks, potentially reducing liquidity premiums and transaction costs.
3. **Market Volatility:** The decreasing concentration of institutional portfolios may reduce the vulnerability of specific stocks or sectors to institutional flow-driven volatility, potentially enhancing overall market stability.
4. **Corporate Governance:** The expanding breadth of meaningful institutional ownership (greater than 5%) across a larger number of companies may improve corporate governance through enhanced institutional monitoring and engagement.

6. Conclusion

This research provides a comprehensive analysis of diversification behaviours across different investor categories in the Indian equity market. Our findings reveal that individual investors consistently maintain more diversified portfolios compared to institutional investors, although the gap has been narrowing in recent years as institutional investors expand their exposure to mid- and small-cap segments.

Key conclusions from this study include:

1. **Consistent Diversification Hierarchy:** Individual investors demonstrate the lowest portfolio concentration (HHI of 62), followed by Domestic Mutual Funds (141), Banks, Financial Institutions & Insurance companies (222), and Foreign Portfolio Investors (236).
2. **Post-Pandemic Evolution:** All investor categories experienced a temporary increase in portfolio concentration following the pandemic outbreak, followed by a steady trend toward greater diversification as markets stabilized.
3. **Sector-Specific Patterns:** While overall portfolio diversification is high across all investor categories, significant concentration exists in certain sectors, particularly Communication Services and Energy, largely due to structural market factors.
4. **Mid- and Small-Cap Exposure:** The declining HHI values across investor categories strongly correlate with increasing exposure to mid- and small-cap stocks, particularly among institutional investors who traditionally focused on large-cap stocks.
5. **Investment Breadth Expansion:** Both FPIs and DMFs have significantly expanded the number of companies in which they hold investments, with FPIs now holding stakes in 1,845 companies (up from approximately 1,200 four years ago) and DMFs holding positions in 1,330 companies.

These findings have important implications for market participants, regulators, and policymakers. The trend toward greater diversification across investor categories suggests improving market efficiency, broader distribution of liquidity, and potentially enhanced market stability. The expanding breadth of institutional ownership may also strengthen corporate governance mechanisms through wider institutional monitoring.

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Greater Deeds Remained for Preschool Education in Mizoram

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Abstract:

Preschool education is the preparation of children for primary schooling and aims to develop the foundation of reading, writing and arithmetic. The issues and challenges of preschool education are inadequate teaching learning facilities, inappropriate teaching learning process, improper assessment or outcome measures, high teacher-children ratio, lack of teaching learning material, inappropriate use of teaching materials, predominance of formal teaching of 3Rs, rote memorization, inadequate infrastructure, inadequate health facilities, lack of appropriate teacher training and improper or inadequate monitoring. With the introduction of NEP2020, Mizoram is taking various steps and measures in addressing these challenges but a big question remains as to whether the strategies and approaches adopted are adequate in handling these issues. Looking at the present scenario, much is yet to be accomplished and much effort needs to be put forward in the process for a successful implementation of systematic and quality preschool education.

Key Words: Preschool education, Early Childhood Care and Education, Foundational Literacy and Numeracy.

Introduction:

Preschool education is child-centered and focuses on the holistic development of the child and it provides a stimulating play environment for intellectual language, emotional, physical and social development of the child through play-way and activity approach. It is the preparation of children for primary schooling and aims to develop the foundation of reading, writing and arithmetic. The issues and challenges that the preschool education faced in India are numerous which may be listed as inadequate teaching learning facilities, inappropriate teaching learning process, improper assessment or outcome measures, high teacher-children ratio, lack of teaching learning material, inappropriate use of teaching materials, predominance of formal teaching of 3Rs, rote memorization, inadequate infrastructure, inadequate health facilities, lack of appropriate teacher training and improper or inadequate monitoring¹. To cure this prevailing problem of standardization and quality of preschool education, professional development opportunities for teachers of preschools and teacher training course for those who aspire to become preschool teachers or those who own preschools must be introduced. There is a National Council for Teacher Education (NCTE) approved course for Diploma in Preschool Education but apart from the Diploma in Early Childhood Care and Education offered through distance mode by IGNOU, none of the government institutions nor private institutions are offering any pre-service education courses on preschool education in Mizoram. This implies that a great majority of those working in the entire private and government sector in preschool sections are untrained or not qualified which is quite a distressing fact. It is an obligation that teachers undergo and complete a course with hands-on supervised training and even after completion of the course, continuing professional development is a compulsory requirement.

Background:

In Mizoram, the Anganwadi centers have been set up in every locality for children in the age group of 0-6 years by the Government and are under the Social Welfare Department. However, the

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¹ Govt. of India, *Learning without Burden: Report of National Advisory Committee (New Delhi: MHRD, 1993 reprinted 2007)*, p.14.

Anganwadi centers do not foster parents' satisfaction in the academic perspective as children are not provided with the necessary skills for school readiness (Nunhlimi, 2017). This creates various problems as it leads to younger children crowding in to primary schools and affecting the classroom quality in terms of both space and teacher pupil ratio and increasing drop out and retention rates in primary schools. The enormity of underage enrolment in government schools also reflects the many problems faced due to underage enrolment and thereby, the need for a pre-primary section of one or two years in government schools as part of elementary schooling (Malsawmthangi, 2009). Expanding primary education without providing adequate early childhood education centers leads to children coming into schools without attaining adequate school readiness. In 2000-2001, under the scheme of SSA, Early Childhood Care and Education (ECCE) Centers were opened in 397 selected centers under the intervention of Innovative Schemes with a very limited budget but was abruptly discontinued from 2013-14. The Government of Mizoram selected 66 Primary Schools to run preschool education program vide No.B.14011/31/2013-EDN of 4th February, 2015; it was started from 2015-16 academic session. The State Council of Educational Research and Training (SCERT) developed reading and study material for children enrolled in these schools and organized sensitization programmes for the Headmasters of these schools and teachers from these selected schools were given training on preschool education in 2015. However, printing of materials for the children could not be continued due to lack of funds, though children are entitled to free textbooks and writing materials. An interesting factor is the reason that compels the preschool programme to be re-opened in 2015 by the state government after many years of shutting it down after the establishment of Anganwadi centers which was implemented under Integrated Child Development Services (ICDS) by the Department of Social Welfare since 1978. The demand for preschool is so soaring that there are also many government primary schools in Mizoram running the preschool education program without prior permission from the government. So, the Samagra Shiksha Abhiyan (SSA) takes the initiative in opening preschool sections in 331 primary schools which was approved in the Programme Advisory Board (PAB), Ministry of Education during 2021-22 Annual Work Plan and Budget. For co-location of Anganwadi and primary schools as outlined in the National Education Policy 2020 (NEP2020), 766 Government Primary Schools have been paired with Anganwadi Centers who are within 500 meters. However, there are 73 Government Primary Schools who do not have Anganwadi Centers within 500 meters. It may also be mentioned that private stand-alone preschools are mushrooming in Aizawl and the government does not take initiative in recognizing these schools or develop guidelines or specifications for quality control of these preschools in the present.

The general problems of curriculum conceptualization discussed in the report of the National Advisory Committee formed by the Ministry of Human Resource Development (MHRD) in 1992 can all be seen reflected in the emerging preschool sector. Despite official stipulations that no textbooks be used at this stage, preschool teachers and parents are feeling compelled to burden the young child with textbooks and formal learning they represent. The sense of compulsion comes from a widespread feeling that unless academic training of a child starts early, she cannot cope with the fast paced pedagogy and competitive ethos of the later school years. The pernicious grip of this false argument manifests itself in absurd and of course deeply harmful, practices in preschools and primary schools such as early emphasis on shapely drawing, writing, and memorizing information. Intrinsic motivation and the child's natural abilities are being smothered at a scale so vast that it cannot be correctly estimated. Our national commitment to the development of human resource is daily challenged in our nurseries and primary schools (Govt. of India, 2007).

Analysis of the Steps taken by the State:

As per NEP 2020, the highest priority of the education system will be to achieve universal foundational literacy and numeracy in primary school by 2025. The rest of this Policy will become relevant for our students only if this most basic learning requirement (i.e., reading, writing, and arithmetic at the foundational level) is first achieved. To this end, a National Mission on Foundational

Literacy and Numeracy (FLN) will be set up by the Ministry of Education on priority. Accordingly, all State/UT governments will immediately prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools, identifying stage-wise targets and goals to be achieved by 2025, and closely tracking and monitoring progress of the same. For successful implementation of ECCE and FLN highlighted in the National Education Policy 2020, 6 months certificate course for ECCE has been implemented since 2019 where primary schools teachers who are in charge of pre-primary classes were deputed by the Directorate of School Education and 64 primary school teachers have completed the course so far. Orientation for primary school teachers who are not yet deputed for the 6 Months Certificate Course is also organised and is an on-going Programme. This training will give awareness and guidance to the pre-primary teachers in implementing ECCE in their respective schools. Another 40 primary school teachers were deputed and the training will commence from October 2022. Training for Key Resource Persons on ECCE was organized by SCERT during 6th- 9th Sept 2022 in which 15 Lecturers from the 8 District Institute of Education and Training (DIET)s and 27 Block Resource Centers (BRC) Coordinators from all the Districts within the state participated. After the training, DIET Kolasib conducted training on ECCE for Primary school teachers during 21st & 22nd September 2022 and DIET Mamit during 27th -29th Sept 2022 in their respective districts.

The state has future plans for effective implementation of ECCE through development of State Specific School Readiness Scale to find out the readiness of children to join Class I. (E.g. Psycho-motor, Language, Number & Socio-Emotional skills). This will also help in reflecting the quality of preschool education that is implemented in the state. Another plan is Development of Guidebook on preparation of low cost and no cost Teaching-Learning Materials which is an important component in Preschool and many teaching aids can be prepared at low cost or even no cost at. Development of State Minimum Specification for Preschool intended for stand-alone and private preschools to check quality standards is also yet to be developed.

For successful implementation of National Initiative for Proficiency in Reading with Understanding and Numeracy Bharat Programme (NIPUN Bharat) in the state for Foundational Literacy and Numeracy (FLN), State and District Missions on FLN has been set up. The State Mission is headed by State Project Director, Samagra Shiksha and the District Mission is headed by Deputy Commissioner. State and District Steering Committee, under the aegis of the Department of School Education, for NIPUN Bharat was constituted on 29th November, 2021. The Committee is headed by a senior level official and District Project Management Unit (DPMU) at the district level is headed by the Deputy Commissioner. Academic Task Force (ATF) for Mizoram for National Resource Group (NRG) for implementation of the (NIPUN Bharat) was constituted on 20th October, 2021. An important step for NIPUN Bharat is Vidya Pravesh or Zirna Kailawn (Learning Ladder) in Mizo is which is a National Mission on FLN Mission of the Government of India and NCERT aligned to the key competencies and the learning outcomes of Balvatika. This preparatory module should be used for all Class 1 students across the country. It is meant to be implemented in government schools through the newly launched 'NIPUN Bharat' scheme. Zirna Kailawn is to address the developmental and learning needs of all children who enter Grade I, and who may or may not had any prior preschool experience. It will facilitate teachers to make children's entry in school education smooth, fearless and joyful. The school preparation programme is designed for initial three months of Grade I which can be transacted for four hours per day. It follows play based pedagogy and promotes experiential learning with emphasis on the use of developmentally appropriate activities and local play materials. The SCERT therefore organized Training of Primary School teachers in Zirna Kailawn- 3 month Play based Pedagogy and four trainings were organized in the first phase. The first was held for SDEO Aizawl East on 7th April 2022, SDEO Aizawl West on 8th April 2022, SDEO Darlawn on 19th April and SDEO Aizawl South and SDEO Saitual on 20th April 2022.

Table 1: The number of participants SDEO wise is given in the table

SN	SDEO	No of teachers	No of headmasters	Total
1	Aizawl East	83	66	149
2	Aizawl West	55	40	95
3	Darlawn	44	22	66
4	Aizawl South & Saitual	87	62	149
	Total	269	190	459

We can see from the table that a total of 269 teachers and 190 headmasters which is a total of 459 from SDEO Aizawl East, West, South, Darlawn and Saitual attended the training programme. Training of Zirna kailawn for Key Resource Persons was also held on 3rd June 2022 for lecturers of DIETs so that the aims and purpose of Zirna Kailawn could be disseminated in all the districts. Study materials of Zirna Kailawn developed by the SCERT were printed and distributed to the primary schools within the state during June –July 2022 through Samagra Shiksha. But the course should be run during the first three months of Class I, therefore it cannot be implemented during 2022-23 academic session. National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA) 3.0 was launched in Mizoram on 1st October, 2021 for Pre-Primary School and Primary School heads and teachers. The training is undertaken in two languages, Mizo and English. Total 6110 primary school teachers enrolled for the course out of which 4567 teachers completed the 12 courses. The training was conducted through online distance mode. Foundational Learning Study (FLS) for class III in 2022 was undertaken under the initiative of NCERT in 2 batches for a total target of 1560 students from 156 schools in all the eight districts of the state during the month of March and April, 2022. The sample schools comprised both of Government and Private unaided recognised schools. With an additional conduct on 498 students from 34 schools of Aizawl, Kolasib, Serchhip and Mamit districts, the total number of students tested was 1853. Posters for awareness on FLN Framework and Goals have also been developed in regional language for display in schools by the SCERT.

The on-going initiatives taken by Samagra Shiksha is development of Wooden Construction Blocks for children of 3-8 years old to enhance cognitive flexibility, language development, stimulation of creativity and divergent problem solving, improvement of social skills, imagination and self-expression. The SCERT is taking steps in development of Learning App for Preschool Stage based on 'Zirtirh Bu' (Language) and 'Nambar Bu' (Numbers) for Balvatika which is a one year school readiness programme to be implemented in all the primary schools as indicated in the NEP2020. A Preschool learning App in regional language which can be easily downloaded from Google Play Store will be developed for young children. This is intended to enhance and support language development and pre number concept through games, puzzles, practicing sums, practice letters and numbers, familiarizing with phonic sounds, identification of simple words, letter sound association, tracing and coloring, spatial understanding. The development of flow chart for the App is in the process in the meantime. It is also felt that parents and the public in general need to be sensitized about the importance of preschool education. Therefore, it is considered imperative to organize awareness campaign for Parents and Community on Preschool Education through Radio Talk which will reach even the remotest part of the state, discussion at the local TV channel/DDK, Parent-Teacher meetings and development of Information, Education and Communication (IEC) Materials. FLN Kits are also planned to be developed like Flash Cards, Word Cards, Reading Cards, Posters, Charts, Story Cards, Interactive Books, Math Manipulatives - dominoes, math puzzles, addition and subtraction manipulatives (Jigsaw Puzzle), and Wipe Clean Slates for Math practice.

Conclusion:

It can be seen that several steps have been taken by the state for the implementation of ECCE and FLN after the introduction of NEP2020. However, there are much works to be done in terms of infrastructure, research and teacher training. Some of the prevailing challenges faced by the

state are the need for additional classrooms for Preschool section and these Primary Schools have available land or space in their school compound. These schools also need different teaching learning materials and proper equipment for a conducive classroom environment. Another issue is that since the Preschools have been set up in the existing Primary Schools, no additional teachers have been recruited. The existing teachers have to be deployed to teach in preschool. Therefore, the number of teachers for Preschool is highly inadequate. However, for quality preschool education, a separate cadre of preschool teachers need to exist and only trained teachers who underwent an eligibility test may be recruited. This issue never been brought up by the authority. If the recruitment of teachers is not done in a systematic way, all the steps the government has taken through policies and other schemes cannot be successful. Another important aspect is the lack of supervision and monitoring mechanism in the state. Proper training management systems also need to be in place and professional development of existing teachers need to be made mandatory to the extent of effecting service matters and pay. Another missing piece is the lack of research in the area of ECCE in the state because without research, the ground realities cannot be realized and problems cannot be identified and addressed effectively. And more so, the impact of the initiatives and steps taken cannot be tracked.

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Impact of Coronal Mass Ejection on Geomagnetic Activity during Rising & Declining phase of Solar Cycle 25

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Abstract

*Our work presents a comprehensive analysis of the behaviour and effects of CMEs on geomagnetic activity over solar cycle 24, including the ascending (2008–2014) and descending (2015–2019) phases. We recorded 16,934 CMEs, the bulk (11,707) of which took place during the rising phase (2008–2014) and the remainder 5,227 during the declining phase (2015–2019). We reported a total of 69 GMs events during solar cycle 24, with 36 occurred during ascending phase and 33 of which during the descending phase of cycle 24. Furthermore, consistent with the peak of solar activity, we saw a greater intensity of large-scale CMEs (halo and partial halo CMEs) during the ascending phase. The majority of events (GMs, Halo CMEs, and Partial Halo CMEs) reached their peak activity in 2012 during the ascending phase, while the most events occurred in 2015 during the descending phase. This is probably due to the tail end of solar maximum activity moving into the cycle 24 declining phase. In solar cycle 24, the relationship between CME rates and geomagnetic indices (*Dst*, *Ap*, *Kp*) was more prominent during the descending phase. The conventional understanding that more CMEs and geomagnetic disturbances are generally produced at solar maximum (the ascending phase) is consistent with our findings. However, a larger correlation between CMEs and geomagnetic indices during the descending phase may suggest that the Earth's magnetosphere is still being more affected by solar activity.*

Keywords: Coronal Mass Ejections, Geomagnetic indices, GMs and solar cycle.

Introduction

The disturbances caused by variations between the earth's and sun's magnetic fields are known as solar activity and geomagnetic activity, respectively. The interplanetary medium connects the two processes; it is located between the sun and the interstellar medium. Coronal mass ejections (CMEs) significantly disrupt the solar wind. These disturbances are primarily responsible for Forbush decreases and geomagnetic storms (GMs). According to Lalan et al. (2013), CMEs produce significant disruptions in the interplanetary medium, which in turn induce sudden changes in the Earth's magnetic field and GMs. There is now broad recognition of the role of coronal mass ejection (CME) in enhancing geomagnetic and interplanetary activity (Tsurutani et al., 1988; Gosling, 1993; Shrivastava and Singh, 2002). The connection between CMEs and geomagnetic storms has been demonstrated by numerous researchers (Shrivastava & Venkatakrishnan, 2002; Gopalswami, 2006; Moon et al., 2010; Richardson, 2013). The solar and heliosphere observatory (SOHO) missions have been using the large angle and spectrometric coronagraph (LASCO) since 1996 to detect coronal mass ejections in solar corona pictures.

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This study examines how CMEs with geomagnetic parameters relate to one another throughout the ascending and descending phases of the cycle 24. Additionally, we have examined the relationship between these characteristics across the chosen time frame.

Data detection and Method Analysis

We picked up CMEs, Dst, Kp, and Ap during solar cycle 24's ascending and descending phases. The first seven years of solar cycle 24 (2008–2014) have been chosen for the rising phase, and the final five years (2015–2019) for the declining phase. Based on angular width, we have chosen CME event data for this investigation from SOHO/LASCO (cdaw.gsfc.nasa.gov/CME_list/). The Omni web provided the annual average of the storm time index DST, Ap, and Kp for geomagnetic disturbances relying on the daily data (<http://omniweb.gsfc.nasa.gov/form/dx1.html>). We have calculated the correlation coefficient between the ascending and descending phases of solar cycle 24 by plotting the cross-correlation graph between CMEs with geomagnetic activity parameters.

Result and Discussion

We have chosen the ascending and descending phases of solar cycle 24 based on the CME database. For the peak phase of solar cycle 24, we have considered the years 2008–2014, and for the falling phase, 2015–2019. The yearly occurrence of CME events for the ascending and descending phases of solar cycle 24 is depicted in figure 1. During solar cycle 24, 16,934 CMEs were detected, with 11,707 of those occurring during the rising phase (2008–2014) and 5,227 during the declining phase (2015–2019). This suggests that cycle 24 ascending phase observed the greatest amount of CME events.

The pie diagram of the halo and partial halo CMEs event during solar cycle 24 ascending and descending phases is displayed in figure 2. In the rising phase, there were 272 Halo CMEs and 833 Partial Halo CMEs; in the declining phase, there were 64 Halo CMEs and 221 Partial Halo CMEs. This implies that large-scale CMEs (such as halo and partial halo CMEs) were more intense during the rising phase, which is consistent with when solar activity peaked.

The number of events (halo, partial halo CMEs, and GMs) that occur annually during the ascending and descending phases of solar cycle 24 is depicted in figure 3. During solar cycle 24, we reported 69 GM events in total, 36 of which occurred during the rising phase and 33 during the falling phase. The majority of events (GMs, Halo CMEs, and Partial Halo CMEs) peaked in 2012 during the ascending stage. Since 2015 had the highest number of events during the descending portion of the cycle, the tail end of solar maximum activity transitioning into the descending phase is most likely the cause.

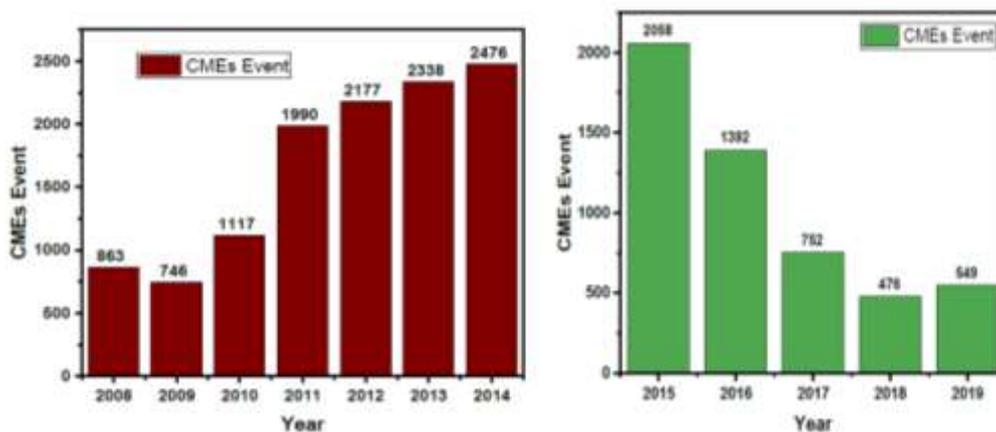


Figure 1. Display the annual CME event occurrence graph for solar cycle 24's ascending (left panel) and descending (right panel) phases.

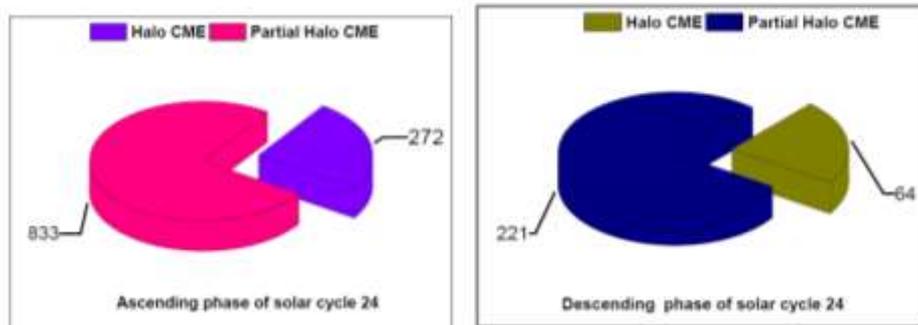


Figure 2. Displays the distribution of halo and partial halo CME events during solar cycle 24's ascending (left panel) and descending (right panel) phases.

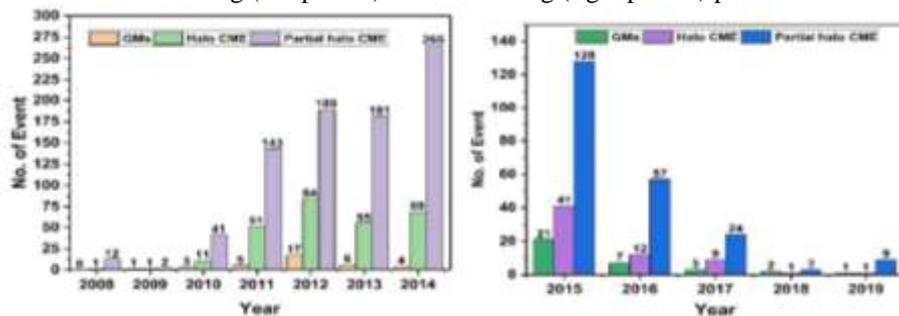


Figure 3. Displays the number of occurrences (GMs, halo, and partial halo CMEs) that occur each year during the solar cycle 24 ascending (left panel) and descending (right panel) phases.

During the ascending and descending phases of solar cycle 24, figure 4 illustrates the correlation between the coronal mass ejection (CME) rate and three geomagnetic indices (Dst, Ap, and Kp). In particular, we have shown that the CME rate and the Dst index are anticorrelated, with correlation coefficients for the ascending and descending phases being -0.79 and -0.98 , respectively. Stronger geomagnetic storms are indicated by an inverse relationship between the CME rate and the Dst index, which means that as the number of CMEs rises, the Dst value tends to become more negative. This is significant since geomagnetic storms are frequently caused by CMEs. The CME rate and Dst index have a reasonably significant negative association during ascending phase solar cycle 24. This implies that more major geomagnetic disturbances are linked to increased CME rates as the Sun approaches the solar maximum (increasing activity). The link gets significantly larger during the descending phase, suggesting that the CME rate and Dst have an even more obvious inverse relationship. This could imply that CMEs continue to have a major influence on Earth's geomagnetic environment even after solar activity declines after the solar maximum, but possibly less frequently, resulting in larger storms when they do occur. The descending phase's increased anticorrelation (correlation of -0.98) indicates that even fewer CMEs may cause more extreme geomagnetic disruptions during this time, perhaps as a result of other solar phenomena or the remaining high-speed solar wind streams. It might also suggest that when each CME meets with Earth's magnetic field, its effects could be more pronounced even when the overall CME rate declines.

Furthermore, we found a positive correlation between the Ap and Kp index and the CME rate. In solar cycle 24, the ascending phase has a correlation coefficient of 0.78 and Ap and Kp index, respectively, while the falling phase has a correlation value of 0.87 and 0.86 . Furthermore, we noticed that throughout rising and descending phases of solar cycle 24, Ap and Kp show the same change with CME rate.

Conclusion

The objective of this study is to investigate how coronal mass ejection affect the geomagnetic parameter during solar cycle 24 ascending and descending phases. The following are our conclusions:

- The rising phase of cycle 24 witnessed the greatest number of CME events.
- The rising phase was characterized by higher intensity large-scale CMEs (i.e., halo and partial halo CMEs), which is consistent with the peak of solar activity.
- During the rising phase, the majority of occurrences (GMs, Halo CMEs, and Partial Halo CMEs) peaked in 2012, while in the declining phase the majority of occurrences in 2015.
- In the declining part of solar cycle 24 as opposed to the ascending phase, we found a stronger association between CMEs and geomagnetic indices.

Given that geomagnetic storms can affect satellite operations, communication networks, and even Earth's power grids, this observation may be crucial to comprehending space weather trends. Researchers can forecast and get ready for such space weather occurrences by analyzing CMEs during both solar cycle stages.

Acknowledgement

The authors gratefully acknowledge National Geophysical Data Centre and OMNI Web Data Documentation to provide solar and geomagnetic data through their website. The CME data were obtained from SAHO LASCO website. We sincerely thank an anonymous referee for valuable suggestions to improve the quality of the paper.

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Effect of Perceived Family Environment on Aggressiveness of Adolescents

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Abstract

The aim of the present study was to measure and compare aggressiveness of adolescents in the light of their gender, residential area and perceived cohesion, conflict and control in family environment. The study was conducted on a sample of 200 adolescents of age range from 16 to 18 years. The sample was drawn randomly from both rural and urban areas of Saran and Siwan Districts of Bihar. The sample comprised of 100 male and 100 female adolescents. Hindi version of Family Environment Scale constructed and standardised by Bhatia and Chadha (2015) and Aggression Inventory constructed and standardised by Sultania (2010) were used to measure perceived cohesion, conflict and control in family environment and aggressiveness respectively. A self made Personal Information Inventory was also used to collect personal information of subjects. Application of t' test revealed that male adolescents are more aggressive than female adolescents. Urban adolescents are more aggressive than rural adolescents. Cohesion in family environment lowers aggressiveness in adolescents. Conflict in family environment increases aggressiveness in adolescents. Control in family environment lowers aggressiveness in adolescents.

Keywords:- Family, Environment, Aggressiveness, Adolescents, Gender, Residential Area

Introduction and Objectives

Family or home environment plays a crucial role in shaping the psychological and behavioural development of adolescents. As the primary setting where individuals experience emotional, social, and cognitive growth, the family environment significantly influences the formation of personality traits and behavioural tendencies (Bronfenbrenner, 2005). Among these behavioural tendencies, aggressiveness has garnered substantial attention from researchers and practitioners alike. Aggressive behaviour during adolescence can manifest in various forms, ranging from verbal hostility and physical aggression to relational aggression and defiance (Anderson & Bushman, 2021).

Adolescence is a developmental stage characterized by heightened emotional reactivity, identity exploration, and increased sensitivity to social relationships (Steinberg, 2022). During this phase, family interactions and parental practices play a pivotal role in regulating or exacerbating aggressive tendencies. Factors such as parental warmth, communication patterns, disciplinary practices, and overall family cohesion have been extensively examined in relation to adolescent aggression (Shek & Lin, 2020). Perceived home environment refers to how adolescents subjectively interpret and internalize their familial experiences (Grych & Fincham, 2020). This perception may significantly influence their emotional regulation, coping mechanisms, and interpersonal relationships.

Aggression in adolescence is not only detrimental to individual well-being but also poses challenges for families, schools, and society at large. Elevated levels of aggression are often linked to academic difficulties, peer rejection, and delinquent behaviours (Loeber & Farrington, 2019). Additionally, adolescents who exhibit aggressive tendencies may experience long-term consequences, including mental health disorders and criminal involvement.

Several theoretical perspectives provide a foundation for understanding the connection between home environment and adolescent aggression. Social learning theory (Bandura, 1977) posits that aggressive behaviour is often learned through observational learning and reinforcement within

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the family. Adolescents exposed to parental conflict, harsh discipline, or inconsistent parenting may model these behaviours, leading to the internalization of aggression as a coping mechanism.

Furthermore, Bronfenbrenner's ecological systems theory (2005) emphasizes the interplay between various environmental systems in shaping behaviour. The microsystem, which includes the immediate family environment, serves as a primary influence on adolescents' behavioural outcomes. Supportive family interactions foster emotional regulation, while negative family dynamics contribute to heightened aggression.

Attachment theory (Bowlby, 1982) also offers insights into the role of family relationships in aggression. Adolescents with insecure attachment styles, resulting from neglectful or inconsistent caregiving, may exhibit higher levels of aggression as a response to perceived threats or emotional distress.

Previous studies have shown that a number of factors within the family environment contribute to adolescents' perceptions and subsequent aggressive behaviour. Kuppens et al., (2021) reported that positive parent-child relationships characterized by warmth, empathy, and emotional support are associated with lower levels of aggression. Gershoff & Grogan-Kaylor, (2016) found that harsh or inconsistent discipline fosters resentment and aggressive tendencies in adolescents. Exposure to frequent family conflicts and violence increases the likelihood of aggressive behaviour as reported by Cummings & Davies, (2021). On the other hand effective parental supervision and involvement reduce the risk of aggressive tendencies (Lansford et al., 2018).

The objectives of this study are:

1. To examine the effect of gender on aggressiveness of adolescents.
2. To examine the effect of residential area on aggressiveness of adolescents.
3. To examine the effect of perceived cohesion in family environment on aggressiveness of adolescents.
4. To examine the effect of perceived conflict in family environment on aggressiveness of adolescents.
5. To examine the effect of perceived control in family environment on aggressiveness of adolescents.

Hypotheses

In the light of above objectives the following hypotheses were formulated:-

1. There will be significant difference between male and female groups on aggressiveness.
2. There will be significant difference between rural and urban groups on aggressiveness.
3. There will be significant effect of perceived cohesion in family environment on aggressiveness of adolescents.
4. There will be significant effect of perceived conflict in family environment on aggressiveness of adolescents.
5. There will be significant effect of perceived control in family environment on aggressiveness of adolescents.

Tools/Instruments

Hindi version of 'Family Environment Scale' constructed and standardised by Bhatia and Chadha (2015) and 'Aggression Inventory' constructed and standardised by Sultania (2010) were used to measure perceived cohesion, conflict and control in family environment and aggressiveness respectively. A self made Personal Information Inventory was also used to collect personal information of subjects.

Results and Discussion

Gender variable has been found significantly influencing aggressiveness of adolescents. The mean aggression score of male group is 32.602 with S.D. 4.423 while the same of female group is 27.554 with S.D. of 4.061. The obtained 't' ratio is 8.407 (Table-1). The obtained 't' ratio is highly significant at .01 level. The mean score of male group is significantly higher than that of female group because it is statistically proved. Higher score on 'Aggression inventory' denotes higher aggressiveness, so male group is significantly more aggressive than female group. Researches in biological field have shown that testosterone levels, which are generally higher in males, are associated with increased aggression (Mazur & Booth, 1998). This high level of testosterone might have significantly increased aggression level of male adolescents. Social learning theory suggests that boys are often reinforced for assertive and dominant behaviour, while girls are encouraged to be

passive and nurturing (Bandura, 1973). These gendered expectations might have shaped behavioural patterns from a young age, reinforcing aggressive behaviour in boys more than girls. Our findings align with previous findings of Archer, (2004) and Bjorkqvist, (2018).

Table – 1
Showing Means, S.Ds. and ‘t’ ratios of Aggression Scores- Male and Female Groups.

Groups	N	Means	S. D.	df	‘t’ ratio	Level of Sign.
Male	100	32.602	4.423	198	8.407	.01
Female	100	27.554	4.061			

Residential area has been found significantly influencing aggressiveness of adolescents. The mean aggression score of urban group is 31.075 with S.D. 4.469 while the same of rural group is 28.583 with S.D. of 4.306. The obtained ‘t’ ratio is 3.949 (Table-2). The obtained ‘t’ ratio is highly significant at .01 level. The mean score of urban group is significantly higher than that of rural group because it is statistically proved. Higher score on ‘Aggression inventory’ denotes higher aggressiveness, so urban group is significantly more aggressive than rural group. Urban areas, which are characterized by higher population density, greater exposure to media violence, and increased social competition, might be fostering heightened levels of stress and emotional reactivity in adolescents and this might be leading to increased aggression in urban adolescents. The relative anonymity and reduced social cohesion in urban neighborhoods might be also limiting the informal social controls that are more prevalent in rural communities and this might be contributing to higher aggressive tendencies among urban adolescents. On the other hand rural environments provide stronger familial bonds, community ties, and a slower-paced lifestyle, which act as protective factors against the development of aggressive behaviours (Resnick et al.,1997). The supportive nature of rural communities might be reducing feelings of alienation and promoting healthier coping mechanisms among adolescents while dealing with stress and interpersonal conflicts. Our findings support the findings of Singh and Misra (2021), who reported that adolescents in urban settings showed significantly higher levels of both physical and verbal aggression compared to their rural peers.

Table – 2
Showing Means, S.Ds. and ‘t’ ratios of Aggression Scores- Rural and Urban Groups

Groups	N	Means	S. D.	df	‘t’ ratio	Level of Sign.
Urban	120	31.075	4.469	198	3.949	.01
Rural	80	28.583	4.306			

In the light of qualitative norms given in the manual for Family Environment Scale subjects were placed in high (scores 61 and above), average (scores 46 to 60) and low (scores 45 and below) perceived cohesion FE groups. The mean aggression scores of high, average and low cohesion groups were compared. This perceived cohesion variable has been found significantly influencing aggressiveness of adolescents. The mean aggression scores of high, average and low cohesion groups are 28.108, 29.414 and 32.562 respectively. The obtained ‘t’ ratios for high x average; high x low and average x low cohesion compared groups are 1.763; 5.701 and 4.268 (Table-3). There has not been found significant difference between high and average cohesion groups. But both high and average cohesion groups have obtained significantly lower mean aggression scores than low cohesion group. Our findings are in line with the findings of Chen et al. (2024) who reported supportive and cohesive family environments acting as protective factors against the development of aggressive tendencies. Our findings support the findings of Sharma and Sangwan (2016) who reported significant negative correlation between cohesion and aggression of adolescents.

Table – 3
Showing Means, S.Ds. and ‘t’ ratios of Aggression Scores- High, Average and Low Cohesion Groups.

Groups	N	Means	S. D.	df	‘t’ ratios	Level of Sign.
H-Cohesion	55	28.108	4.112	133	1.763	NS
A-Cohesion	80	29.414	4.392			
H-Cohesion	55	28.108	4.112	118	5.701	.01
L-Cohesion	65	32.562	4.437			
A-Cohesion	80	29.414	4.392	143	4.268	.01
L-Cohesion	65	32.562	4.437			

In the light of qualitative norms given in the manual for Family Environment Scale subjects were placed in high (scores 37 and below), average (scores 38 to 51) and low (scores 52 and above) perceived conflict FE groups. The mean aggression scores of high, average and low conflict groups were compared. This perceived conflict variable has been found significantly influencing aggressiveness of adolescents. The mean aggression scores of high, average and low conflict groups are 32.751, 29.799 and 28.515 respectively. The obtained ‘t’ ratios for high X average; high x low and average x low conflict compared groups are 3.630; 4.896 and 1.809 (Table-4). There has not been found significant difference between low and average conflict groups. But both low and average conflict groups have obtained significantly lower mean aggression scores than high conflict group. Our findings support the findings of Singh (2011); and Sharma and Sangwan (2016) who reported significant positive correlation between conflict and aggression of adolescents.

Table – 4
Showing Means, S.Ds. and ‘t’ ratios of Aggression Scores- High, Average and Low Conflict Groups.

Groups	N	Means	S. D.	df	‘t’ ratios	Level of Sign.
H-Conflict	45	32.751	4.515	138	3.630	.01
A-Conflict	95	29.799	4.447			
H-Conflict	45	32.751	4.515	103	4.896	.01
L-Conflict	45	28.515	4.211			
A-Conflict	60	29.799	4.447	153	1.809	NS
L-Conflict	95	28.515	4.211			

In the light of qualitative norms given in the manual for Family Environment Scale subjects were placed in high (scores 18 and above), average (scores 14 to 17) and low (scores 13 and below) perceived control FE groups. The mean aggression scores of high, average and low control groups were compared. This perceived control variable has been found significantly influencing aggressiveness of adolescents. The mean aggression scores of high, average and low control groups are 29.046, 29.134 and 33.016 respectively. The obtained ‘t’ ratios for high X average; high x low and average x low control compared groups are 0.120; 4.628 and 4.952 (Table-5). There has not been found significant difference between high and average control groups. But both high and average control groups have obtained significantly lower mean aggression scores than low control group. Our findings support the findings of Sharma and Sangwan (2016) who reported significant negative correlation between control and aggression of adolescents.

Table – 5
Showing Means, S.Ds. and ‘t’ ratios of Aggression Scores- High, Average and Low Control Groups.

Groups	N	Means	S. D.	df	‘t’ ratios	Level of Sign.
H-Control	60	29.046	4.433	148	0.120	NS
A-Control	90	29.134	4.306			
H-Control	60	29.046	4.433	108	4.628	.01
L-Control	50	33.016	4.519			
A-Control	90	29.134	4.306	138	4.952	.01
L-Control	50	33.016	4.519			

Conclusions

The study finally led to the following conclusions :-

1. Male adolescents are more aggressive than female adolescents.
2. Urban adolescents are more aggressive than rural adolescents.
3. Cohesion in family environment lowers aggressiveness in adolescents.
4. Conflict in family environment increases aggressiveness in adolescents.
5. Control in family environment lowers aggressiveness in adolescents.

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A Study of Immoral Trafficking of a Girl Child in India

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Abstract

Trafficking in women and children is one of the worst abuses of human rights. But it is very difficult to estimate the scale of the phenomenon as trafficking is closely related to child labour, bonded labour, child marriage, kidnapping and abduction and prostitution even though these phenomena can exist also independent of trafficking. This article has attempted to analyse the nature, causes, modes and volume of trafficking in a country that has recently become a soft target in the India for trafficking in persons. India has failed to comply with certain international standards to combat the crime. The paper highlights the need to develop a multidimensional approach and focuses attention on structural factors of trafficking for recommending meaningful stratagems to counter the social evil.

Keywords: Relationships, Marriage, Rights of Women, Globalization

Introduction

Trafficking means a trade which is illegal and unlawful that is recognized by the Statues. Immoral Trafficking is carrying out as trade on Child and it is considered as immoral. Girls are trafficked for the purpose of sexual slavery, commercial sexual exploitation, extraction of organs or tissues, forced marriage, forced labor or domestic servitude and so on. Immoral trafficking after drugs and the arms trade is the third largest organized crime across the globe. India also suffers greatly from this evil. Immoral trafficking across the globe is mainly done for sexual exploitation where women and children are victimized. Immoral trafficking is done for a number of purposes but sadly in India the Act which deals with Child trafficking is the Immoral Trafficking Prevention Act (Act no.104) (I.T.P.A) 1956. This Act combats the Immoral trafficking when done for the purpose of sexual exploitation. Therefore, the legal provisions relating to Immoral trafficking as whole must be strengthened in order to prevent Immoral Trafficking in India and eventually at international level too. There are international conventions for preventing Immoral Trafficking of which more of the countries have ratified it. Immoral trafficking leads to violation of Child rights of the individuals and also they are subjected to re-victimization. The laws for immoral trafficking must be strengthened to meet all the requirements for preventing immoral trafficking. People who are below poverty line are most likely to become the subject of Human and Immoral Trafficking across the country and therefore they must be made aware about human and immoral trafficking and its consequences in order to prevent them from becoming victims.

Immoral Trafficking as an organized crime is a matter of global concern. It is considered as the third largest form of organized crime against Child after drugs and arms trafficking. India also suffers from this problem. Within India, the Eastern Himalayan region remains as the fastest growing areas of illicit Immoral Trafficking. The region has all the necessary elements that facilitate this crime such as, source, transit and destination countries located side by side and of whose borders are relatively unmanned. This makes it much easy for the traffickers to freely move across borders. As a result, the region has witnessed rapid growth in Child

Historical Background

While the roots of child exploitation and child abuse is emerging from human history. It is only few century ago that the need of recognition to child exploitation and child abuse as an enormous problem or issues faced by every society is given consideration, something that a child shall be protected from. It can be also stated that the exploitation against children existed from a very long time but was accepted. It was only in 20th century that child welfare became a major concern. By

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beginning of 20th century poor medical care, involvement of child into crimes, suicidal rates of child, malnutrition, absence of children's primary education and various other factors engaged in the minds of law reformers and other concern authorities all over the globe. In the last phase of 20th century even more threatening problem of abuse is identified. This time the focus was on sexual abuse of Child, many people found it so disturbing that they are even hesitated to think about it. It can be also said that the various factors serving for protection of child seems to be failing.

Although, history of child protection is marked with various errors, omissions and terrible events but these factors should not allow to abstruse various gains accomplished by social reformers, policy makers and other authorities worldwide, by countless number of child life's has been touched and improved with the dedication and hard work of these people. Child protection has gone through many changes in the past centuries, redefining its objectives as our understanding of abuse has been changed. Not only includes neglect, economic exploitation and cruelty but also emotional and psychological and sexual abuse as well.¹

So, child protection enters 21st century with substantial depth of good but also painful experience of warfare and laws.

Forms of Trafficking

There are three major forms in Child Trafficking. They are Sex Trafficking, Labour Trafficking (Bonded and forced Labour) and Child Trafficking (U.N.O.D.C, 2014).

Sex trafficking is broadly defined as, child trafficking is a crime involving the movement of children for the purpose of their exploitation and by gaining the profits from the child in different sexual ways. A child has been trafficked if he or she has been moved within a country, or across borders, whether by force or not, with the purpose of exploiting the child.² It is a well-known fact that women are traded, bought and sold and even the girl child and now a day's boy child also are been bought, sold like the objects and treated with no Child dignity and in a very cruel manner. Very frequently the term trafficking is used to describe cross-border activity but it is known that the majority of trafficking takes place within nation or state boundaries. The major factors that fuels sex trafficking are poverty, gender inequality, false marriage proposal (that ultimately turn into bondage), promise of a good job in another country, so on and so forth. It is also the truth of this illegal trafficking that the demand of the children whether it is a girl or the boy as young kids are sold and bought at a very higher rates as earlier those children were not sexually active as the demand of these type of kids or children as compared to the women or girls of the maturity age are higher. As such, the victims of Child Trafficking are forced into various forms of commercial sexual exploitation including prostitution, pornography, stripping, live-sex shows, military prostitution, sex tourism etc.³

If we are to take a report of the United Nations Development Fund for Women, it argues that sex trafficking appears to be growing in scope and magnitude, with increasing numbers of Countries being involved in it due to globalization and the relative ease with which traffickers are able to transport victims between countries through porous borders.⁴

The Trafficking Victims Protection Act (T.V.P.A) of 2000, defines labour trafficking as "the recruitment, harboring, transportation, provision, or obtaining of a person for labour or services,

¹ Available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=2ahUKEwiCzOyR1rvhAhUy8HMBHejiCzMqFjACegQIDBAK&url=https%3A%2F%2Fwww.w.o_pen.edu%2Fopenlearn%2Fbody-mind%2Fchildhood-youth%2Fworking-young-people%2Fhistory-child-protection&usg=AOvVaw1D9hxZolY1btizs_Ng4CxV (Retrieved on January 3, 2014).

² Available at: https://www.unicef.org/southafrica/SAF_pressrelease_notetrafficking...pdf (Retrieve on January 3, 2014).

³ Available at: https://www.researchgate.net/publication/308875329_Sex_Trafficking_and_the_Commercial_Sexual_Exploitation_of_Children (Retrieve on January 3, 2014).

⁴ Available at https://www.researchgate.net/publication/226816609_Smuggling_and_Trafficking_in_Human_Beings_The_Phenomenon_The_Markets_that_Drive_It_and_the_Organisations_that_Promote_It (Retrieve on April 11, 2014).

through the use of force, fraud or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage or slavery”.⁵ There are several forms of exploitative practices linked to labour trafficking that includes bonded labour, forced labour and even child labour.

Forced Labour is a situation in which victims are forced to work against their own will, under the threat of violence or some other form of punishment. This sought of trafficking has an adverse effect on child. Forms of forced labour include domestic servitude, agricultural labour, sweatshop factory labour, and begging etc.

Various factors such as poverty, discrimination, social exclusion and inadequate implementation of legislations are the root causes of labour trafficking for bonded labour across the world. It is probably the least known form of slavery today. Victims become bonded labourers when their labor is demanded as a means of repayment for a loan or service in which its terms and conditions have not been defined.⁶

As, it is seen that day by day the children are been trafficked for the purpose of the labor as thinking of these people are like that they just want the profits out of their works and they don't value these children as studied by the researcher that there are many type of labour works which are believed to be done well by the hands of the children and can give higher production with the perfection in work as the bangles making factories there the child labour are been done at a very higher rate as the working of the child in the bangle factories are strictly ban by the laws of India as the production of the bangle can harm the eye of the children, another is the production of ganja, hash, cannabis and marihuana are said as if been produced by the hands of the child than the quality of them are very fine in nature as these trade are illegal in nature so is the child labour in these areas.

Labour trafficking as a form of Child Trafficking is predominant in the Indian region. The caste system of the region is one of the main social factors on which the structure of bonded labour rests. Dalits or the so called untouchables are denied access to land in India. Badi caste in Western Nepal are forced to work in in Child conditions, and expected to perform labour for free. This is due to the (so called) existing upper castes, which are practicing active boycott system which keeps the lower caste socially subjecting and keeps them economically exploited.

Child Trafficking is another form of trafficking which is also a global curse. This violates children's rights and infringes upon the child's physical and mental integrity which is central to the experience of Child dignity, and poses a significant threat to the child's life. Children are trafficked in India for various purposes in which sexual exploitation is the primary goal. Child labour is a form of work that is likely to be hazardous to the physical and mental health, moral and social development of children and can also hamper their education. Other purpose for exploitation includes agricultural labour, factory works, domestic servitude, organs trade, child pornography, begging and other related criminal activities. Boys from Bangladesh and Pakistan have been trafficked to work in camel racing shows in the Middle Eastern countries. Trafficking for forced or arranged marriage is another critical issue in Afghanistan and Bangladesh where children are the major victims. Debt release, dispute settlement and forced military recruitment are other causes of trafficking of children.

Due to its transnational nature, the impacts of Child Trafficking reached almost to each and every country. According to the stop violence against women (S.V.A.W)⁷, trafficking patterns has been divided into 'source', 'transit' and 'destination' countries. The source countries refer to the country of origin of a trafficking victim the country where traffickers recruit women and girls. The transit countries are those where traffickers frequently move women through intermediary countries, often for extended periods when the women may be forced to work. Traffickers choose transit countries based near border areas. Such countries had their weak border controls, corruption on immigration officials and police personnel which eventually offer space for organized crime of

⁵ Available at: <https://www.nij.gov/topics/crime/human-trafficking/pages/welcome.aspx> (Retrieve on January 3, 2014).

⁶ Available at: https://www.acf.hhs.gov/trafficking/about/fact_labour.pdf (Retrieve on January 3, 2014).

Child Trafficking. Destination countries are those that receive trafficking victims. These are generally economically prosperous countries than the origin countries and more often they can support the commercial sex industry, forced labor industry etc.

International Instruments and Constitutional Provisions for Preventing Trafficking

Trafficking in Children is the gravest form of abuse and exploitation of Child beings. Many of Indians are trafficked every day to some destination or the other and are forced to lead lives of slavery. They survive in brothels, factories, guesthouses, dance bars, farms and even in the homes of well-off Indians, with no control over their bodies and lives.

Being wise and learned the constitution makers of India had known the nation of their vision cannot be achieved if the children of the country are not safe. Hence the makers of the constitution imitated their concern to protect and safeguard the interest and welfare of children by incorporating various provisions in the shape of Fundamental Rights contained in Part III of the Constitution of India, Directive Principles of the State Policy, Fundamental Duties, Schedules of the Constitution etc.

The Indian Constitution specifically bans the traffic in persons. *Article-23*, in the Fundamental Rights section of the constitution, prohibits "traffic in Child beings and other similar forms of forced labor". Though there is no concrete definition of trafficking, it could be said that trafficking necessarily involves movement /transportation, of a person by means of coercion or deceit, and consequent exploitation leading to commercialization. The abusers, including the traffickers, the recruiters, the transporters, the sellers, the buyers, the end-users etc., exploit the vulnerability of the trafficked person. Trafficking shows phenomenal increase with globalization. Increasing profit with little or no risk, organized activities, low priority in law enforcement etc., aggravate the situation. The income generated by trafficking is comparable to the money generated through trafficking in arms and drugs.⁷

Trafficking in Child beings take place for the purpose of exploitation which in general could be categorized as:

- (a) Sex –based; and
- (b) Non-Sex-based.

The former category includes trafficking for prostitution, Commercial sexual abuse, Pedophilia, Pornography, Cybersex, and different types of disguised sexual exploitation that take place in some of the massage parlors, beauty parlors, bars, and other manifestations like call girl racket, friends clubs, etc. Non sex based trafficking could be for different types of servitude, like domestic labor, industrial labor, adoption, organ transplant, camel racing marriage related rackets etc. But the growing traffic in Children is principally for the purpose of prostitution. Prostitution is an India problem which can be found in both developing and industrialized nations. Unfortunately, society remains tolerant of this abominable crime against women. There are ways of getting Children into prostitution that are common to many countries; then there are particular methods unique to a country. Probably the three most common methods are false employment promises, false marriages and kidnapping. But what makes Children girls vulnerable are economic distress, desertion by their spouses, sexually exploitative social customs and family traditions.

In a recent survey in India prostituted children cited the following reason for the remaining in the trade reasons that have been acquired in all concerned countries in descending order of significance their poverty and unemployment lack of proper integration services lack of options stigma and adverse social attitude family Expectations and pressure resignation and acclimatization of the lifestyle.

Fundamental Rights provided by the constitution to children-

- (a) Special provisions for women and children *Article-15(3)*,

Article-15 of the Constitution provides for prohibition of discrimination on the grounds of religion, race, caste, sex, place of birth.⁸ But *Article-15(3)* provides that state can make special provision for women and children.⁹ These rights are guaranteed to citizen of India by the Constitution

⁷ Malavika Kumar, "Trafficking in Women and Children - An ounce of prevention is worth a pound of cure", 69. Available at: <https://www.stopvaw.org>(Retrieve on January 3, 2014).

⁸ Constitution of India, 1950.

⁹ *Ibid.*

under *Article-15(1)*, thus reading together *Article-15 clause (1) and (3)* it can be concluded that while there can be no discrimination in general on the grounds of sex, special provisions in the case of women and children are permissible. The language of *clause (3)* is absolute terms and does not appear to restrict in any way the nature of ambit of special provision which the state may make in favor of women and children.¹⁰

(b) Right to Life and Personal Liberty *Article-21*,

Article-21 of the Constitution provides for protection of life and personal liberty.¹¹ The honorable Supreme Court has given a wider interpretation to *Article-21* of the Constitution in *Bandhua Mukti Morcha v. Union of India and Others*¹² the Supreme Court of India held that the procedure established by law has interpreted to mean due process of law. In this case *Article-21* was interpreted in the context of problem of child labour. The Apex court held that the bane of poverty is the root of child labour and the children are being subjected to deprivation of their meaningful right to life, leisure, food, shelter, medical aid and education. Every child shall have, without any discrimination on the grounds of caste, birth, color, sex, language, religion, social origin, property or birth alone, right to health, wellbeing, education and social protection. The judiciary with innovative child responsive approach has given new lease of life to the children's rights under the protective umbrella of *Article-21*.

(c) Right to Free and Compulsory Education *Article-21A*,

Article-21A of the Constitution provides free and compulsory education to all children of the age of 6 to 14 years as a fundamental right.¹³ This Article in the Constitution was inserted by the *Constitution (86th Amendment) Act, 2002*. The effect of insertion of this new Article was that the right to free and compulsory education for the children becomes a fundamental right and the state has now come under Constitutional obligation to provide free and compulsory education to all children between 6 to 14 years of age. And if the state fails to do so any person can see constitutional remedy against the state for the violation of the fundamental right under *Article-32* and 226 of the Constitution.

(d) Prohibition of Traffic in Human Beings and Forced Labor *Article-23*,

Article-23 of the Constitution provides for prohibition of traffic in human beings and forced labour.¹⁴ This *Article* consist of two declarations first of all that traffic in human beings, beggar and other similar forms of forced labour or prohibited. And secondly, that any contravention of this provision shall be an offence punishable in accordance with law. The prohibition applies not only to the state but also to private persons, bodies and organizations. In *Raj Bahadur v. Legal Remembrance of Government of West Bengal*, it was held that *Article-23* of the Constitution of India provides for prohibition of traffic, inter alia, in human beings, which would include traffic in women and children for immoral or other purpose. Therefore, Immoral Traffic (Prevention) Act, 1956 is made by Parliament for the purpose of punishing acts which result in traffic in human beings.¹⁵

(e) Prohibition of Employment of Children in Factories, Mines, etc. *Article-24*,

Article-24 of the Constitution provides for prohibition of employment of children in factories, mines, etc.¹⁶*Article-24* was discussed in detail by honorable Supreme Court in *Bandhua Mukti Morcha's case*, it was observed in this case that "*Article-24* of the Constitution prohibits employment of children below the age of 14 years in a factory or mine or in any hazardous employment, but it is hard reality that due to poverty the children is driven to be employed in a factory, mine or hazardous employment. Pragmatic, realistic and constructive steps and actions are required to be taken to enable the child belonging to poor, weaker section, dalits, tribal and

¹⁰ V.N Shukla, *Constitution of India* 71-75 (Eastern Book Company, Lucknow, 1998).

¹¹ Constitution of India, 1950.

¹² (1997) 10 SCC 549.

¹³ Constitution of India, 1950.

¹⁴ AIR 1953 Cal 522 at 524.

¹⁵ Constitution of India, 1950.

¹⁶ *Supra* note52.

minorities, enjoy their childhood and develop their full blossomed personality- educationally, intellectually and culturally – with the spirit of enquiry, reform and enjoyment of leisure, child labour, therefore must be eradicated through well-planned, poverty focused alleviation, development and imposition of trade actions in employment of the children. Total banishment of employment may drive the children and mass them up into destitution and other mischievous environment, making them vagrant, hard criminals and prone to social risk. Therefore, while exploitation of children must be progressively banned, simultaneous alternatives to the child should be evolved including providing education, healthcare, nutrient food, shelter and other means of livelihood with self-respect and dignity of person. Immediate ban on child labour would be both unrealistic and counter-productive. Ban of employment of children must begin from the most hazardous and intolerable activities like slavery, bonded trafficking, prostitution, pornography and other dangerous forms of labour.”

Legal Framework Relating to Immoral Trafficking

- In Indian penal law 1860 (section 359 to 373) deals with the offences related to kidnapping abduction and buying and selling of minors.
- Section 363 A deals with the kidnapping for begging, Section 366 A deals with procreation of minor girls, Section 366 deals with imputation of girls, Section 369 deals with kidnapping of children from one person and selling it to another person, Section 372 or Section 373 deals with the selling of girls for prostitution.
- Immoral traffic (Prevention) Act, 1956 deals with the offences related to women and girls.
- Juvenile Justice (Care and Protection of Children) Act 2015 has been passed by the parliament of India the basic objective of Act to the replace the existing India Juvenile delinquency law, Juvenile justice (Care and Protection of Children) Act 2000.

Judicial Approach for Prevention of Trafficking

The first case in which the concept of immoral trafficking arises in *Vishal Jeet v. Union of India and others*¹⁷, public interest litigation was filed by an advocate seeking certain directions from the Central bureau of investigated to institute an enquiry against those police officers under whose jurisdiction red light areas as well as Devdasi and Jogin tradition was flourished and to take necessary action against such arising erring police officers and lawbreakers; the Supreme Court issued instructions that all state governments should direct the law enforcement authorities to take appropriate and swift actions against child trafficking and also directed to set up and consult the committee with experts from all fields to make suggestions regarding measures for eradicate of child prostitution, for care and rehabilitate the rescued girls, for setting up of rehabilitation home, and to examine the existence of traditional Devdasi and Jogin in their respective states.

In *Gaurav Jain v. Union of India and others*¹⁸, a public interest litigation was filed to seek directions to the respondent for making separate schools with vocational training facilities and hostels for children of prostitutes. In this regard the Supreme Court gave a historic judgment on the rights of children of prostitutes. Following are the directions issued by Supreme Court-

1. It is the duty of the government and all voluntary and non-governmental organizations to take necessary measures to protect and rehabilitate these children from prostitution so that they can lead a life with dignity as a person.
2. The court also directed that education, financial support, and marketing facilities should be provided to these children for the goods provided by them.
3. The Court also directed that prostitute marriages should be arranged in order to eradicate the problem of child prostitution. Marriage would give them real social status in the society. They should also be provided with housing facilities, legal aid, free counselling assistance and all similar aids and services to prevent them from falling back into the trap of red light area again.

¹⁷ AIR 1990 SC 1412.

¹⁸ AIR 1990 SC 1412.

4. The Court held that economic empowerment has been one of the major factors that could prevent young girls from continuing their practices of dedicating themselves towards prostitution as devdasis, jogins or venkatasins. Referring to the measures taken by various States, the Court ordered the social welfare department should undertake similar rehabilitation programs for the victims so that the foul practice is totally eradicated and they are not again trapped into prostitution.
5. The Court ordered that the child prostitutes and children should be rescued and rehabilitated under the nodal department, namely, Department of Women and Child Development under the Ministry of Women and Human Resources, Government of India, which will develop appropriate schemes for proper and effective implementation. The Court directed the Ministry of women and child Welfare, Government of India for the establishment of more Juvenile homes.
6. The Court ordered the Government to set-up a Committee within a month from the judgment conduct an in-depth study of these issues and to develop appropriate schemes. Within three months the report should be submitted. On the basis of this report, guidance for effective implementation of schemes would be given to the state government.

The Nodal Department would enforce and be regularly supervised by the Ministry of Welfare. A permanent Committee of Secretaries should be set up to review the implementation progress on an annual basis and to take such other steps as may be appropriate for the effective implementation of the Schemes. Periodical progress as to financing and enforcing the scheme should be submitted to the Supreme Court registry. It is hoped, the Court said, that the above law and direction would alleviate the human problem by rehabilitating of the unfortunate fallen women caught in the trap of prostitution, their children would be brought into the mainstream of the social order. These directions would enable them to avail the equality of opportunity and of status with dignity of person which is the arch of the Constitution.

In case of *Sakshi v. Union of India*,¹⁹ the Supreme Court gave directions regarding manner of holding trial in child sexual abuse cases. The court held that a screen or some such arrangement of this kind could be made where the victim or witness does not see the body or the face of the accused; the question put in cross examination on the behalf of the accused should be given in writing to the presiding officer, who can explain it to the victim in non-embarrassing manner. The victim of child sexual abuse while giving testimony should be allowed sufficient breaks as and when required.

In the case of *Harpal Singh v. State of Himachal Pradesh*,²⁰ it was argued by the prosecution that sexual intercourse without any injuries were found on the private parts and stated that it was a case of sexual intercourse with consent, but the Supreme Court is of the view that since the girl was below the age of 16 years, the question of consent is totally irrelevant. Hence, the court held that sexual intercourse below the age of 16 years amounts to rape, whether it is done with or without consent.

In *Bachpan Bachao Andolan and others v. Union of India and others*, the Delhi High Court observed that “trafficking in women and children is the gravest form of abuse and exploitation of human beings. Thousands of Indians are trafficked every day to some destination or the other and were forced to lead lives of slavery. They are forced to survive in brothels, factories, guest houses, dance bars, farms and even in the homes of well-off Indians, with no control over their bodies and lives. Though there is no concrete definition of trafficking, it could be said that trafficking necessarily involves movement or transportation, of a person by means of coercion or deceit, and consequent exploitation leading to commercialization. The abuser, including the traffickers, the recruiters, the transporters, the sellers, the buyers, the end users, etc, exploit the vulnerability of the traffic person. Trafficking shows phenomenal increase with globalization. Increasing profit with little or no risk, organized activities, and low priority in law enforcement, expect, etc. Aggravate the situation. The income generated by trafficking is comparable to money generated through trafficking in arms and drugs.”

¹⁹ AIR 2004 SC 3566

²⁰ AIR 1981 SC 361.

Concluding Observations

Once the Laureate Dr. Rabinder Nath Tagore said: a nation's children are its supremely important asset and nation's future lies in their proper development and safety. The protection of children is indeed the protected future. The view of the girl has been found by the honorable Supreme Court in the judgement of *Laxmikant Pandey* case where in Justice P.N Bhagwati beautifully described the role of children in the society in his own words. He said: "Children are supremely important national asset and the future well-being of the nation depends on how its children grow and develop. The child is a soul with a being, a nature and capacities of its own, who must be helped to find them, to grow into their maturity, into fullness of physical and vital energy and the utmost breadth, depth and height of its economical, intellectual and spiritual being; otherwise there cannot be healthy growth of the nation."

Trafficking of child should be taken as crime against humanity and the protection of children from such exploitation and abuse is the collective responsibility of society, family, and state. In this millennium the question of Child rights has emerged as the most vibrant issue for the discussion among the lawmakers, activists, and other authorities working for a welfare state. The fact remains that even today children are a part of disadvantaged by naughty groups so as far as the relation of human rights and social justice are concerned. Child being not a complete political entity in true sense is the main reason for this lacuna and also, they are physically, mentally and economically weak and defenseless. Due to the era of rapid growing globalization the rights of child and their development has been given least amount of consideration. This phenomenon not only fractures the whole value system, but also their present safety, social and economic needs.

The future of humanity depends largely upon child and there is no doubt accepting this fact, but even then very partial and narrow approach has been followed towards protection and safeguard. A concerted approach or efforts are required on part of every member of the society starting from the family which is the basic unit of the society for a child and has the primary responsibility to provide care and protection for such child. A child shall be provided with conducive environment to develop his or her physical, mental, moral and spiritual personality and it is our duty being a responsible member of civilized society to fulfill such needs. It is our duty to give them a world free from hate, neglect, violence and abuse. India is a developing nation and its government has done much work in the direction of welfare of children and protecting them from crimes, abuse and exploitation, but still a lot more has to be done in the part of the government to practice proper enforcement of the rights of the children and cast effective implementation of laws, policy and programs in the society. In the light of the foregoing concluding remarks, the present research Scholar has come up with some suggestions for the welfare and protection of child, which are as follows-

- In India most of the people or aware of police helpline number 100 to contact the police in case of any emergency but only a few of them are aware of the fact that a CHILDLINE service number exists which is 1098 for protection of child in case of emergency. But this number is regulated by an NGO 'Childline' only in selected cities of India. Hence it is suggested that like the number 100 this number should also be regulated in whole of India and the number should be displayed at all public places such as railway stations, bus stations, airports, public parks, amusement places, banks, shopping malls, hotels and restaurants, police stations or posts, schools and other institutions, all government and private or semi-government buses, autos and other modes of public convenience used by public at large with a view that general public in saluting children may get aware of this helpline number in case of any emergency.
- Child sex tourism is another form of crime which is increasing nowadays in the coastal regions of India and particularly in Goa and Kerala where foreigners came to satisfy their lust of sex with children. Therefore it is suggested that the state should take an immediate action which requires effective coordination among the state police agencies and central law enforcement agencies, including immigration authorities, airport authorities. Person

identified or accused, as child sex tourist should be prohibited from entering the territorial boundaries of Indian state. Government should prepare an online database of these accused or convicted persons who came to India as child sex tourists.

- In the modern society that technology has evolved in such a manner that it may provide merits and de merits at the same time. Many a times Internet can be used as a medium of public opinion and to raise voice against any crime against children but this medium can also be used as the source for creating or committing crime against children. The abuse of children over the Internet and phenomena of child pornography is rapidly increasing which is needed to be addressed on urgent basis. There are porn websites which depicts the children as it object of sexual pleasure. These websites are the reason behind thoroughly corrupting the mind of the people as well as children. After watching the websites not only adults but children also started committing crime and sexual violence against other children such as girl child.

Therefore, it is suggested that government must evolve some technology to filter these websites with a view to block all pornographic sites which shows child pornography. There are millions of such pornographic sites hence, only by issuing law to put a ban on the sites will not help the government to reduce its ill effects on adults and children but a method technologically has to be evolved to put a restriction on these sites. Parents must also use the software, which can filter these pornographic websites when their children are using, or accessing Internet. Similarly in schools and other institutions where a child can access through internet by computers or other devices, shall install this filtering software so as to protect children from accessing those porn sites.

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Socio-Economic Conditions of Religious Minorities in Odisha: Challenges and Opportunities with a Media Perspective

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Abstract

Religious minorities in Odisha, including Muslims, Christians, Sikhs, Buddhists, and Jains, encounter distinct socio-economic challenges. This paper delves into their educational attainment, economic status, health, housing conditions, and political representation. It also examines government initiatives aimed at their upliftment and the media's role in shaping public discourse and policy. The study utilizes a combination of primary and secondary data, including government reports, academic research, and media analyses, to provide a comprehensive overview of the current scenario. The study also explores the influence of cultural and regional factors on these challenges while assessing opportunities for empowerment through targeted interventions and responsible media narratives.

The BJP-led government has introduced several welfare schemes to enhance the socio-economic conditions of religious minorities, emphasizing inclusive development and national integration. By addressing these concerns, this research provides actionable recommendations to promote equity, inclusion, and communal harmony in Odisha.

Keywords: Religious minorities, socio-economic challenges, media representation, inclusive development, Odisha

Introduction

Odisha is home to a wide variety of religious communities. According to the 2011 Census, the state's population comprises approximately 2.17% Muslims, 2.77% Christians, and smaller percentages of Sikhs, Buddhists, and Jains. Despite constitutional safeguards and targeted government initiatives, these communities often grapple with economic disparities, educational challenges, and social marginalization. This paper aims to explore the socio-economic conditions of religious minorities in Odisha, identify the challenges they face, and assess the role of media in influencing public perception and policy formulation.

This paper focuses on the socio-economic conditions of religious minorities in Odisha, exploring their access to essential services, employment opportunities, education, and the influence of media on their representation and social mobility. Media, as a powerful instrument of communication, plays a dual role—either amplifying minority voices or reinforcing stereotypes. Under the leadership of the BJP government, various initiatives such as the Pradhan Mantri Jan Vikas Karyakram (PMJVK) have been introduced to enhance the quality of life for minority communities through skill development, education, and health services. By understanding the unique challenges faced by these communities, this research aims to propose actionable strategies for fostering equity, inclusion, and balanced media representation.

Religious minorities in Odisha, particularly Muslims, Christians, and certain tribal communities, contribute significantly to the state's social and cultural diversity. However, they face socio-economic disparities that hinder their development. According to the Census of India 2011, Muslims constitute around 14.04% of the state's population, while Christians account for about 2.4%. Tribal communities also make up approximately 22.5% of the state's population. These communities are often concentrated in rural and remote areas, where access to education, healthcare, and economic opportunities remains limited.

In the educational domain, the literacy rate among religious minorities in Odisha lags behind the state average. The Literacy Rate for Muslims is approximately 65.6%, compared to the state average of 72.9% (Census 2011). Similarly, tribal communities have a literacy rate of around 54.6%, which is

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significantly lower than the state's overall literacy rate. These statistics highlight the need for improved educational infrastructure and access to resources for minority groups.

Research Objectives:

1. To analyze the socio-economic status of religious minorities in Odisha.
2. To identify systemic barriers to education, healthcare, and employment.
3. To explore the role of governmental and non-governmental initiatives in addressing these challenges.
4. To provide data-driven recommendations for improving the socio-economic conditions of religious minorities in Odisha.

Methodology:-This study employs a mixed-methods approach, combining qualitative and quantitative data. The Research methodology involves a analysis of Primary and secondary sources, including Census data and National Sample Survey reports on socio-economic indicators of religious minorities in Odisha. Statistical analysis of literacy rates, employment trends, and income levels. Analysis of data from government and NGO reports to assess the impact of welfare schemes. Case studies of government schemes and their impact on minority communities.

Socio-Economic Conditions of Religious Minorities in Odisha

1. **Education:** Educational attainment among religious minorities in Odisha varies. For instance, the literacy rate among Muslims is 70%, while it is 80% among Christians, compared to the state average of 72.9%. Factors such as poverty, discrimination, and inadequate infrastructure contribute to these disparities. The ANWESHA scheme, launched in 2015, aims to bridge this gap by enrolling Scheduled Tribe (ST) and Scheduled Caste (SC) students in reputable private English-medium schools in urban areas, covering all educational expenses. As of recent reports, over 21,000 students across 17 districts have benefited from this program.
2. **Employment:** A significant portion of religious minorities is engaged in informal sectors, leading to job insecurity and low wages. Government initiatives like the Seekho Aur Kamao (Learn & Earn) scheme focus on skill development to enhance employability among minority youth. However, access to such programs remains limited due to factors like lack of awareness and socio-economic barriers.
3. **Health and Housing:** Minority communities often reside in underdeveloped areas with inadequate healthcare facilities and poor housing conditions. The Sahaya scheme, initiated by the Social Security & Empowerment of Persons with Disabilities Department, aims to provide protection, care, and rehabilitation for beggars and destitute individuals, many of whom belong to minority communities.
4. **Political Representation:** Political participation among religious minorities is limited, leading to underrepresentation in decision-making bodies. Their capacity to influence policies that directly impact their communities is impeded by this lack of representation.

Challenges Faced by Religious Minorities

- **Economic Disparities:** Limited access to financial resources and credit facilities restricts economic advancement.
- **Social Discrimination:** Prejudices and stereotypes perpetuated by societal norms and sometimes by media portrayals contribute to social exclusion.
- **Media Representation:** Mainstream media often either overlooks issues pertinent to minorities or portrays them negatively, influencing public perception and policy responses.

Government Initiatives for Religious Minorities

The BJP government has introduced multiple welfare schemes aimed at improving the socio-economic conditions of religious minorities in Odisha and across India. Some of the major initiatives include:

- **Pre-Matric and Post-Matric Scholarships:** These scholarships provide financial assistance to minority students at various educational levels to reduce dropout rates and encourage higher education.
- **Subhadra Yojana:** Launched in September 2024, this women-centric welfare scheme provides direct financial assistance to women aged 21 to 60 years from economically weaker sections, including those from minority communities. Each beneficiary receives ₹50,000 over five years, aiming to promote economic empowerment.
- **Multi-Purpose Community Centres:** In November 2023, the Odisha government sanctioned ₹45 crore for constructing 150 multi-purpose community centres across 22 districts. These centres aim to preserve the culture and heritage of minority communities and provide spaces for community activities.

- **Pradhan Mantri Jan Vikas Karyakram (PMJVK):** The Pradhan Mantri Jan Vikas Karyakram (PMJVK) is a flagship initiative by the BJP-led government aimed at improving the overall socio-economic conditions of religious minorities. This program focuses on enhancing infrastructure in minority-dominated areas by constructing schools, health centers, hostels, and community development programs. By strengthening essential services, PMJVK ensures that minority communities have better access to quality education and healthcare facilities, addressing long-standing disparities. Furthermore, the program emphasizes skill development and vocational training, equipping individuals with market-relevant skills to enhance employability. By fostering economic empowerment, PMJVK helps bridge the socio-economic gap and promote national integration.

The Pradhan Mantri Jan Vikas Karyakram (PMJVK) program aims to improve the socioeconomic conditions of minorities and give them basic amenities to make people's lives better and reduce imbalances in 18 districts that have a lot of minorities. These districts are Gajapati, Rayagada, Kandhamal, Sundergarh, and Bhadrak Municipality of Bhadrak District. It is planned that the projects that fall under PMJVK will mostly involve building facilities in the areas of health, education, and skill development. In addition to new ways to improve the social, economic, and living situations of minority groups and other groups that live in the catchment areas.

- **Nai Roshni Scheme:** The Nai Roshni Scheme is a leadership and skill development program specifically designed for minority women. Recognizing the role of women in socio-economic progress, the scheme provides training in digital literacy, financial literacy, legal rights awareness, and leadership development. By equipping women with these critical skills, the program enhances their confidence and empowers them to participate in community development, financial independence, and decision-making processes. The scheme also addresses social barriers that hinder women's participation in the workforce, promoting gender equality within minority communities.
- **Nai Manzil Scheme:** The Nai Manzil Scheme provides formal education and vocational training to school dropouts among religious minority communities. Many individuals from these communities are unable to complete their education due to financial constraints, lack of access, or socio-cultural challenges. This scheme offers bridge courses to help them re-enter the education system and gain formal qualifications. Additionally, it enhances employment prospects by linking trained individuals with job opportunities, thereby reducing unemployment and improving the economic standing of minority communities.
- **Maulana Azad National Fellowship:** The Maulana Azad National Fellowship is a crucial initiative supporting minority students in pursuing higher education and research. By providing scholarships, the program encourages students from underprivileged backgrounds to continue their studies in universities and research institutions. This initiative fosters academic excellence and ensures that talented minority students have the resources needed to contribute to fields such as science, social sciences, humanities, and technology. By supporting higher education, the scheme promotes minority representation in academic and professional fields, ultimately contributing to social mobility and economic development.
- **Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY):** The Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY) is a revolutionary healthcare initiative that provides financial support for medical treatment to economically weaker sections, including religious minorities. Through this scheme, beneficiaries receive health insurance coverage of up to ₹5 lakh per family per year, enabling them to access quality medical care without financial burden. The program has significantly improved healthcare accessibility in rural and semi-urban areas, ensuring that religious minorities receive proper medical treatment and preventive healthcare. By strengthening the health infrastructure, PMJAY contributes to the overall well-being of marginalized communities.
- **Stand-Up India and Mudra Yojana:** Economic empowerment is a key focus of the Stand-Up India and Mudra Yojana schemes, which provide financial assistance to minority entrepreneurs to start and expand businesses. Under these schemes, small and micro-businesses receive collateral-free loans, encouraging self-employment and financial independence. Many minority communities, particularly artisans and small-scale traders, benefit from these programs, as they offer credit support and business mentorship. By facilitating entrepreneurship, these schemes help bridge economic disparities and create sustainable livelihood opportunities for religious minorities.
- **Hunar Haat Initiative:** The Hunar Haat Initiative is a unique platform that showcases the traditional skills and craftsmanship of artisans from minority communities. Organized by the Ministry of Minority

Affairs, this initiative provides artisans with market access, financial support, and training in modern business techniques. By promoting handmade products, Hunar Haat ensures the economic sustainability of artisans and preserves India's rich cultural heritage. The initiative has helped thousands of craftsmen secure better income opportunities, enhancing their social and economic status.

- **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):**-While this is a national program, the Odisha government has enhanced its implementation to ensure greater participation from religious minorities, particularly Muslims and Dalits, in rural areas. The scheme provides job security and income support for the rural poor, thus benefiting religious minorities engaged in agricultural labor and rural employment.

By implementing these welfare schemes, the BJP-led government has taken significant steps toward improving the socio-economic conditions of religious minorities. These initiatives not only address key challenges such as education, healthcare, and employment but also promote inclusive development and national integration. However, ensuring effective implementation and increased awareness of these programs remains crucial for maximizing their impact. With continued policy focus and media advocacy, religious minorities in Odisha can achieve greater social and economic empowerment, contributing meaningfully to the state's progress and communal harmony.

Multi Sector Development Program for Minorities: Different Multi Sector Development Programs funded by the central government have been put into action in Gajapati, Rayagada, Kandhamal, Sundargarh, and the Bhadrak Municipality in Bhadrak district.

Media Representation and Policy Implementation Gaps

Religious minorities in Odisha are often underrepresented or misrepresented in mainstream media, leading to skewed public perceptions. The lack of diversity in newsroom hiring and editorial decision-making results in biased portrayals and an underreporting of critical socio-economic issues affecting these communities.

Sensationalist reporting on communal issues further alienates minority groups instead of fostering inclusivity. The government has attempted to address this concern by promoting community media initiatives and ensuring the dissemination of positive narratives through platforms such as Bharat Nirman Public Information Campaigns.

However, greater efforts are needed to ensure balanced and fair representation. Encouraging more individuals from minority communities to pursue careers in journalism, establishing dedicated community radio stations, and facilitating partnerships between government agencies and media outlets for responsible reporting can help mitigate biases and ensure that the voices of religious minorities are adequately represented.

Opportunities and the Role of Media in Supporting Religious Minority Communities in Odisha

The media plays a crucial role in shaping public opinion, influencing policy, and empowering marginalized communities, including religious minorities in Odisha. Through responsible journalism and strategic media interventions, the media can bridge the gap between government policies and their implementation, highlight socio-economic challenges, and promote a more inclusive society.

1. Policy Advocacy: Addressing Gaps and Driving Reforms

One of the most impactful roles of the media is in policy advocacy, where it can highlight gaps in policy implementation and push for necessary reforms to address the concerns of minority communities.

Examples:

- **Implementation of PM's new 15-Point Programme for Minorities:** Investigative journalism can reveal whether funds allocated under this program for education, skill development, and employment for minorities are being effectively utilized in Odisha. For instance, reports by The Hindu and The Indian Express have exposed cases where funds meant for minority welfare were either underutilized or diverted.
- **RTI-based Reporting:** Media houses can use Right to Information (RTI) applications to expose inefficiencies in government schemes targeted at minorities, such as pre-matric and post-matric scholarships, which often face delays in disbursement.

2. Education and Awareness Campaigns: Bridging the Information Gap

A significant challenge faced by minority communities is lack of awareness about government schemes, educational opportunities, and legal rights. The media can play a proactive role in educating these communities through various formats, including news reports, television debates, digital campaigns, and social media initiatives.

Examples:

- **Community Radio Programs:** Stations like Radio Namaskar (Puri, Odisha), Radio Bulbul in Bhadrak and Radio Dhimsa (Koraput) can run programs in regional languages informing minorities about their rights and available schemes such as the Nai Roshni (Leadership Development for Minority Women) program.
- **Social Media & Digital Platforms:** Platforms like YouTube, X, WhatsApp, and Facebook are widely used by the youth. Initiatives such as “Sachetan Odisha” (Odisha Awareness)” can create short videos and infographics on scholarships, employment opportunities, and constitutional rights for minority communities.
- **Newspaper Columns & Helpline Numbers:** Regional newspapers such as Sambad, Dharitri, Prajatantra, Prameya, Pragativadi, The Samaja and many more can dedicate columns to government schemes and legal rights awareness, while NGOs and government bodies can collaborate with media houses to promote helpline numbers for legal and social assistance.

3. Positive Representation: Countering Stereotypes and Celebrating Success Stories

The portrayal of religious minorities in the media significantly impacts social perceptions and community integration. Responsible media coverage can break stereotypes, highlight achievements, and encourage unity.

Examples:

- **Success Stories of Minority Entrepreneurs:**
 - Showcasing Muslim weavers in Cuttack who have preserved traditional handloom techniques.
 - Highlighting Christian-run educational institutions in Kandhamal, which have contributed significantly to literacy rates in tribal areas.
- **Minority Representation in Governance & Public Service:**
 - Featuring Muslim and Christian women who have emerged as sarpanches (village heads) or social activists.
 - Interviews with Odisha’s religious minority bureaucrats, journalists, and artists to inspire young people from these communities.
- **Documentaries & Cultural Programs:**
 - Documentaries on Odisha’s Jewish traders in Kendrapara or the Buddhist heritage of Dhauli to emphasize the state are pluralistic past.
 - Community festivals and interfaith dialogues covered in local television and print media to promote religious harmony.

The media’s role in advocating for policy reforms, spreading awareness, and promoting inclusivity can lead to greater socio-economic upliftment of religious minorities in Odisha. However, this requires ethical journalism, fact-based reporting, and collaboration between media houses, NGOs, and government agencies.

Role of Media in Shaping Public Perception and Policy

The media plays a critical role in shaping the narratives surrounding minority communities. In Odisha, religious minorities often face negative stereotyping, particularly in relation to communal issues, which can marginalize their voices. Media outlets, by focusing on success stories, educational achievements, and economic empowerment, can help challenge stereotypes and encourage positive perceptions. Community radio initiatives and local media outlets can further empower minorities by offering them a platform to narrate their stories and share their concerns.

Recent reports in Odisha show that local media coverage of government welfare schemes like Ayushman Bharat has resulted in a 40% increase in program awareness among minority communities. This highlights the potential for media to drive greater participation in state initiatives and ensure that minorities benefit from policies aimed at their welfare.

Furthermore, digital media has become a critical tool in bridging educational and healthcare gaps. The rise of mobile-based applications for healthcare services and online education platforms has helped religious minorities, particularly in rural Odisha, access services they might have otherwise been excluded from.

Findings and Discussion

1. Educational Disparities

Religious minorities in Odisha face significant barriers to accessing quality education. Limited infrastructure, inadequate funding, and a lack of well-equipped schools in minority-dominated areas contribute to this disparity. Many students from these communities struggle with affordability and accessibility, often having to travel long distances for better educational opportunities.

The Maulana Azad National Fellowship and PMJVK have significantly contributed to improving access to education for religious minority students. These programs provide financial aid, hostel facilities, and infrastructure support to enable minority students to pursue higher education and vocational training. Special coaching centers and bridge courses under the Nai Udaan and Nai Roshni schemes have also played an instrumental role in preparing students for competitive exams and self-employment opportunities.

However, despite these initiatives, digital literacy and access to online education remain a challenge, especially in rural and remote areas. Government efforts to provide digital infrastructure, such as distributing free tablets and ensuring internet connectivity in minority-populated regions, need to be further intensified. Additionally, greater media coverage of educational achievements within minority communities can serve as an inspiration and counter negative stereotypes.

2. Healthcare Accessibility

Healthcare remains a critical challenge for religious minorities in Odisha, particularly in remote and economically weaker sections of society. Many minority-dominated regions suffer from inadequate healthcare infrastructure, including a lack of hospitals, specialized medical staff, and essential medicines. As a result, these communities face high maternal and child mortality rates and a prevalence of preventable diseases.

The Ayushman Bharat scheme has been a game-changer in expanding healthcare access for economically weaker sections, including religious minorities. This initiative provides financial coverage for hospitalization, covering essential treatments and surgeries for vulnerable communities. Additionally, under the PMJVK, the government has established healthcare centers and mobile health units in areas with a significant minority population to improve access to basic health services.

Despite these positive developments, gaps in healthcare accessibility persist due to a lack of awareness about government schemes and bureaucratic challenges in availing benefits. To address this, community-driven awareness campaigns, facilitated by media partnerships, are necessary to ensure that more people can benefit from these welfare programs.

3. Economic Marginalization

Religious minorities in Odisha, particularly Muslim artisans, Christian farmers, and tribal communities engaged in traditional livelihoods, face significant economic hardships. Factors such as declining demand for handicrafts, lack of access to modern technology, and difficulties in obtaining credit create substantial financial instability.

The Stand-Up India and Mudra Yojana schemes have provided much-needed financial assistance to entrepreneurs from minority backgrounds. These schemes offer loans for small businesses, promoting self-employment and economic growth. Additionally, the Seekho aur Kamao (Learn and Earn) program provides skill development training tailored to minority youth, helping them integrate into the job market.

However, the effectiveness of these programs is limited by poor awareness, procedural hurdles, and a lack of financial literacy among beneficiaries. To bridge this gap, media can play a crucial role by disseminating information on government schemes, sharing success stories, and encouraging minority participation in economic development initiatives.

Recommendations and Policy Implementation

The paper emphasizes the importance of policy implementation through increased budget allocations for minority welfare schemes and the establishment of monitoring committees to ensure effectiveness. Media can play a pivotal role in ensuring that these schemes reach their target audience. By

showcasing community-driven success stories and providing detailed, accessible information about schemes such as Nai Roshni or Mudra Yojana, media can help increase participation among minority communities, driving real social change.

Moreover, the representation of minorities in media must be improved. Ensuring diversity in newsrooms and promoting community-led media initiatives will help create a more balanced narrative. This, in turn, can positively influence public opinion and encourage broader social acceptance of religious minorities, ultimately fostering greater communal harmony in Odisha.

Conclusion: Religious minorities in Odisha face multifaceted socio-economic challenges that require targeted interventions. Addressing educational and healthcare disparities, promoting economic empowerment, and ensuring the effective implementation of welfare schemes are critical for fostering equity and inclusion. Furthermore, responsible media representation can play a transformative role in shaping public discourse, challenging stereotypes, and advocating for policy reforms. The BJP government has made significant efforts to improve the conditions of minorities through various schemes and inclusive development programs. By focusing on these areas, policymakers, media professionals, and civil society stakeholders can contribute to the holistic development of minority communities, thereby strengthening Odisha's social fabric and upholding its tradition of communal harmony.

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Environmental Dispute Resolution and the UN System: The Role of United Nations Convention on the Law of the Sea (UNCLOS)

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Abstract

Conflict resolution at the international level attracts complex academic churnings and scholarly debates. There is no universal dispute settlement mechanism globally. Various forums are utilized to resolve conflicts peacefully, conflicts that is originated mostly owing to non-compliance of international legal instruments. In the field of international environmental law, multilateral environmental agreements, lately, provide provisions regarding pacific settlement of disputes. The present work focuses on utilizing dispute settlement mechanisms within UN system in the case of environment. It proceeds with the role of United Nations Security Council, that is chiefly responsible to maintain international peace and security. Finally, the provisions of United Nations Convention on the Law of the Sea (UNCLOS) are discussed in detail.

1. Introduction

The Conflict resolution and coordination to common purposes are perennial challenges in any anarchy, and the international system is no exception.¹ The development of rules of international law concerning protection of environment is of little significance unless accompanied by effective means for ensuring enforcement, compliance and dispute settlement. International courts and tribunals have also acted to clarify the meaning and effect of treaty norms, to identify the existence of customary norms of general applications, and to establish a more central role for environmental consideration in the international legal order.²The following observation appears relevant here:

“[t]hat adjudicatory settlement of international disputes has become common feature of international relations, has taken effective shape and has developed into one of the most viable means of international dispute settlement....and now manifests itself in two forms- the arbitration and the standing courts- both forms consisting of diverse content.”³

Judiciary has a key role to play in integrating Human Values set out in the United Nations Millennium Declaration. The decisions of international institutionalized environmental courts have played an important role in enhancing the legitimacy of international environmental concerns and confirming that global rules can play a significant role in contributing to the protection of shared environmental resources.⁴ International courts and tribunals have also acted to clarify the meaning and effect of treaty norms of general applications, and to establish a more central role for environmental consideration in the international legal order.⁵

2. Environmental Dispute Resolution and UN System

UN system, the successor of League of Nations,⁶ presents huge opportunities for peaceful settlement of disputes, in particular, disputes related with the environment. However these opportunities

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¹Dryzek, Johns (1987), *Environmental Mediation for international Problems*, Vol.31: 87-102, at p. 87.

²Sands, Philippe (2007), *Litigating Environmental Disputes: Courts, Tribunals and the Progressive Development of International Environmental Law*, in Tafsir Malik Ndiaye and Rudigerwolfrum (eds.) *Law of the Sea, environmental Law and Settlement of Disputes*, Leiden/Boston: MartinusNijhoff Publishers, p. 313

³Amerasinghe, C.F. (2007), *Reflections on Judicial Functions in International Law*, in Tafsir Malik Ndiaye and Rudigerwolfrum (eds.) *Law of the Sea, environmental Law and Settlement of Disputes*, Leiden/Boston: MartinusNijhoff Publishers, p.122.

⁴OECD (2008), *litigating Environmental Disputes: Courts, Tribunals and the Progressive Development on International Environmental Law*, OECD Global Forum on International Investment, p.2.

⁵*Ibid.*

⁶Under Article 12 of the Covenant of the League of Nations, it was declared that any disputes likely to lead to a conflict between members was to be dealt with in three ways: by arbitration, by judicial settlement or by inquiry by the Council of the League.

have never been fully exhausted for the purpose of environmental disputes. Indeed it is one of the purposes of UN 'to maintain international peace and security.....to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international dispute or situations which might lead to a breach of peace'.⁷ Further, it is the purpose of UN 'to achieve international cooperation in solving international problems of an economic, social, cultural and humanitarian in character...' It is one of the principles of UN charter that 'all the members shall settle their disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered'

UN system is divided on functional lines, however, often due to existing political reasons the distinction gets blurred. UN system offers political as well as legal mechanisms to maintain world peace and security. Following paragraphs will examine their respective roles particularly for environmental disputes.

For the pacific settlement of disputes UN Charter contains comprehensive provisions.⁸ It provide that, 'the parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or either peaceful means of their of their own choice'.⁹

The role of United Nations Security council (UNSC) is primary for the maintenance of international peace and security.¹⁰ The UNSC may investigate any dispute, or any situations which might lead to international friction or give rise to a dispute, in order to determine whether the continuance of dispute or situation is likely to endanger the maintenance of international peace and security.¹¹ The UNSC may at any stage of a dispute of the nature referred to in article 33 of UN charter or of a situation of the like nature, recommend appropriate procedures or methods of adjustment. Further UNSC shall, when it deems necessary, call upon the parties to settle their dispute by the means provided under article 33 of UN charter.¹² However, the cases where council has recommended procedure or methods of adjustment under article 36 of the Charter have been comparatively rare.¹³

One more case in which UNSC took active interest and which involve environmental compensation was UNSC resolution which imposed on Iraq to pay environmental compensation. The conclusion may be drawn that role of UNSC, the executive organ of UN system, has been negligible in case of environmental disputes partly because of will of the states and partly because of the reason that environmental disputes has not been elevated upto the level to threat to international peace and security and so provide avenues to UNSC to intervene, with caution, however. This notion may be considered in future.

However, it is the primary responsibility of UNSC to maintain world peace and security, UNGA may recommend measures for the peaceful adjustment of *any situations, regardless of origin*, which it deems likely to impair the general welfare or friendly relations among the nations, including situations resulting from a violations of the provisions of UN charter set forth in the purpose and principles.¹⁴ The phrases 'any situations' and 'regardless of origin' may be utilised by UNGA to call attention of UNSC to any environmental situations which are likely to endanger international peace and security.¹⁵

Judicial organ of UN system, the ICJ as a world played significant role in the settlement of dispute. However, with reference to environmental dispute its full potential has not been exhausted fully. Finally, the roles of UN system for the settlement of environmental dispute cannot be exaggerated. It constitutes

⁷ Art. 1, UN Charter.

⁸Chapter VI of UN Charter, Peaceful Settlement of Disputes.

⁹Art. 33 UN Charter.

¹⁰Art.24 UN Charter.

¹¹Art. 34 UN Charter.

¹²Art. 33(2) UN Charter.

¹³The only precedent which olds state unequivocally responsible for environmental damage in law is UNSC Res. 687, adopted following Iraq's invasion and occupation of Kuwait in 1991; see UNGC Decisions 7 (1992), Para 35.

¹⁴Art. 14 UN Charter.

¹⁵Art. 11 (3) UN Charter.

merely one of the additional instruments in international dispute settlement management and often remains subject to political pressures.

3. United Nations Convention on the Law of the Sea: International Tribunal for Law of the Sea

One of the most important achievements of the third United Nations Convention of Law of the Sea conference (UNCLOS) is the establishment of a real code for the settlement of disputes which may arise with respect to the interpretation and application of the Law of Sea convention.¹⁶ It was recognized early in the negotiation that if the parties to the convention had retained the right of the international interpretation then the complex text drafted by the conference would have looked stability certainly and predictability.¹⁷ The underlying idea behind the above notion, 'is concept of sovereign equality, in the sense that 'in the absence of an agreement on impartial third party adjudication the view of one state with reference to the in the interpretation of the convention cannot prevail over the views of the member states.¹⁸

Part XX of the Convention deals exhaustively on provision relating the settlement of disputes basically the divided into the section: Section 1 deals with General provision dealing with obligation to settle disputes by peaceful means,¹⁹ settlement of disputes by any peaceful means chosen by the parties,²⁰ procedure where no settlement has been reached by the parties,²¹ obligation under general regional or bilateral agreement,²² Obligation to exchange view,²³ conciliation,²⁴ application of this section to disputes submitted pursuant to Part XI.²⁵ Section 2: compulsory procedure entailing binding decisions: dealing with application of procedure under this section, choice of procedure, jurisdiction, experts, provisional measures, access, prompt release of vessel ex crews, applied law primarily proceeding, exhaustion of local remedies, and finally the binding force of decisions.²⁶ Section 3 deals with limits of exceptions applicability of Section 2 deals with 297-299.

Settlements of disputes under treaty are flexible at the same time rigid also of the object of the treaty is to be met. It is also further divided in to two categories: Settlement of general categories disputes and settlement of specific categories of disputes.

Choice of procedures

It is the primary duty of every state to settle any disputes between them regarding the interpretation of application of convention, by peaceful means prescribed under Article 33 of UN Charter; however, states are free to choose any peaceful means of their own choice.²⁷ The procedure provided in Part XV shall apply only in those cases where no settlement has been reached between the parties. Further, states are free to agree on the methods of dispute settlements entails binding decisions, though general regional or bilateral agreements.²⁸ This procedure shall have priority over law of the sea convention provided that adopted procedure must entail binding decisions. It is the obligation of state parties to proceed expeditiously to exchange views in two conditions:

1. Where the dispute arises between state parties concerning interpretation or application of the convention.²⁹

¹⁶See <http://www.Un.org/depts/Los.index.htm>

¹⁷Sohn, Louis B. (1983), Peaceful Settlement of Disputes in Oceanic Conflicts: Does UNCLOS-III Point the Way?, Law and Contemporary Problems, Vol.46, No.2: 195-200, p. 195.

¹⁸*Ibid.*

¹⁹Art. 279, UNCLOS, 1982.

²⁰Art. 280, UNCLOS, 1982.

²¹Art. 281, UNCLOS, 1982.

²²Art. 282, UNCLOS, 1982.

²³Art. 283, UNCLOS, 1982.

²⁴Art. 284, UNCLOS, 1982.

²⁵Art. 285, UNCLOS, 1982.

²⁶See Art. 286-296, UNCLOS, 1982.

²⁷Art. 281, UNCLOS, 1982.

²⁸Art. 282, UNCLOS, 1982. For example some African Countries have expressed preference for submitting the disputes relating to the interpretation application of the Law of the Sea Convention to the Commission of Mediation, Conciliation, and Arbitration of the Organization of African Unity.

²⁹Art. 283 (1), UNCLOS, 1982.

2. Where the procedure for the settlement of such disputes has been terminated without a settlement or where a settlement has been reached required further consultation.³⁰

Obligation to Proceed expeditiously to *exchange views* raises some key issues regarding the phrase: viz. time limit, circumstances, its requirement in southern bluffing tuna case, the tribunal stated its views that, “a state party is not obliged to pursue procedures under Part XV, Section 1, of the convention when it concluded that the possibilities of settlement have been exhausted.”³¹ The tribunal was more specific in its order prescribing provisional mechanism in the *MOX Plant* case in stating that a state party is not obliged to continue with an exchange of views when it concludes that the possibilities of reaching agreement has been exhausted.³²

A more wide and exhaustive review of Article 283 by the tribunal was made in the *Land reclamation case or Barbados Trinidad* case. The term “exchange of view” is descriptive is clearly something distinct from a “negotiation” with the meaning of Article 33 of UN Charter and is descriptive.³³ The exchange is completed when the second state expresses its view in response to the first or chooses to remain silent after a reasonable period of time lapsed, however, there is no requirement to seek to reach agreement.³⁴

The need of consultation is clear from the fact that often a dispute has more than one aspect to which different provision in the convention would apply for example a boundary disputes may involve issues to do with access to fish stocks straddling the future boundary. The parties thus can clarify the scope of dispute in the preliminary exchange and identify those questions that are best suited to any future litigation.³⁵

To date, there have been four cases in which issues have arisen under Article 283 are:

1. *Southern Bluffin Tuna* (SBT),
2. *MOX plant*
3. *Land Reclamation case*
4. *Borbados Vs Trinidad*

It is interesting to note that under Section 1 of Part XV, only *conciliation* as a means of dispute settlement is provided. A state party may invite other party or parties to submit the disputes to conciliation in accordance with the procedure under annex V section 1 or another conciliation procedure.³⁶

Compulsory Procedure and Binding Decisions

One of the achievements of UN Convention on Law of Sea is its provisions for binding dispute settlement,³⁷ *subject to Section 3 of Part XV*, where no settlement has been reached by recourse to section 1 of Part XV.³⁸ It allows the state at the time of signature, ratification of accession or at any time thereafter to designate any of the following dispute settlement procedure:

- a. The ITLOS established in accordance with annex VI;
- b. The ICJ;
- c. An arbitral tribunal constituted in accordance with annex VII;
- d. A special arbitral tribunal constituted in accordance with annex VIII for one or more of the categories of disputes specified therein.³⁹

A court or tribunal listed in Section 2 has jurisdiction over any disputes concerning the interpretation or application of the convention submitted to in accordance with this part.⁴⁰ Such court or

³⁰Art. 282 (2), UNCLOS, 1982.

³¹Anderson Davis (2007), Article 283 of the UN Convention of the Law of the Sea, in TafirMalickNdiaye and RudigerWolfrum (eds.) Law of the Sea, Environmental Law and Settlement of Disputes, Leiden/Boston: MartinusNijhoff Publishers, p. 847; see also ITLOS Reports 1999, P.280.

³²*Ibid.*

³³*Ibid.*

³⁴*Ibid.*

³⁵*Ibid.*

³⁶Art. 284; for list of conciliators and arbitrators under Annexes V and VII to the convention see www.un.org/Depts/Los/settlement_of_disputes/conciliators-arbitrators.htm.

³⁷Section 2, part XV UNCLOS, 1982.

³⁸Art. 286, UNCLOS, 1982.

³⁹Art.287 (1), UNCLOS,1982.

tribunal shall have jurisdiction over any disputed concerning the interpretation of application of an international agreement related to purpose of this convention.⁴¹ Where the parties to a dispute have accepted the same procedure, it must be utilized unless they agree otherwise.⁴² It provides for arbitration as default procedure in case of state fails to designate any choice in its written declaration.⁴³

Provisional Measures

The power of a tribunal to exercise provisional measures pending a final decision of a dispute is common in international settlement of disputes.⁴⁴ The court of tribunal having prima facie jurisdiction, may prescribe any provisional measures which it consider appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending the final decision if dispute has been duly submitted to it.⁴⁵

Limitation and Exception to Compulsory Procedures and Binding Decisions

Although the provision of Section 2 entailing compulsory and binding methods were drafted to provide maximum flexibility, not all disputes were deemed to be appropriate for binding settlement.⁴⁶ These exceptions are applicable in case of sovereign rights and jurisdiction of a coastal state. The exercise by a coastal state of its sovereign rights or jurisdiction under UNCLOS is only subject to the compulsory procedure when it is alleged that has violated certain UNCLOS provisions, including internationally lawful uses of the EEZ or specified international rules and standards for the protection and preservation of marine environment which are applicable to that state, established under UNCLOS or by a competent international organisation or diplomatic conference.

3.1. The Dispute Settlement Mechanism of UNCLOS: Protection of Marine Environment

Part XII of the UNCLOS deals with protection and preservation of marine environment. This part is divided into 11 sections: General provision (Article 192-196) and global regional cooperation (Article 197-201). States have obligation to protect and preserve the marine environment. States have the sovereign right to exploit their natural resources in accordance with their environment policies. Further, states shall take, individually or jointly as appropriate, all measures consistent with this convention that are necessary to prevent reduce and control pollution of the marine environment from any source. It incorporates one of the fundamental principles of the environmental obligation of states by providing that state shall not transfer, directly or indirectly, damage or hazard from one or to another.

The substantive provision of UNCLOS regarding the protection or preservation of the marine environment, are meaningful in their scope. The convention confers jurisdiction upon the coastal state for “the protection and preservation of marine environment” the conservation of living resources is entrusted to coastal states. The balancing of interests that underlie the entire convention virtually ensures that disputes between coastal states and other maritime parties, as well as competing interests on high sea.⁴⁷

3.2. Conciliation

It is interesting to note here that Part XV Section which provides specifically ‘conciliation’ as a procedure for settlement of disputes. The third party dispute settlement mechanism of conciliation is noteworthy example of special interest in the area of wild life conservation and textually significant in the

⁴⁰Art. 288 (1), UNCLOS, 1982.

⁴¹Art, 288 (2), UNCLOS, 1982.

⁴²Art. 290 (1), UNCLOS, 1982.

⁴³Art. 287 (4), UNCLOS, 1982.

⁴⁴*Ibid.*

⁴⁵Art. 290 (1), UNCLOS, 1982.

⁴⁶Section 3 of Part XV. Three categories of cases are subject, however, to different procedures: (a) Art, 297 govern disputes relating to the exercising by a coastal stat of its sovereign right or jurisdiction in the EEZ; (b) Art. 298 governs disputes relating to sea boundary delimitation, to military or law enforcement activities or to disputes submitted to the UNSC; and (c) Arts. 186-191 govern the disputes relating to seabed mining. See note 217, p.50 at p. 197. See also Settlement of Dispute mechanism under the Agreement for the Implementation of the Provisions of the Convention Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks- choice of procedure under Art. 30 of the Agreement and Optional Exception. Available at http://www.un.org/los/settlements_of_disputes/choice_procedure.htm , see also http://www.un.org/depts/los/convention_agreemnt/convention_overview_fish_stocks.htm .

⁴⁷KwaitKowska, Barbara (2001), “Southern Bluefin Tuna”, ASIL, Vo. 95, No.1: pp.162-171, p.2

areas of fisheries and the conservation and management of living resources.⁴⁸ In disputes involving the conservation, management, determination and allocation of living resources in EEZ, Article 297 (3) (b) requires conciliation upon the demand of any party to the dispute, where no settlement has been reached under section 1.⁴⁹ Some disputes involving marine research may also be submitted to conciliation, at the request of either party, subject to certain rights of the coastal states.⁵⁰ It further provides that in no case conciliation commission shall substitute its discretion for that of the coastal state however.⁵¹

3.3. Special Arbitration

The method of special arbitration provided under Article 287 (d), offer promising role in the area of marine wildlife management and conservation. The primary difference between arbitration and “special arbitration” is in the technical character of the disputes and the qualification of potential arbitrators.⁵² Annex VIII defines the categories of disputes that may be referred to special arbitration. These are: fisheries; protection and preservation of marine environment; marine scientific research; navigation, including pollution from vessels and by dumping.⁵³ The special arbitral tribunal is comprised of recognized expert in those fields.⁵⁴

One of the key purposes of special arbitration is to submit those disputes involving technical and scientific issues to designate arbitrators who have previously been classified as experts in those categories, and such expertise should reduce the time necessary for consideration of highly technical disputes and potentially yield to most informed findings.⁵⁵

3.4. Compulsory Binding Settlement

In case of coastal states, the power granted to special arbitration to decide every related disputes are taken away by the limitations on compulsory and binding dispute settlement.⁵⁶ Since many environmental disputes directly involve rights of the coastal states, such limitations may prove significant in future. These limitations are severe setback to the disputes relating to marine environment, however, provided for the protection of sovereign rights of coastal states. Article 297 (3) (a) states:

Disputes concerning the interpretation or application of the provisions of this Convention with regard to fisheries shall be settled in accordance with section 2, except that *the coastal State shall not be obliged to accept the submission to such settlement of any dispute relating to its sovereign rights with respect to the living resources in the exclusive economic zone or their exercise, including its discretionary powers for determining the allowable catch, its harvesting capacity, the allocation of surpluses to other States and the terms and conditions established in its conservation and management laws and regulations.* A coastal state may also avoid a binding decision in certain cases involving marine scientific research in its waters.⁵⁷

⁴⁸*Ibid.*

⁴⁹Article 297 (3) (b) (i-iii) of UNCLOS, 1982:

Where no settlement has been reached by recourse to section 1 of this Part, a dispute shall be submitted to conciliation under Annex V, section 2, at the request of any party to the dispute, when it is alleged that: (i) a coastal State has manifestly failed to comply with its obligations to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not seriously endangered; (ii) a coastal State has arbitrarily refused to determine, at the request of another State, the allowable catch and its capacity to harvest living resources with respect to stocks which that other State is interested in fishing; or (iii) a coastal State has arbitrarily refused to allocate to any State, under articles 62, 69 and 70 and under the terms and conditions established by the coastal State consistent with this Convention, the whole or part of the surplus it has declared to exist.

⁵⁰Art. 297 (2) (b), UNCLOS, 1982.

⁵¹Art. 297 (3) (c) of UNCLOS, 1982.

⁵²*Supra.*

⁵³Annex VIII, UNCLOS, 1982.

⁵⁴Annex VIII, Art.2; see for the list of experts http://www.in.org/Depts/los/settlement_of_disputes/experts_spl_arb.htm

⁵⁵*Ibid.*

⁵⁶Arts.286-296, Section 2, Part XV, UNCLOS, 1982.

⁵⁷Art. 297 (2) (a) (i) and (ii), UNCLOS, 1982.

One can hardly predict whether future activity under Part XV will be “environmental friendly”, however, it appears as if the substantive and dispute settlement of UNCLOS were drafted to address environmental and wildlife management concerns in a thoughtful and informed manner.

3.5. International Seabed Authority

Disputes relating to the exploration and exploitation of the international seabed and ocean floor (the Area) and its recourse are subject to special dispute settlement procedures, which will generally involve disputes submitting to a Seabed Dispute Chamber of the International Tribunal for the Law of Sea (Article 186-191, and Annex VI, Articles 35-40). The jurisdiction of the Seabed Chamber will extend to cover a wide range of disputes, including environmental disputes involving those engaged in activities in the Area (Article 187).

Conclusion

Recent emergence of multiple forums at international level to solve environmental disputes poses significant problems of proliferation and competition among those means. Issue of hierarchy is also significant that needs effective construction within particular MEAs. However, within all available means the alternatives methods offer more promising role in environmental dispute settlement in which several considerations, considering the nature of environmental issues, can be accommodated. More formal and institutional means are almost not in used except establish under UNCLOS. The role of UN system to resolve international environmental disputes, because of the complexity, is critically important in the era of fragmented norms and institutions.



Exploring Cellular Lightweight Concrete (CLC) Blocks as a Sustainable Alternative in Modern Construction

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Abstract:

Cellular Lightweight Concrete (CLC) is an innovative, low-density construction material produced by incorporating stable foam into a cementitious matrix. Composed of Portland cement, fly ash, fine aggregates, water, and foaming agents, CLC offers adjustable densities (300–1800 kg/m³) and enhanced properties like thermal and acoustic insulation, reduced dead load, and fire resistance. Its use of fly ash promotes environmental sustainability by repurposing industrial waste and reducing reliance on energy-intensive brick kilns. CLC's density-dependent strength, high workability, and adaptability to conventional construction make it viable for structural and non-structural applications. This review highlights CLC's engineering and ecological benefits, supporting its role in sustainable urban development without compromising structural performance.

Keywords: Cellular Lightweight Concrete, Foam Concrete, Sustainable Construction, Thermal Insulation, Low-Density Concrete, Eco-Friendly Building Material

1. Introduction

The construction industry is undergoing a paradigm shift toward materials that ensure structural efficiency, environmental sustainability, and ease of implementation. Among emerging alternatives, **Cellular Lightweight Concrete (CLC)** has gained significant traction as a viable replacement for traditional masonry units due to its reduced weight, superior insulation characteristics, and environmentally benign composition [1][2]. CLC, also referred to as foam concrete or aerated concrete, is produced by blending a cementitious slurry—usually comprising cement, fly ash, and water—with stable pre-formed foam, leading to a uniform cellular matrix of air voids [3]. The resultant material can be engineered to exhibit densities ranging from 300 to 1800 kg/m³, enabling diverse structural and non-structural applications [4].

From a sustainability standpoint, CLC offers substantial benefits. Its production involves **no high-temperature kiln firing**, unlike burnt clay bricks, thereby reducing fossil fuel consumption and airborne pollutants [5]. Moreover, the incorporation of **fly ash**, a by-product of coal-fired thermal power plants, promotes waste reutilization and supports circular economy practices [6]. The decreased cement usage directly contributes to lowering carbon emissions, aligning CLC with global green building goals [7].

Numerous studies have explored CLC's performance. Brady et al. [8] underscored the critical influence of foam stability and mix uniformity on strength. Nambiar and Ramamurthy [9] identified the relationship between pore structure and mechanical behavior, showing that smaller, evenly distributed voids enhance durability. Although increased fly ash content can slightly diminish early compressive strength, it improves workability and thermal insulation [10].

Despite a lack of universally accepted design standards for CLC, its **versatile composition, high workability, and compatibility** with both precast and cast-in-situ systems position it as a scalable material for energy-efficient construction [11]. This study aims to consolidate the scientific understanding of CLC while highlighting its potential as a sustainable masonry alternative.

This paper aims to explore the scientific foundation, material characteristics, manufacturing methods, and comparative advantages of CLC blocks, drawing from existing literature and industry

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practices. It seeks to establish CLC as a technically and environmentally viable replacement for conventional masonry units, especially in regions seeking low-cost, high-performance, and sustainable construction solutions.

2. Materials and Methods

The production of Cellular Lightweight Concrete (CLC) involves a combination of conventional cementitious materials and specialized foaming techniques. While CLC does not have a standardized mix design akin to traditional concrete (as per IS 456:2000), its formulation generally follows performance-based requirements depending on the target application (structural vs. non-structural)[12]. The following subsection describes the primary materials used and the methodology adopted in producing CLC blocks, as synthesized from existing literature.

2.1 Materials Used

a) Cement

Ordinary Portland Cement (OPC) of 53 Grade, conforming to IS 12269:1987, is commonly used due to its high early strength and consistent quality. The cement acts as the primary binder in the CLC matrix.

b) Fly Ash

Fly ash, classified as Class F or Class C depending on its source, is employed as a pozzolanic material to replace a portion of cement. It enhances workability, reduces heat of hydration, and contributes to long-term strength while lowering the environmental footprint.

c) Fine Aggregates (Sand or Quarry Dust)

Well-graded sand passing through a 2.36 mm sieve is added as a filler. In some formulations, **quarry dust** is used as a partial replacement to enhance particle packing and reduce cost. Excessively angular particles are avoided as they may destroy foam bubbles during mixing.

d) Foaming Agent

Foaming agents are key components in CLC production. Two primary types are used:

- **Synthetic foaming agents** (chemical-based): Suitable for densities $>1000 \text{ kg/m}^3$.
- **Protein-based foaming agents** (organic origin): Suitable for lower densities (400–1600 kg/m^3), producing more stable and smaller bubbles.

e) Water

Potable water free from organic and harmful contaminants is used to ensure proper hydration of cement and dilution of the foaming agent.

2.2 Methodology

Cellular Lightweight Concrete (CLC) can be made using pre-foaming or mixed foaming methods. In pre-foaming, stable foam is added to a uniform slurry, ensuring better foam stability and consistent properties. In mixed foaming, foam is generated in situ during mixing, which is faster but less stable, leading to potential variability in strength and density. Pre-foaming is ideal for high-quality applications, while mixed foaming is suitable for quick, cost-effective construction.

2.3 Curing

Curing is vital for the strength and durability of Cellular Lightweight Concrete (CLC) by enabling proper cement hydration. Two methods are commonly used:

Natural Curing involves keeping blocks moist for 14–28 days using water spraying, wet coverings, or cloths. It is suitable for smaller-scale applications and ensures steady strength development.

Steam Curing exposes blocks to 60–90°C steam for 8–10 hours, accelerating hydration and producing denser microstructures. Ideal for precast production, it reduces curing time and improves early strength.

Both methods support quality, with natural curing preferred for small-scale use and steam curing for industrial efficiency.

3. Comparative Analysis

To establish the viability of Cellular Lightweight Concrete (CLC) blocks as a sustainable alternative in modern construction, it is critical to compare them with conventional masonry units such as burnt clay bricks, fly ash bricks, and hollow concrete blocks. This comparative analysis is drawn from the literature and is based on multiple parameters including raw materials, production process, physical and mechanical properties, environmental impact, and overall performance in construction.

3.1 Raw Materials and Manufacturing

CLC blocks are composed of **cement, fly ash, sand or quarry dust, water, and a foaming agent**, requiring no kiln firing. This contrasts with **burnt clay bricks**, which consume topsoil and require substantial thermal energy for firing. Fly ash bricks and hollow concrete blocks, while also factory-produced, often involve higher aggregate usage and energy consumption during compaction and curing processes.

CLC can be **manufactured on-site or in plants**, offering logistical flexibility and cost savings on transportation. Burnt clay bricks require centralized kiln production, and their quality varies significantly based on fuel and soil composition. CLC also eliminates the need for mortar-intensive joints due to larger block sizes and smoother surfaces.

3.2 Physical Properties

Property	CLC Block	Burnt Clay Brick	Hollow Concrete Block	Fly Ash Brick
Dry Density (kg/m ³)	300–1800	1800–2000	1900–2200	900–2100
Compressive Strength (kg/cm ²)	25–60 (avg)	40–125	30–150	30–150
Thermal Insulation	Superior	Poor	Good	Normal
Sound Insulation	High	Low	Moderate	Moderate
Ease of Working	Can be nailed/cut/drilled	Moderate	Difficult	Moderate
Curing Requirement	14–28 days (or steam)	None (fired)	7–28 days	14–28 days

CLC blocks offer **significantly lower density** than traditional bricks and blocks, reducing the **dead load on structures** and enabling lighter foundation designs. Their **superior insulation properties** provide passive energy savings by reducing the need for artificial heating and cooling.

3.3 Environmental Impact

- Burnt clay bricks cause irreversible damage to agricultural land and release CO₂, NO_x, and SO_x gases from kiln combustion.
- CLC blocks utilize fly ash and avoid high-temperature firing, contributing to resource conservation, waste reduction, and greenhouse gas mitigation.
- The energy demand in producing CLC is considerably lower, and it aligns with LEED and GRIHA green building ratings for environmentally responsible materials.

CLC is thus classified as a **green building product**, supporting the circular economy by converting industrial waste into construction-grade material. It contributes to the reduction of **embodied energy** in buildings.

3.4 Economic Considerations

Although the initial investment in Cellular Lightweight Concrete (CLC) may be higher, overall costs are significantly reduced due to several factors:

- **Decreased Transportation Costs:** CLC blocks can be produced on-site, eliminating transportation expenses.

- **Lower Structural Material Usage:** The lightweight nature reduces material requirements for foundations and support structures.
- **Quicker Construction Cycles:** Faster manufacturing and curing times lead to reduced labor and shorter project timelines.
- **Reduced HVAC Loads:** Superior thermal insulation lowers energy consumption for heating and cooling.

In comparison, traditional bricks incur ongoing costs for raw materials, transport, and energy-intensive firing, making CLC a more sustainable, cost-effective alternative.

4. Properties and Applications of CLC Blocks

The performance characteristics of **Cellular Lightweight Concrete (CLC) blocks** are closely linked to their microstructure, density, and composition. These properties make CLC a versatile material suitable for various applications in both residential and commercial construction. This section outlines the key physical and mechanical properties of CLC and explores its practical uses in modern building projects.

4.1 Key Properties of CLC

Cellular Lightweight Concrete (CLC) blocks offer several advantages:

- **Density and Weight Reduction:** Ranging from 300 to 1800 kg/m³, CLC blocks reduce structural load, easing handling and speeding up construction.
- **Compressive Strength:** With strengths between 25-60 kg/cm², CLC blocks gain up to 75% of their strength in the first week of curing.
- **Thermal Insulation:** CLC blocks offer superior insulation, reducing energy consumption by improving temperature regulation.
- **Sound Insulation:** Their air pockets provide excellent soundproofing, ideal for noise-sensitive areas.
- **Workability:** Easy to cut and shape, CLC blocks allow faster, precise construction.
- **Fire Resistance:** CLC blocks provide 2-4 hours of fire protection.
- **Eco-Friendliness:** CLC blocks use fly ash and don't require high-temperature firing, reducing energy consumption and environmental impact.

Applications: CLC blocks are used for partition walls, low-rise structures, roof insulation, filler slabs, sound barriers, and thermal wall panels, making them a sustainable choice for various construction needs.

5. Conclusion

Cellular Lightweight Concrete (CLC) blocks are a sustainable construction material offering light weight, thermal and acoustic insulation, and ease of handling. Their reduced dead load allows for economical foundation design and energy-efficient buildings. Unlike traditional bricks, which require high-energy kiln firing, CLC blocks use low-energy processes and industrial waste materials like fly ash, supporting circular economy principles and reducing environmental impact. Suitable for various applications, from partitions to roof decks, CLC blocks are both structurally efficient and environmentally responsible, making them ideal for modern sustainable construction practices.

6. Future Scope

The future potential of Cellular Lightweight Concrete (CLC) blocks can be enhanced through research in several areas:

1. **Optimization of Foaming Agents:** Improving mix designs to balance strength and density, enhancing load-bearing capacity while maintaining lightweight properties.
2. **Standardized Mix Design Codes:** Developing validated codes to ensure consistent performance across production sites.
3. **Nano- and Micro-Additives:** Adding advanced materials like silica fume and graphene to improve mechanical properties.

4. **Modular Precast Systems:** Exploring integration into prefabricated, energy-efficient, cost-effective systems.
5. **Life Cycle Assessment (LCA):** Detailed LCA models to assess environmental and economic sustainability.

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Bridging Policy and Practice: A Review of Women's Work and Economic Strategies in the IWWAGE 2023 Report

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Introduction

India's economy has surged in recent years, yet a persistent puzzle remains: women's workforce participation lags far behind men's. Official statistics show that only about one-third of Indian women are economically active – for example, in 2020–21 the female labour force participation rate (FLFPR) was roughly 32.5%. By contrast, the global FLFPR is around 52.4%. Although the 2022–23 Periodic Labour Force Survey (PLFS) data reported a modest rise (37% of women compared to 29.4% in the prior year), women's labour force rates remain far below the male levels (men's workforce participation is about 73%). These long-standing gaps reflect deep social and economic barriers. Indeed, surveys of women's attitudes find that traditional norms endure: in one study, 84% of women said they still needed a family member's permission to work, and only 20% would stop working even if they had no financial need to earn.

The new IWWAGE report which is their annual flagship data driven report that highlights key trends in women's economic empowerment and other critical areas linked to gender equality in India. This is the third report in the series. Threaded through with insights from IWWAGE and LEAD's research on the subject, the report covers trends across available data sources on scheme performances, policy changes, and political announcements, mapping the contours of women's work in India and looking ahead to 2023.

Women and Work: How India Fared in 2022.

Breaking Barriers: Women, Work, and India's Economic Renaissance (2023) builds on these observations. It documents labour-market trends, assesses existing gender-related policies, and highlights field evidence of successful interventions. Drawing on this source and related analyses, this paper examines three themes central to the book: (1) women's labour-market trends in India, (2) gender-focused policies and recommendations, and (3) illustrative case studies and examples of challenges and solutions. Throughout, we critically engage with the authors' arguments and situate them in the broader context of recent data and research.

Labour-Market Trends for Women in India

Women's participation in India's workforce has historically been low and volatile. After declining sharply in the early 2000s, FLFPR rebounded somewhat by the late 2010s. For example, PLFS data show FLFPR rising from roughly 23.3% in 2017–18 to about 32.5% in 2020–21. This improvement partly reflects more women working in agriculture and rural schemes as well as better survey coverage (the PLFS expanded to an annual survey in 2017–18). Yet even 32.5% remains extremely low; the global average FLFPR is ~52%.

Moreover, COVID-19 caused notable short-term disruptions for women. Analyses of CMIE data indicate that by 2021, urban women's employment had fallen by about 22% compared to 2019 levels, and fewer women were seeking jobs than before. Unemployment also rose disproportionately among women; for instance, rural female unemployment increased by 1.6 percentage points from April 2021 to August 2022 (while rural male unemployment fell). Such trends underscore that in times of crisis, many women are pushed out of the labour market even as household incomes fall. (Interestingly, the same sources note that FLFPR for men also declined moderately, so the gender gap widened because fewer women returned to work.)

Sectoral patterns reveal that many women work in particular informal occupations. Data from the national E-Shram portal (which registered 30.68 crore unorganised workers by early 2025) show

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that women constitute a slight majority (53.7%) of the registrants. Within that portal, women dominate traditionally “feminized” sectors: for example, about 73–90% of workers in apparel or domestic work are women, whereas only ~4–10% in construction are women. This reflects the concentration of women in low-paid informal work (often vulnerable to economic shocks).

Education and earnings patterns further complicate the picture. While more women are attaining higher education, a rising share of educated women do not translate this into formal employment. At the same time, the proportion of women in leadership roles remains small. For instance, women held only about 18% of board seats in India's large companies as of 2022. This suggests a “leaky pipeline”: women may enter the workforce in numbers, but few reach senior positions. In summary, labour-market data show low female participation, a heavy tilt toward informal work, and only modest gains in recent years.

The Role of Digital Literacy in Creating More Jobs for Women

Digital literacy is increasingly recognized as a crucial enabler for women's economic participation, especially in the post-pandemic era. As India transitions into a digitally driven economy, access to digital tools and skills has opened new pathways for women to work, learn, and start businesses. The *Breaking Barriers* report emphasizes that closing the gender digital divide is essential to ensuring women can take advantage of new economic opportunities – especially in a context where remote work, digital services, and platform-based livelihoods are growing rapidly (Shruti et al., 2024).

One major policy initiative in this area is the *Digital Shakti* campaign, launched by the National Commission for Women and implemented with CyberPeace Foundation. Now in its fourth phase, this program aims to make women digitally skilled, financially literate, and resilient against cyber risks (NCW, 2023). As of 2023, it had reached over 6 lakh women across rural and semi-urban India. Programs like this have proven to not only enhance technical confidence but also link women to income-generating opportunities, such as selling products online, freelance work, or participating in government e-services (Shruti et al., 2024; IWWAGE, 2023).

Another key example comes from state-level initiatives. Tamil Nadu's Women-Led Start-Up Incubation Program and smartphone distribution to self-help group (SHG) leaders is equipping rural women with the tools and skills to use e-commerce, online banking, and digital marketing (Shruti et al., 2024). Research from the Bill & Melinda Gates Foundation and Dalberg (2022) finds that when women gain mobile internet access, their probability of engaging in paid work increases by up to 15 percentage points. Digital tools thus serve not just as communication channels, but also as workspaces – for example, allowing women to tutor online, sell handicrafts via WhatsApp, or participate in gig platforms like UrbanClap or Meesho.

However, the gender gap in digital access remains stark. According to GSMA's 2023 Mobile Gender Gap Report, Indian women are 40% less likely than men to own a smartphone and 30% less likely to use mobile internet regularly. The *Breaking Barriers* authors note that digital illiteracy is often compounded by low confidence and lack of social support: women are discouraged from using phones due to family resistance or fear of misuse (IWWAGE, 2023). Bridging this gap requires not just technical training but also behavioral change interventions that address restrictive gender norms.

From a policy standpoint, integrating digital literacy into education, skilling, and entrepreneurship programs is essential. The National Education Policy (NEP) 2020 recommends digital skill development from early stages, which, if implemented equitably, could benefit girls and young women. Additionally, the *Mission Shakti* framework now includes digital skilling under its empowerment hubs, aiming to institutionalize such efforts across districts (Ministry of Women and Child Development, 2023).

In summary, digital literacy is more than a technical skill – it is a foundational enabler of modern economic participation. Whether through online work, digital financial services, or access to information, technology can help women overcome physical, social, and logistical barriers to employment. The *Breaking Barriers* report rightly identifies this as a strategic lever for India's

gender-inclusive economic growth. Going forward, a robust digital inclusion agenda – supported by infrastructure, affordable access, and norm-shifting campaigns – will be key to realizing this potential at scale.

Gender Policy Frameworks and Recommendations

This paper emphasizes that persistent gender gaps in employment require targeted policies. Also, it outlines a comprehensive “action agenda” spanning several domains. One key recommendation is strengthening **gender-responsive budgeting and data collection**: budgets and schemes should explicitly track gendered outcomes, and governments should maintain up-to-date gender-disaggregated data. In practice, this could mean expanding Gender Budgeting processes and creating standard metrics to evaluate programs’ effects on women. Such measures aim to make policy more evidence-based and transparent.

Another major pillar is **skills, education and digital access**. We need to advocate greater investment in training women for non-traditional sectors like STEM, engineering and technology. For example, while India has grown more data science jobs, the number of qualified data scientists (women or men) remains limited. Upskilling programs and bridge courses are needed to recover educational gaps and prepare women for emerging industries. The government has launched initiatives in this vein: for instance, the National Commission for Women’s *Digital Shakti* campaign (now in its fourth phase) focuses on making women “digitally skilled and aware” of online opportunities and risks. Similarly, the *Mission Shakti* program (a central umbrella for women’s empowerment) is creating “Hubs for Empowerment of Women” at national, state and district levels, providing single-window services for finance, training, health, and more.

Relatedly, **financial inclusion and entrepreneurship** are highlighted. Policies such as support funds and preferential procurement can improve women entrepreneurs’ outcomes. The authors specifically call for expanding women’s access to capital, markets, and networks, and even for a national women’s entrepreneurship policy and a nodal coordination centre. In parallel, schemes like Pradhan Mantri Mudra Yojana and Stand-Up India already provide targeted loans to women-owned businesses; the book suggests building on these with better mentorship and skill support. The Tamil Nadu government, for instance, has launched state programs to nurture women’s self-help groups and small enterprises, including free smartphone distribution to female SHG workers.

Enabling infrastructure is another major theme. Recognizing that childcare and other unpaid care burdens keep women from working, the report stresses schemes to redistribute care work. It advocates full implementation of existing laws (like maternity benefits and the National Creche Scheme) and new investments in creches, eldercare, and women’s safety. For example, the 2020 Occupational Safety, Health and Working Conditions Code includes provisions for toilets and housing in plantations; as of mid-2022, 24 states have notified rules ensuring workers (and their families) get toilets and clean water. But much remains to be done. Similarly, better transportation and flexible work spaces can help: Kerala’s pilot “Work Near Home Centres” aim to employ educated women in their local areas, and Goa is exploring co-working spaces to attract female workers.

Finally, the agenda includes labour participation initiatives. For rural women, the authors propose extending government employment schemes. For example, they applaud an announced plan to reserve 33% of person-days in the Government’s new rural employment guarantee (similar to MGNREGA) for women. The book also notes that state governments are adopting such quotas: Tamil Nadu’s new urban jobs scheme reserves 50% of all person-days for women. These sorts of reforms aim to guarantee work for women and make it a strategic part of development planning.

Case Studies and Field Evidence

To illustrate the above trends and policies, several real-life examples may be studied:

- **MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act)**: This flagship rural jobs program provides direct evidence of rural women’s employment. In 2022–23, women accounted for 56.27% of all person-days under MGNREGA, up from

53.19% in 2020–21. (By contrast, women's share had been as low as 33.6% in 2019–20 in states like Uttar Pradesh.) The Parliamentary Committee on Rural Development has even recommended linking MGNREGA work with women's self-help groups to provide integrated livelihoods. Some states are being particularly proactive: Rajasthan has over 50% female "mates" (supervisors) in MGNREGA, following a policy decision to appoint many women as welfare coordinators. These examples show both the potential and the variation across India in using public employment to reach women.

- **Transportation and Mobility (Tamil Nadu Zero Ticket Bus Travel):** In Tamil Nadu, the state government introduced free bus passes for women under a scheme called Zero Ticket Bus Travel (ZTBT). Studies report that this policy has helped women save roughly 8–12% of their income on commuting. The saved money often goes to purchasing nutritious food or funding children's education. Such a scheme provides a concrete case of how gender-sensitive infrastructure (public transport) can improve women's livelihoods, especially in small towns where women form a significant portion of public transit users.
- **Childcare and Creches:** Access to childcare is a major barrier for working mothers. The IWWAGE analysis notes India's existing childcare infrastructure (e.g. Anganwadis under the ICDS program) as essential supports. However, funding has been inconsistent. For example, as of 2022 there were over 1.3 million Anganwadi centres across India, but only about 4,947 were functioning as creches for working mothers. This gap prompted the National Creche Scheme (now part of the *Mission Shakti* umbrella) to build 34 new creches at public transit hubs and set up daycare at government workplaces. These initiatives are cited as examples of government action to alleviate the childcare burden on women.
- **Urban Women in the Informal Sector (e-Shram Data):** The nationwide *e-Shram* portal, which registers informal workers, reveals that a majority of India's unorganized workforce is female. Anecdotal accounts from the platform highlight how women street vendors, home-based garment workers, and domestic helpers use it to access insurance and pensions. This illustrates the scale of women's informal work and supports the book's emphasis on extending social security to them.
- **Corporate Diversity:** On the corporate side, indicators of women's leadership show incremental improvements. For instance, data from Grant Thornton and EY indicate that women's representation on boards of major Indian companies rose to 18% by 2022 (up from about 11% a few years earlier). While still low, the trend has been positive. Many top firms now have formal return-to-work and leadership programs for women; one report notes 75% of the top 100 companies had such programs in 2022 (vs. 30% in 2016). These case data points demonstrate both progress and the distance yet to go.

Critical Analysis

The authors' arguments in *Breaking Barriers* are well-supported by data and policy insights, but several caveats and questions merit discussion.

First, the data narrative itself is contested. The official government line (supported by PLFS) is that female participation has improved substantially in recent years. For example, a 2024 press release from India's Ministry of Labour notes that the rural FLFPR jumped from 24.6% in 2017–18 to 47.6% in 2023–24, and female WPR (worker population ratio) nearly doubled over the period. This suggests a major swing that contradicts the common narrative of decline. Analysts point out, however, that some of this rise may reflect better survey coverage and changing definitions (for instance counting more part-time or agricultural work as economic activity). Indeed, IWWAGE itself has acknowledged that measurement issues (such as how unpaid family labour is counted) complicate the picture of FLFPR.

Second, many proposed policies hinge on large-scale implementation and budgetary commitments. The research paper's agenda – e.g. expanding skilling and broadband for all women – is comprehensive but ambitious. For instance, ensuring universal childcare or 33% reservation in all

employment schemes would entail major government investment. While some initiatives (like digital literacy drives) are underway, critics may question whether they can be rolled out uniformly across India's diverse states. The book could more deeply analyze the fiscal and administrative feasibility of its recommendations.

Third, the root causes of women's labour underrepresentation are complex, and not solely economic. Gender norms and household dynamics play a huge role. The finding that 84% of women still need a male relative's approval to work points to patriarchy as a barrier that policy alone may not overturn. The book mentions social norms and safety, but its solutions focus on schemes and infrastructure (e.g. better transport, safe workspaces). These are important, but success also requires changing attitudes through education and legal enforcement (e.g. against workplace harassment). For example, although India has laws like mandatory maternity leave and creche facilities, uptake has been slow, suggesting enforcement gaps.

Finally, some improvement may be cyclical or uneven. While India's 2023 economy was the fastest-growing major economy globally, the so-called "renaissance" for women's employment has been uneven: rural and low-income women often enter work during distress and leave when conditions improve. In fact, an Economic Survey note (cited in the PIB release) cautioned that if FLFPR rises were due to distress, one would have expected it to peak during the pandemic and then fall – which did not happen. This suggests structural changes, but it also raises the question whether new growth sectors are inclusive of women. The book could engage more critically with such countervailing narratives.

Overall, *Breaking Barriers* compiles a wealth of data and offers a multi-faceted policy framework. Its emphasis on evidence and actionable agendas is commendable. Going forward, it will be crucial to monitor how these ideas translate into real outcomes. Continued research – including better data and longitudinal studies – will be needed to assess whether, for example, digital skill programs or expanded childcare truly "move the needle" on female labour participation. Policymakers and civil society should also watch for unintended consequences; for example, interventions that boost women's earnings must be careful not to impose new burdens (like limiting women's time with family). In sum, the book's broad recommendations provide a strong starting point, but their success will depend on sustained political will, resources, and cultural change.

Conclusion

India's "economic renaissance" will only be inclusive if it lifts women along with men. This paper underscores that India's gender gaps in work are rooted in social norms, inadequate infrastructure, and policy shortcomings. Labour-market data confirm that millions of women remain outside the formal workforce, with most employed in vulnerable informal jobs. The authors' proposed remedies – from gender budgeting to childcare to STEM training – align with international best practices, but their implementation will be key.

The evidence and examples discussed here – from MGNREGA to Tamil Nadu's bus scheme – illustrate both the possibilities and challenges of empowering women at work. There are promising signs (rising rural participation, innovative state schemes, corporate diversity programs), but also signs of fragility (urban job losses in crises, persistent unpaid care burdens). Sustained progress will require not only continued policy innovation, but also robust monitoring, better data, and a societal commitment to gender equality. As the *Breaking Barriers* team argues, breaking India's gender barriers is not only a matter of justice, but also a way to unlock the country's full economic potential.

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A Comparative Study of Psychological Well-Being and Mental Health Behavior of Working Women in Context of Emotional Intelligence

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Abstract

The present study was psychological well-being and mental health behavior of working women in context of emotional intelligence was systematically measured and compared. In total 200 working women were taken different urban area of Siwan and Chapra of Bihar. The socio economic statuses of all groups were tried to keep constant. The age of the participants ranged from 25-45 years. The purposive sampling technique was used to select participants in the study. Whole working women sample obtained score high on emotional intelligence were kept in emotional high group and vice-versa. Then the Psychological well-being scale, Mental Health Inventory(MHI-38) and The Schutte Self-Report Emotional Intelligence Test (SSEIT) along with personal information sheets were administered in individual settings. The obtained data were analysed with the help of SPSS using various statistical technique like mean, standard deviation (SD), t-test, etc. The obtained results were interpreted and discussed in the light of various hypotheses. the study. First hypothesis of the study presuming difference in the psychological well-being of (high and low) emotional intelligence of working were tested with the help of mean scores and the finding suggest that high emotional intelligence working women had significantly greater amount of psychological well-being than low emotional intelligence working women. Second hypothesis of the study presuming difference in the level of mental health behaviour of (high and low) emotional intelligence of working were tested with the help of mean scores of the mental health behaviour and finding suggest that high emotional intelligence working women had significantly greater amount of mental health behaviour than low emotional intelligence working women.

Key words: Psychological Well-being, Mental health behaviour, Emotional intelligence, and Working and Non-working women.

Introduction:

Women who are currently employed for a pay cheque are referred to as working women. In today's culture, women have progressed beyond being competent housewives to acquire the abilities and skills required to participate in the workforce on an equal basis with men. The ladies of this age are adamant about pursuing prosperous jobs in their areas of interest. But in this world, not everyone is blessed with a bed full of roses. The level of conflict with working women has increased. Prior to focussing on the many demands at home, one must attend to the needs at work. In the modern family, both the husband and the wife strive to strike a healthy balance between the demands of their professional lives and the responsibilities they have as parents at home. However, it is still challenging for women because they frequently have to fulfill many roles, such as those of a cook, a family maid, a tutor, a nurse, and also attend to the requirements of office work.

Psychological Wellbeing:

Some researchers explain psychological well-being in terms of self acceptance, personal growth in life and positive relations with others, environmental mastery and autonomy. A person's evaluation of his or her life may be in form of cognitions e.g.: when person gives conscious evaluative judgments about his or her satisfaction with life as a whole, or evaluative judgments about specific aspects of his or life such as recreation. However, an evaluation of one's life may also be in the form of affect such as people experiencing unpleasant or pleasant moods and emotions in reaction

* JPU, Chapra

to the life. Thus a person is said to have high psychological well-being if she or he experiences life satisfaction and frequent joy, and only infrequently experience unpleasant emotions such as sadness and anger. On the contrary a person is said to have low psychological well-being if he or she is dissatisfied with life, experiences little joy and affection, and frequently feels negative and affective such as anger or anxiety. The cognitive and affective components of psychological well-being highly interrelated.

Psychological well-being is the internal feeling on individual and can be defined as the state of feeling healthy and happy, having satisfaction, relaxation, pleasure and peace of mind (Joshi, Kumari and Jain, 2008).

Psychological well-being means a general sense of emotional health as evidenced by high self-esteem and positive relationships with others and a lack of anxiety, depression and deviant behavior. As summarized, Psychological well-being is about lives going well. It is the combination of feeling good and functioning effectively (Huppert, 2009).

Well-being is a dynamic concept that includes subjective, social and psychological dimensions as well as health-related behaviors (Seifert, 2005). The Ryff Scales of Psychological Well-Being is a theoretically grounded instrument that specifically focuses on measuring multiple facets of psychological well-being. These facets are: self-acceptance, the establishment of quality ties to other, a sense of autonomy in thought and action, the ability to manage complex environments to suit personal needs and values, the pursuit of meaningful goals and a sense of purpose in life and continued growth and development as a person.

Mental Health:

The fact that working women are often the primary caregivers for their children and other family members, along with many other responsibilities, has a significant impact on the work-life balance and mental health of working women. A woman who has a job and is also responsible for her family is unable to execute her obligations in an equal and effective manner; as a result, she feels tense and remains tense, which produces stress, which in turn may damage her mental health state. The majority of research studies on working women have been conducted on working women who worked in public and private sector organisations, such as working women in the banking sector and railway sectors, who had better psychological health and wellbeing as compared to women working in other sector organisation teachers. This was discovered by conducting a review of the existing research on working women. It was discovered that both the home and the workplace play an important part in deciding the mental health status of an individual.

World Health Organization (1948), states that health as a state of 'complete physical, mental and social well-being and not merely the absence of disease or infirmity. Mental health is an integral and essential component of health. Mental health is more than the absence of illness, and is intimately connected with physical health and behaviour. Neither mental nor physical health can exist alone. Mental, physical, and social functioning is interdependent. Furthermore, health and illness may co-exist. They are mutually exclusive only if health is defined in a restrictive way as the absence of disease (Sartorius 1990). Conditions such as stress, depression, and anxiety can all affect mental health and disrupt a person's routine. If the mental condition is good, a woman can take various responsibilities of a family and understand the complications, try to solve them, plan for future and adjustment with others by becoming mentally strong.

Operational definition of working women in the study is "A working-class married (at least three years) woman with paid employment in a private hospital setting. Such as ward attendant, sweeper, nurses, doctor etc". Women is an individual who is responsible for caring of elderly, nurturing children, take care of family's responsibilities and also they have to work in once as well. There is no doubt about the fact that women are very strong and that they can pull on a lot of work burden be it related to their personal or professional life but at times these working married women in the rush of handling everything forget to take care of themselves and this leads to high levels of stress and affects their mental health. A survey recently conducted in various cities of

India revealed that the major sources that cause mental stress in working women are long working hours, lack of support from family and friends, as well as heavy workload. It's quite clear that a married working woman in India tends to face a lot of challenges in her life and this affects her mental health, deteriorates body image and reduces her quality of life. The various factors affecting the work-life balance of married working women have been examined in this study.

Emotional Intelligence:

The concept of emotional intelligence is currently receiving a lot of attention from a variety of audiences, including the general public, professionals in the field, and academic scholars. It is a generally held belief among the general populace that emotional and social competence is on par with, or even higher than, traditional dimensions of personality and intellectual aptitude in terms of importance. "The ability to notice emotions, integrate emotions in such a way as to facilitate thought, comprehend emotions, and manage emotions in order to promote personal growth," is one definition of "emotional intelligence." The two components that make up emotional intelligence are a person's abilities and their personalities. Emotional intelligence is a process that may be learnt throughout a person's life through various life events. When a person has developed his emotional competences, he will have a happier life and will perform better in the profession. An employee's ability to be emotionally intelligent contributes to their success in their profession, as well as their ability to be creative and to their general productivity in the workplace.

Emotionally intelligent women have the tendency to be aggressive and express their thoughts directly. They also tend to have a positive view of themselves, are gregarious and friendly, express their sentiments at an acceptable rate, and are able to adjust to the load of stress. The traditional and domestic role of women, in which they initially served only as wives and as caregivers of children, began to shift along with the shifting times, emancipation, the development of education and technology, and the demands of the times. In the beginning, women's roles were limited to serving only in these capacities. There is a growing trend of women pursuing higher education, and many of these women have excellent potential for leadership roles. In addition to this, because there is such a high demand in the economic sector, a husband's income is not sufficient to provide for his family on its own; therefore, the family must rely on the earnings of the wife as well (Yulia, 2007). Women in ancient times were more submissive and accepted their lives regardless of the circumstances. Women's thoughts and behaviours have shifted in response to the shifting social climate as a result. Emancipation was one of the results of the feminist movement, and it opened the door for women to have equal access to educational opportunities. As a result of this, there has been a rise in the number of intelligent women who have the capacity to make significant contributions to both society and the government. Both the job of housewife and the role of working woman require women to have the ability to absorb the emotions associated with their different responsibilities. When it comes to duty, the two jobs naturally have different perspectives on the challenges and responsibilities at hand. In addition to their roles as individuals, wives, and mothers, women also play a variety of other significant and difficult roles. She is recognisable by a certain trait; in point of fact, women should not be seen as objects but rather as subjects in the context of the human life system.

Significant of the study:

Balancing acts as a working woman and a wife, means they have to perform a dual responsibility. On the other hand, single or unmarried working women have to cope-up with the societal and cultural pressure. To balance the dual pressure of work at home and work sphere, women faced various psychological, social and physical problems. It is from here that various social, physical and psychological problems emerge and affect the working capacities of women in household as well as in workplace. Modern women have the dual responsibilities of concentrating on the family as well as at work, balancing between home and workplace. Therefore, the problems of the working women are manifold and multidimensional. From a psychological perspective, there are limited studies that emphasis upon the psychological well-being, emotional intelligence and mental problems of working women. The present study find out the socio-psychological, mental health problems of working

women, who are working in service sector either in public or private, either in rural areas or urban areas in Siwan and Chapra districts of Bihar.

Hypotheses:

The following hypotheses were formulated to empirically validate the above objectives:

1. There would be significant difference between women's desires for psychological well-being of (high and low) emotional intelligence of working women.
2. There would be significant difference between mental health behaviour of (high and low) emotional intelligence of working women.

Sample:

Present study attempted to study the concern for status, and mental health behaviour among working women. In total 200 women patients were taken as participants for study. The working women participants were taken from different public and private organization were taken different area from urban area of Siwan and Chapra of Bihar. The socio economic statuses of all groups were tried to keep constant. The age of the participants ranged from 25-45 years. All the participant were selected on the basis of inclusion and exclusion criteria. The emotional intelligence scale was administered to the whole sample, whereas those who obtained high scores on the emotional intelligence scale were kept in the emotionally high group and vice versa.

Design:

Since the study used two group (high and low emotional intelligence working women) designs was used in the study. Working women consists of two hundred (200) respectively. The working women divided into two different groups who scored high on emotional intelligence questionnaire kept in emotional high group(n=92) and scored low on emotional intelligence questionnaire kept in emotional low group(n=108). The groups of participants were compared on psychological well-being and mental health behavior of working women.

Measures/Tools:

There were three tools used in this research one each for measuring desire for social freedom and mental health behavior in context of emotional intelligence of working women. The following tools were administered on the participants.

Ryff's psychological well-being scale (PWB):

Ryff's psychological well-being scale (PWB) was developed by Ryff (1989). The scale is a 54 item scale version that was used. The scale involves items of the 6 constructs of Psychological well being given by Ryff of autonomy, self acceptance, environmental mastery, personal growth, purpose in life and positive relations with others. Respondents rate statements on a scale of 1 to 6, with 1 indicating strong disagreement and 6 indicating strong agreement. The Inter-factor correlations of the psychological well-being constructs were sufficiently high (> 0.80). Internal consistency varied from .86 to .93 for the various dimensions. The cronbach alpha was .82 on the Indian sample indicating that the reliability is quiet adequate for further application.

Mental health Scale (Talesara & Bano, 2017):

Mental health Scale developed by Talesara & Bano, (2017). It contains 54 items with Three dimension the following dimensions of Mental health Scale were identified: Mental health scale has 54 items out of which 25 items are positive and 29 items are negative. The serial numbers of the positive and negative items are given in Table.

Scoring:

The subject is supposed to mark his response to each item in 'Always = 4', 'Often=3', 'Sometimes=2', 'Rarely=1' or 'Never= 0' for positive items and negative items score was 'Always = 0', 'Often=1', 'Sometimes=2', 'Rarely=3' or 'Never= 4'.

Reliability and Validity:

The split-half reliability coefficient for the scale based on both odd- even and first half second half splitting was determined by using the Spearman-Brown Formula was found to be .72. Concurrent validity was assessed by Pramod Kumar. The coefficient of correlation thus calculated was found .69

which was significant at .01 level. Intrinsic validity was also computed by correlating score, the total score obtained on mental health scale which range .58 to .71 which was significant at .01 levels.

The Schutte Self-Report Emotional Intelligence Test (SSEIT)

Schutte et al. (1998). The SSEIT is a 33-item, three of which are reverse scored. It is a self-report on a 5-point Likert scale, scored as 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree. The scores ranged from 33 to 165, with the higher scores indicating more characteristic EI (Schutte et al., 1998). The mean EI score is 124; scores below 111 or above 137 are considered unusually low or high (Malouf, 2014). Schutte and her colleges report a reliability rating of 0.90 for their emotional intelligence scale. The scale also showed evidence of predictive and discriminant validity. The EI score, overall, is fairly reliable for adults and adolescents.

Results and Discussion:

Hypothesis-I: There would be significant difference between psychological wellbeing of (high and low) emotional intelligence of working women.

Table 1: Mean and standard deviation of the scores on Psychological wellbeing of the two groups (emotional intelligence (High) and emotional intelligence (Low)) of working women, and t-value for the test of the reliability of difference between the two groups.

Variables	Group	N	Mean	SD	SED	T	P
Psychological wellbeing	Emotional intelligence (High)	92	88.24	12.418	3.674	2.460	<.01
	Emotional intelligence (Low)	108	79.20	22.822			

First hypothesis of the study presuming difference in the level of Psychological wellbeing of (high and low) emotional intelligence of working were tested with the help of mean scores of the women’s desires for social freedom computed separately for each of the two groups (high and low) emotional intelligence of working) of women and obtained results were presented in table no. 1. From the results given in the above table 1 it appears that the mean score of two groups high emotional intelligence working women and low emotional intelligence working women were found to be 88.24 and 79.20 respectively. It means that high emotional intelligence working women have obtained higher mean on psychological well-being than low emotional intelligence working women. The standard deviations for high emotional intelligence working women and low emotional intelligence working women were 1.647 and 1.071 respectively. The t-ratio between the two means came to be 2.460 which were found significant at .01 level of confidence. These finding suggest that high emotional intelligence working women had significantly greater amount of psychological well-being than low emotional intelligence working women. Hence, the hypothesis-I which states that “there would be significant difference between psychological wellbeing of (high and low) emotional intelligence of working women.” was confirmed by the finding of the study.

It seems that since the two-level (high and low) emotional intelligence of working women belong to the same socio-economic strata of the organization and go through almost the same kind of work environment and practices so much so that they worked in the same organization, they did not exhibit a difference in the emotional intelligence. It proves that work environment; job nature and job satisfaction etc. are important ingredients for the development of emotional intelligence. It was also found that working women have more desire for freedom than non-working women shown in table 1. Results revealed that working women higher desire for freedom this reason no effect of emotional intelligence has been seen. According to the findings of the study, it was revealed that there no difference in the desire for social freedom of high and low emotional intelligence groups of working women.

Hypothesis-II: There would be significant difference between mental health behaviour of (high and low) emotional intelligence of working women.

Table 2: Mean and standard deviation of the scores on mental health behaviour of the two groups (emotional intelligence (High) and emotional intelligence (Low)) of working women, and t-value for the test of the reliability of difference between the two groups

Variables	Group	N	Mean	SD	SED	t	P
Mental health behavior	Emotional intelligence(High)	92	120.66	7.735	1.076	8.315	<.01
	Emotional intelligence(Low)	108	111.71	7.409			

Second hypothesis of the study presuming difference in the level of mental health behaviour of (high and low) emotional intelligence of working were tested with the help of mean scores of the mental health behaviour computed separately for each of the two groups (high and low) emotional intelligence of working women and obtained results were presented in table no. 2. From the results given it appears that the mean score of two groups high emotional intelligence working women and low emotional intelligence working women were found to be 120.66 and 111.71 respectively. It means that high emotional intelligence working women have obtained more mean on mental health behaviour than low emotional intelligence working women. The standard deviations for high emotional intelligence working women and low emotional intelligence working women were 7.735 and 7.409 respectively. The t-ratio between the two means came to be 8.315 which were significant beyond .01 level. These finding suggest that high emotional intelligence working women had significantly greater amount of mental health behaviour than low emotional intelligence working women. Hence, the hypothesis-II which states that "There would be significant difference between mental health behaviour of (high and low) emotional intelligence of working women." was confirmed by the finding of the study.

Since both of these women come from similar socioeconomic backgrounds and experience almost identical environments—living and working in the same family and joining the same organization—it would appear that their psychological well-being differed. It demonstrates how factors such as the work environment, pressure to perform, gender discrimination, barriers between the sexes, having two jobs and a house, being a mother and a working woman at the same time, etc., can contribute to the emergence of psychological issues. A career in today's competitive world is increasingly characterised by struggles with deadlines, rapid project mobility, and frequently divergent reporting relationships; it also involves the shock style of conflict management, temporal dissociation, the "night here, morning there" syndrome (since most Indian software companies are clients of US-based concerns, they must work at night in India whereas it is day in the US); misuse of free time; and an increasingly pervasive cynicism that can cause dejection, distress, pressure, and stress. It is all part of the modern workplace. When such a situation prevails in the private and government sector married working woman professional has to face all these situations and in addition she often has to take care of her kith and kin, elders, and other responsibilities in the family. It showed that a woman who works full-time may have increased stress and anxiety as a result of this, particularly if her family is not supportive. The lack of family support generates problems in the way of working women. Married working women are facing the challenges in their marital relationships, child care and household responsibilities. They are facing the changing behavior of family members and don't have proper time for self-care. The overtime work and family management are the main reason for stress among working women. In most of the circumstance's working women are not able to cope-up with family as well as professional management. Adzlin et al (2011) showed the prevalence of psychological distress among married working women as 22.8%.

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India's Contribution to United Nations Peacekeeping Operations: Past, Present, and Future Goals

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Uroos Fatima Rizvi**

Abstract

India has been at the forefront of United Nations Peacekeeping Operations (UNPKOs) since the early years of its independence, establishing itself as a committed stakeholder in global peace and security. This paper explores India's enduring engagement in peacekeeping missions by tracing its historical participation, evaluating its present-day roles, and identifying the strategic goals guiding its future contributions. From sending medical units to Korea in the 1950s to deploying thousands of personnel in modern-day conflict zones like South Sudan and the Democratic Republic of Congo, India's peacekeeping legacy reflects a blend of humanitarian commitment, diplomatic strategy, and geopolitical interest. The study also addresses key challenges such as operational constraints and political complexities, and discusses India's emphasis on leadership roles, gender inclusion, and technological advancements in future missions. By analyzing India's multifaceted role, the paper aims to contribute to a deeper understanding of how peacekeeping strengthens India's global standing and supports its aspirations for broader influence within the UN system.

Keywords: India's Peacekeeping, Military Support, Peacekeeping Missions, Conflict Resolution, Troop Contributions, and UN Peacekeeping Operations (UNPKOs).

I. Introduction

Since its independence, India has consistently demonstrated a profound commitment to global peace and security. As one of the founding members of the United Nations (UN), India has actively participated in various UN initiatives, with peacekeeping operations being a significant area of involvement. India's substantial contributions to UN Peacekeeping Operations (UNPKOs) underscore its dedication to upholding international peace and stability. Over the decades, India has emerged as one of the largest troop-contributing countries, deploying over 253,000 personnel across more than 49 missions worldwide.

This paper delves into India's historical engagement in UNPKOs, examines its current roles and challenges, and explores future objectives, highlighting the nation's evolving strategies in the realm of international peacekeeping.

II. Objectives: The primary objectives of this research are:

- Historical Analysis:** To trace India's involvement in UNPKOs from inception to the present, highlighting key missions and contributions.
- Current Assessment:** To evaluate India's present role, including the nature of deployments, challenges faced, and strategic interests.
- Future Outlook:** To explore India's prospective goals in UNPKOs, considering geopolitical shifts and emerging global security dynamics.
- Policy Implications:** To assess how India's peacekeeping endeavours influence its foreign policy and aspirations for a permanent seat in the UN Security Council.

III. Related Work

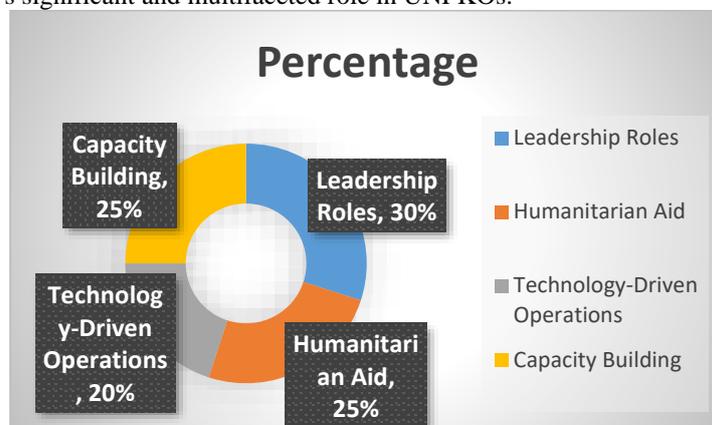
Numerous scholars and institutions have examined India's role in UNPKOs. Bhatia (2022) provides a comprehensive historical overview, emphasizing India's strategic motivations and

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contributions. Singh (2022) discusses India's evolving strategies in peacekeeping, focusing on its increasing emphasis on capacity-building and technological integration. Mishra (2021) analyzes India's peacekeeping legacy and its implications for future engagements. These works collectively underscore India's significant and multifaceted role in UNPKOs.



IV. Methodology

This research adopts a qualitative approach, utilizing a combination of primary and secondary sources. Primary sources include official UN documents (United Nations Peacekeeping, n.d.), reports from the Ministry of External Affairs (n.d.), and publications from the Centre for United Nations Peacekeeping (CUNPK, n.d.). Secondary sources encompass scholarly articles, books, and credible news outlets. Data analysis involves thematic categorization to identify patterns, challenges, and strategic shifts in India's peacekeeping endeavours.

V. Data Analysis

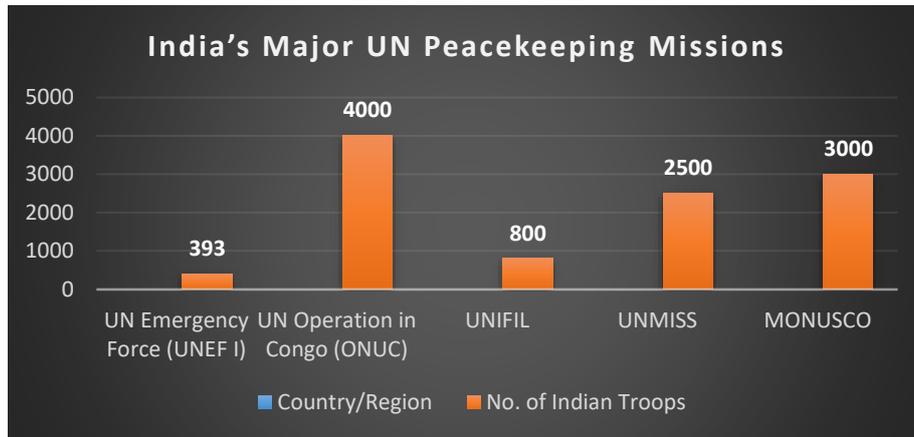
A. Historical Contributions

India's engagement in UNPKOs dates back to the 1950s. Notable missions include:

- **Korea (1950-54):** Deployment of medical units and a Custodian Force to provide humanitarian assistance and ensure ceasefire compliance.
- **Congo (1960-64):** Significant role in stabilizing the region, with Indian peacekeepers engaging in combat operations to restore peace.
- **Cambodia (1992-93):** Facilitation of peaceful transition to democratic governance.
- **South Sudan (2011-present):** Ongoing contributions focusing on civilian protection and humanitarian aid (United Nations Peacekeeping, n.d.).

India's Major UN Peacekeeping Missions (1950–Present)

Mission Name	Country/Region	Year	No. of Indian Troops	Objective	Outcome
UN Emergency Force (UNEF I)	Egypt	1956–1967	393	Ceasefire monitoring in Suez Canal	Successful disengagement of forces
UN Operation in Congo (ONUC)	Congo	1960–1964	4,000+	Stabilization and conflict resolution	Key role in restoring peace
UNIFIL	Lebanon	1978–Present	800+	Ceasefire monitoring in Lebanon	Ongoing
UNMISS	South Sudan	2011–Present	2,500+	Protection of civilians	Ongoing humanitarian assistance
MONUSCO	Democratic Republic of Congo	1999–Present	3,000+	Chapter VII mandate enforcement	Ongoing operations



B. Current Role and Challenges

As of recent data, India has over 5,000 personnel deployed in nine active UN missions, including significant deployments in South Sudan, Congo, and Lebanon. India's contributions extend beyond troop deployments to include medical aid, engineering support, and capacity-building initiatives (Ministry of External Affairs, n.d.; United Nations Peacekeeping, n.d.; UNMISS, n.d.; MONUSCO, n.d.).

However, Indian peacekeepers face several challenges:

- **Hostile Environments:** Operating in conflict zones with fragile ceasefires and unpredictable armed groups.
- **Resource Constraints:** Limited access to modern equipment and logistical support.
- **Political Complexities:** Navigating the intricate political dynamics of host countries while adhering to UN mandates.
- **Casualties:** Indian peacekeepers have suffered fatalities, underscoring the risks involved in such missions.

C. Strategic Motivations: India's participation in UNPKOs is driven by multiple factors including national interests, diplomatic engagement, professional development, and global standing. These contributions help bolster its case for a permanent seat on the UN Security Council (Mishra, 2021).

- **National Interests:** Ensuring regional stability and preventing conflicts that could impact India's security.
- **Diplomatic Engagement:** Strengthening bilateral relations with host countries.
- **Professional Development:** Providing Indian armed forces with exposure to international operational standards.
- **Global Standing:** Enhancing India's reputation as a responsible global power and bolstering its case for a permanent seat in the UN Security Council.

D. Capacity Building and Gender Inclusion

India has been proactive in capacity-building efforts, notably through the Centre for UN Peacekeeping (CUNPK, n.d.). In 2007, India deployed the first all-female Formed Police Unit in Liberia, marking a significant step towards gender inclusion in peacekeeping operations (Ministry of External Affairs, n.d.).

E. Future Goals: India's future objectives in UNPKOs encompass leadership roles and technological integration (Singh, 2022), as well as advocacy for reforms (Bhatia, 2022).

- **Leadership Roles:** Aspiring for greater representation in leadership positions within UN missions.
- **Technological Integration:** Investing in advanced technology and surveillance systems to enhance operational efficiency.



- **Strengthening Multilateralism:** Advocating for UN reforms, particularly the expansion of the Security Council to reflect contemporary global realities.

VI. Conclusion

India's unwavering commitment to UNPKOs underscores its role as a pivotal player in global peacekeeping efforts. Through substantial troop contributions, capacity-building initiatives, and advocacy for UN reforms, India continues to shape the landscape of international peace and security. As the nature of conflicts evolves, India's adaptive strategies and emphasis on inclusive, technology-driven approaches position it to effectively address emerging challenges in peacekeeping operations.

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Academic Achievement of High School Students in Relation to their Internet Addiction and Sex

Dr. Kirty Raj*

Abstract

To see the effect of internet addiction and sex on academic achievement of high school students 'Internet Addiction Test' constructed and standardized by Kimberly Young (1998) and a self made 'Personal Information Inventory were administered on a sample of 100 male and 100 female students of high school level. Sample was drawn from high schools of Gopalganj district of Bihar State. Comparison of scores of academic achievement on moderate level of internet addiction /mild level of internet addiction and male/female revealed that subjects of lower academic achievement are comparatively more internet addicted than those subjects who are of higher academic achievement. It shows that high level of internet addiction pushes one towards lower academic achievement and normal level of internet addiction refrains from it. Subjects of male sex are comparatively lower academic achievement than those subjects who are of female sex.

Keywords:- Internet addiction, academic achievement , Age, High School, Students.

Introduction

The Internet is a global computer network - a network of many networks- which connects all the computers of the world through routers and servers and spreads data and information all over the world. These data and information can be text, verbal, image, video or anything. The full form of the Internet is 'Interconnected Network'. America started the Internet on January 1, 1983, which was launched in India on 14 January 1995.

The use of the Internet has made human life very convenient and has also brought a lot of change in human living and thinking. Through the Internet, we are able to send information and data anywhere in the world in second. We get information about anything of the world sitting at our home. We can download or upload files, applications, photos, videos etc. Internet gives us the facility of playing games, reading or watching news, movies and songs. Social networking, free calling or video calling, online shopping and marketing, online ticket booking (flight, train, bus etc), hotel booking, job searching, fund transfer etc. have become easily possible with the Internet. Due to its benefits, the number of its users is increasing day by day. The internet user base in India has exceeded 500 million mark and is likely to reach 900 million by the end of 2025, according to a newly released IAMAI Kantar report. Youths of the day spend a lot of time on internet, either surfing different texts, movies or gaming and watching different visual items. Today's human life is gradually becoming dependent on the Internet. Internet is being used in every field today such as technology, education, business, farming etc. and its contribution to the development in every field is also immense.

Consuming or using anything excessively or for longer than normal level affects not only physical and mental health of an individual but also his family, social and institutional relationships and adjustment. This behaviour pattern falls in the category of addiction. According to Walker (1989), "Addiction refers to a persistent behavioral pattern characterized by: a desire or need to continue the activity which places it outside voluntary control; a tendency to increase the frequency or amount of the activity over time; Psychological dependence on the pleasurable effects of the activity; and, a detrimental effect on the individual and society". Kimberly Young was the first

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woman to coin the term Internet addiction with the aim of showing a connection between behaviour and impulse control disorder. Young defined Internet addiction as any online-related, compulsive behaviour that severely affects activities of daily living and social interaction.

Internet addiction is the inability to control the use of internet that leads to feeling of pressure, anxiety and dysfunctional behaviours in everyday activities. The phenomenon of reckless use of the internet by young people has taken enormous dimensions and has created problems for the mental and social functioning and it leads them to addiction (Sfakianakis et. al. 2012). Deng et al (2007), Johansson and Gotestam (2004) and other different investigators have reported that prevalence of internet addiction varies from 1.5% to 25% in different populations. Goel et al (2013) reported prevalence of internet addiction among Indian adolescents at the level of 0.7%. Young individuals of age group 18 – 24 years are more vulnerable to become internet addicts than old individuals (Soule et al,2002).

Our young generation waste more and more of their time on internet and screen and unknowingly waste the most important time of their life at the age they should get more and more education, search for new facts, reflect on old facts, think about their employment and be most active, at that age they become inactive by becoming a victim of internet addiction. This makes them unable to concentrate on their studies and goals and consequently they suffer from various types of mental and physical diseases. Youths in internet addiction ignore their responsibilities toward themselves, family and society that is very harmful for themselves, their family and their society at large.

Academic achievement is sometimes called academic excellence. It is the positive, direct outcomes of our academic performance. These include our grades, honors, awards, competitive results and experiences that demonstrate our academic ability, engagement in student life, contribution to our community and resilience.

Academic achievement represents performance outcomes that indicate the extent to which an individual has achieved specific goals that were the focus of activities in the learning environment, especially in school, college, and university. School systems define primarily cognitive objectives that apply to several subject areas (e.g., critical thinking) or involve the acquisition of knowledge and understanding in a specific intellectual area (e.g., numeracy, literacy, science, history). Therefore, academic performance should be considered a multidimensional construct that includes various learning domains. Since the scope of educational achievement is so broad and includes a variety of educational outcomes, the definition of educational achievement depends on the indicators used to measure it. Among the many criteria that indicate educational performance, there are very general indicators, such as procedural and declarative knowledge acquired in the educational system, more curriculum-based criteria, such as grades or performance on educational achievement tests, and indicators of cumulative academic performance, such as educational qualifications and certificates.

In the light of above objectives the following hypotheses were formulated :-

1. There will be significant difference between higher academic achievement and lower academic achievement groups on Internet Addiction.
2. There will be significant difference between male and female groups on Academic achievement.

Method

Sample : - The study was conducted on a sample of 200 (100 male 100 female) high school students. Sample was drawn from high schools of Gopalganj district of Bihar State by using purposive -cum-random sampling design.

Tests Used: - For measuring internet addiction 'Internet Addiction Test' constructed and standardized by Kimberly Young (1998) has been used. A Self-made 'Personal Information Inventory' has been also used which sought personal information from subjects.

Statistical Analysis :- To test the effects of internet addiction and sex on academic achievement of high- School students the score of academic achievement of different subgroups differing on different criteria were calculated separately. Means and S.Ds of internet addiction scores were

calculated for different subgroups. After this 't' test was run to test the significance of difference between mean scores of different criterion sub-groups on academic achievement.

Results and Discussion

There has been found significant relationship between sex and academic achievement. On comparing male and female groups on academic achievement it is found that female group has obtained significantly higher mean score than male group. The mean academic achievement score of male group is 50.44 while that of female group is 56.06 (Table-1). The obtained 't' ratio for testing the significance of difference between the two mean score is 2.148 which is higher than the required value for significance at .05 level. So, the obtained 't'-ratio is significant.

As is the general belief that boys are ahead of girls in education and academic achievement, but in reality it is not so. The result of present study proves that academic achievement of subjects of female sex are higher than those subjects who are of male sex. It also proves that femininity pushes one towards to achieve higher academic achievement compare to the masculinity

Table -1
Showing Means , SDs and t- ratio of Academic Achievement Scores – Male and Female groups.

Groups	N	Mean	S.D.	Df	t – ratio	Level of Significance
Male	100	50.44	19.791	198	2.148	.05
Female	100	56.06	17.113			

Table -2
Showing Means , SDs and t- ratio of Academic Achievement Scores – Normal , Mild and Moderate level of IA groups

Groups	N	Mean	S.D.	Df	t – ratio	Level of Significance
Normal	64	65.24	18.191	127	2.909	.01
Mild	65	56.17	17.187			
Normal	64	65.24	18.191	133	8.567	.01
Moderate	71	39.75	16.165			
Mild	65	56.17	17.187	134	5.725	.01
Moderate	71	39.75	16.165			

There has been found a significant relationship between internet addiction and academic achievement. On comparing Normal, Mild and Moderate level of Internet Addiction groups on academic achievement it is found that normal group has obtained significantly higher mean score than mild level of internet addiction and moderate level of internet addiction group. Mild level of internet addiction group has obtained significantly lower mean score than normal group and significantly higher mean score than moderate level of internet addiction group. Moderate level of internet addiction group has obtained significantly lower mean score than normal and mild level of internet addiction group. The mean academic achievement scores of normal, mild and moderate groups of internet addiction are 65.24, 56.17 and 39.75 respectively (Table-2). The obtained 't' ratios for Normal x Mild level of IA, Normal x Moderate level of IA and Mild level of IA x Moderate level of IA compared groups are 2.909, 8.567 and 5.725 respectively. All the three 't' ratios are significant at .01 level. There is significant decrease in academic achievement scores with increase in level of internet addiction. This proves significant effect of internet addiction on academic achievement of high school students.

Conclusion

The study has finally led to the following conclusions :-

1. Female students are significantly higher on academic achievement than male students.
2. Increasing level of internet addiction decreasing academic achievement in students.

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A Study on Trends and Pattern and Issue on Agriculture Sector Development with Reference: Haryana

Jaishree*

Abstract

The early 1960s food shortage was a significant problem for the Indian economy at the time of independence because India's economy was agro-based and stagnated. However, throughout time, as a result of numerous reforms or significant actions done by the government, as well as advancements in technology, India has become one of the G-20 economies with the fastest expanding economies due to its early efforts to achieve food security. According to a report, almost 70% of Haryana's land is used for agricultural, making the state of Haryana a significant contributor to India's GDP. Haryana is also known as "the food mine". The primary goal of this paper is to obtain the trends and patterns of agricultural cultivation or crops in the state of Haryana using secondary published and various reports, such as the economic survey, statistical analysis of Haryana, and other farmer development reports and research papers, among others. It also aims to identify the major issues that have arisen in the development of the agricultural sector.

Introduction

The agriculture sector is the one main important sector of the Indian economy and livelihood due to the creation of jobs in the sector. The Agriculture and Allied Sector has been steadily declining over time as a result of land segmentation. Because of spatial fragmentation, but our reliance on the industrial and service sectors. In the agriculture sector in 2020-21, 58 percent of persons engaged depend on the agriculture industry. Furthermore, agriculture contributes 20.2% of overall GVA (Gross VALUE ADDED) of national income. Agriculture contributes around 17.8 percent of Haryana's gross domestic product (GDP), while employing 51 percent of the workforce. Furthermore, approximately 75% of the region is irrigated via tube Wells and a vast canal system. About two-thirds of the state has secured irrigation, which is best suitable for rice-wheat production, while the remaining one-fifth is best suited for rapeseed and mustard, pearl millet, cluster bean agriculture, agro-forestry, and arid-horticulture. Agriculture contributes approximately 14.5 percent of Haryana's gross domestic product (GDP) while providing employment Agriculture employs 51 percent of the workforce. Furthermore, approximately 75% of the region is irrigated via tube Wells and a vast canal system.

Research Methodology: - Economic, Statistical, and Secondary Data from Haryana the Ministry of Agriculture and Farmers' Welfare conducted the survey and published research papers, agriculture reports, and other materials in the publication. The exponential function will be fitted in order to calculate the growth behavior of trends and performance of agricultural production in Haryana farm area, yield, production, and revenue.

Objective of study

- Trends and pattern of agriculture crops in Haryana
- Major issue and initiatives in agriculture sector in Haryana.

Literature Review

Kumar v. (2022), Using time series data from 1967–1968 to 2020–2020 from published sources, this article has examined the trends and patterns in agricultural growth, pattern in agricultural growth, pattern in agricultural growth and crop production growth at the national level. The analysis indicated a clear transition from foodgrain to non-foodgrain crops and a drop in gross cropped area of

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11.62%. Foodgrain crop contribution decreased from 32.46% in 1970–1971 to 27.41% in 2020, whereas fruit and vegetable share increased significantly from 14.11% to 27.77% over the same time period.

Godara R. krishan B. (2020), The study, "An Economic Analysis of the Transforms of Agriculture Production in Haryana," aimed to primarily access the trends of agriculture production as well as find the pattern of land holding distribution pattern in Haryana. The study discovered that, thanks to government policies and initiatives, agriculture production and productivity have increased in Haryana over the past two decades; however, on the other hand, the government needs to increase farmer income and insist on water deregulation.

Pandey A.2019, study on an analytical analysis of Indian agricultural crop output, export, and wheat. The primary goal of the study was to analyze the production of the agricultural crop (wheat) in India and the export of that crop. Based on primary and secondary data, it was concluded that India is not a major exporter of agriculture crop wheat and that it needs to strengthen its export policies and increase that crop's export.

Dev.S (2018) study on "Transformation of India agriculture growth inclusive and Sustainability" The primary goal of this study was to access the changes in world agriculture that have affected India's agricultural development and sustainability as well as to identify contemporary trends in global agriculture that have affected India's agricultural performance and sustainability. According to the Indian Constitution, states are responsible for governing in order to achieve the three goals of growth, inclusiveness, and sustainability; therefore, it is important for states to provide a blueprint for the policies and reforms needed to increase farmers' income. Growth, however, will be useless without inclusivity and sustainability.

Behera M. (2017), The study's major objective was to identify the important interest for the agro-food industries by determining the impact of supplementation on the natural quality and acceptability of millet biscuits. The study indicated that millets and wheat significantly improved in terms of protein content. The findings showed that cowpea biscuits had higher protein content than wheat biscuits and that mistral, one variety of millets, is characterized by high carbohydrate content.

Research gap: -

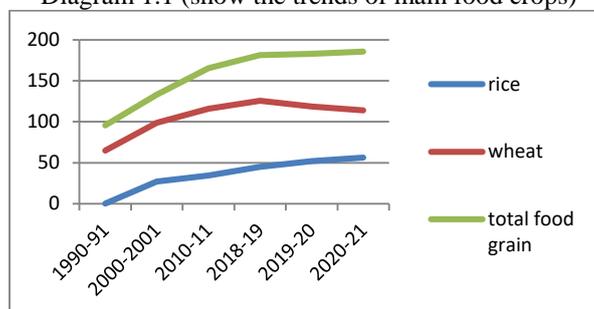
All the study based on agriculture trends and development on wheat crops, millets agro based industries and focus on agricultural export trends but no one study on the agriculture Pattern and trends and major issue of agricultural development and initiative by government for deployments of Agriculture with reference to Haryana.

Trends and pattern of Agricultural crops in Haryana: -

Cropping pattern refers to the arrangement of crops in a specific land area and the proportion of land under cultivation of various crops at various points in time. Agriculture, including crop husbandry and dairy farming, is the main component contributing about 95% to GDP of agriculture and allied activities, Jowar, bajre, maize, wheat, barley, gramme, mustard, cotton, and sugarcane are some of the primary crops grown in Haryana. According to an analysis, there are 35.56 lakh hc of net sown area and 38.09 lakh hc of cultivated area. Wheat, paddy, and sugarcane are its main crops as a result of the green revolution in India in 1966 and the expansion of irrigation facilities in many districts following the creation of Haryana State. Wheat and paddy are farmed on the majority of the land in the major Haryana districts of Jhajjar, Fatehabad, and Panchkula. The northeastern zone covers the admired and sub-humid areas of karnal, panipat, and sonipat while the southwest zone covers the arid and sub-humid regions of ambala, yamuna, nagar, panchkula, and kaithal. In Haryana, a total of 16.17 lakh farmers own 36.46 lakh hectares of arable land, including 7.78 lakh (48.11%) marginal farmers who own 3,60 lakh hectors of cultivable land and 3.15 lakh (19.47%) small farmers who own 4,63 lakh hectors. Agriculture is the basic occupation of the people who live in the state of Haryana and occupies 70% of the total area of the state. Today, Haryana makes a significant contribution to the nation's production of milk and food grains. Karnal is a district in Haryana that is referred to as the "rice bowl". Haryana utilizes the up 1.5% of India's land area but

contributes 15% of the country's agricultural output, which has increased by approximately 10 times since the state's founding in 1966. Nearly 97% of the state's land is arable, and 86% of that is used for agriculture. So trends and pattern of main food crops to be show under the diagram.

Diagram 1.1 (show the trends of main food crops)



Source : Statistical abstract of Haryana (2020-2021)

Under the diagram (1.1), shows that the on (OY -axes) production of food grains in lakh , and on (OX –axes) show the production trends of the rice, Wheatland total food grains , which are the main crops of Haryana ,in diagram on the base of crictally examine from 1990 to 2020-21trands shows that on an average production of all the crops has in increasing trends , as compare to rice to production growth of wheat , production of rice crop is continually increasing pattern as compare to production of wheat , which shows that in Haryana growth rate of production of rice is high. Under this diagram, which contrasts the relative growth rates of crop production in Haryana, production of rice in 1991–1992 was only 18.34 lakh, but it increased to 56.33 lakh in 2020–21, as well as production of wheat initially in 1991–1992, which increased to 114.06 lakh in 2020–21, and total food grain production, which was 95.91 lakh and increased to 185.91 lakh in recent decades. The study concluded that this increase in crop production is due to the state's ongoing agricultural development. It was a significant effect on agriculture development as well nation's GDP.

Agriculture index numbers relating to agriculture in Haryana

Table-1.1

(base: triennium ending 2007-08=100)

Year	Index of area under crops	Index of net area sown	Index of cropping intensity	Index of cropping pattern	Index of yield	Index of productivity per hectare of net area shown	Index of agriculture production
1	2	3	4	5	6	7	8
1969-70	92.79	98.37	93.35	96.68	101.92	92.95	91.43
1980-81	100.51	99.88	101.66	101.31	104.46	106.50	106.37
1990-91	110.07	99.13	111.00	107.76	152.70	182.71	181.12
2000-01	116.32	97.78	127.40	118.54	161.53	227.79	222.73
2010-11	101.45	98.51	184.91	100.00	107.55	110.75	109.10
2017-18	111.45	102.24	189.76	100.00	107.58	120.68	119.90
2018-19	113.91	101.73	190.32	100.00	121.03	135.53	137.87
2019-20	115.67	105.57	193.69	100.00	117.29	128.51	135.67
2020-21	112.17	100.33	180.73	100.00	123.63	138.22	138.68

Source: dept. of Economic and Statistical affairs, Haryana

According to this table (1.1), the index of area under crops has been rising significantly between 1969 and 2020-21, and the index of area showed also be positive trands reveals that in Haryana, agricultural produce was one of the key sources of the state's income. Since approximately 80% of state residents depended on agriculture in 1969–70, Haryana has been dubbed the nation's

"food mine." This state not only provided all of the nation's food needs, but it also played a significant role in India's exports. With the advancement of technology, agricultural productivity has also increased steadily over time, rising by 92.9 percent from 1969 to 2020–21. The production has grown by about 80%. and that agricultural productivity will rise as well. Due to irrigation facilities and technological advancements, the area under cultivation increased quickly in the state. Farmers were also required to pay a minimum support price (MSP) in exchange for a fixed or minimum return on their crops as a result of government assistance, insensitivity, and fasal bima (insurance). The table below shows many factors that support farmers' efforts to increase their crop production. It also demonstrates that the cost of cultivation has decreased, with the result that both agricultural output and the amount of land cultivated have increased.

Agriculture index number of Agricultural production in Haryana

Table-1.2 (base: triennium ending 2007-08= 100)

Commodity	Weight	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4	5	6	7	8	9
(b)fiber								
Cotton(desl)	2.14	11.01	4.41	22.03	1.32	3.96	11.89	89.27
Cotton(amrican)	14.46	127.64	275.84	132.50	18.23	227.22	279.22	203.67
Total Fibers	16.60	112.60	240.85	118.26	16.05	198.36	339.73	188.92
(c) Miscellaneous								
Potatoes	0.44	107.04	100.26	127.67	119.63	168.52	139.59	135.91
Onion	0.13	95.20	34.93	106.11	126.64	125.18	70.36	109.96
Sugarcane	5.62	80.22	80.22	91.98	107.79	95.02	86.50	95.96
Chilles (dry)	0.17	13.69	51.33	42.21	22.81	34.22	27.38	29.66
Gowar seed	2.73	99.55	112.04	66.76	511.88	47.12	255.91	31.32
Total non-food grains	9.14	86.34	173.03	110.99	102.34	160.00	144.16	148.99
All c commodities	100.00	106.60	133.83	121.19	119.90	137.87	135.67	138.68

Source: dept. of Economics & Statistical affairs, Haryana

Table 1.2 displays the state's agricultural production index for several food and non-food crops like onion, sugarcane, chilies, and gourd seeds, as well as non-food crops like cotton and other crops. Trends show that both crops produced more food and non-food items in recent years compared to traditional food crops, which indicate that the green revolution and state-level technological advancements are to blame for the increase in food and non-food production. Both the state's and the country's economic development have benefited from it. However, it is a good indication for economic growth. Crop pattern in Haryana mainly food crops cultivation was more than non-food crops in absolute term, however, in recent years' data shows that growth rate of non-food crops increases more than food crops. People diversified to horticulture or cash crops. it is shows that state is not only fulfill the propose of food security as well participate in commercialization in agriculture sector. The study's findings demonstrate that the growth rates of both food and non-food crops in the state were enhanced.

Major issue under Agriculture sector in Haryana: -

There is some of major issues arise in agricultural sector development, these problems and initiatives are to be define under the following as: -

Erosion of soil and land degradation:-One of the main obstacles to raising crop output is soil erosion and deterioration. There are several reasons that soil erosion is getting worse every day. soil deterioration caused by extensive fertilizer, chemical, and pesticide use in agriculture. The issue of water logging is developing as a result of the fertilizer and chemical. In order to combat soil erosion,

organic farming is used. In addition to Haryana, other states also experience issues with soil degradation. Punjab is the initial state to experience a crisis with soil erosion.

The desies to be controlled: - Government of Haryana to implement crop pest management. The main agricultural concern for Haryana is the yellow rust disease that affects wheat crops. To stop the sickness Haryana will deploy technology in the agriculture sector, including DSR and CA.

Planning to use the HVYs in agriculture sector: -Because of the use of the green revolution in India, the adoption of high yielding types of seeds was stimulated Hybrid seeds, new technologies utilized in agriculture, changes to the infrastructure, and governmental policies are just a few of the additional variables that contributed to the green revolution's significant growth in agricultural production.

Irrigation related problem in Haryana:- The Agriculture industry was under pressure as the population grew since there was a rise in the demand for agricultural products. The marketplace additionally, herbicides and pesticides are used in agriculture to increase profits. Approximately 80% of water use was for agriculture. Farmer preference for wheat and Kharif crops, on the other hand. We require a lot of water for paddy in order to grow Kharif crops. The government of Haryana will also implement a national horticulture mission and crop diversification programme to address the state's water crisis. The government of Haryana recommends growing maize instead of paddy instead.

Government initiatives for agriculture sector development: - The government established the CACP in 1965 to combat agricultural malpractice because the government wants peasants to receive a fair price for their commodities produced by farmers. During the year in 2018, the government pledged to put an end to agricultural marketing malpractices by launching the E-NAM mandi, which will provide farmers with a fair price for their produce. According to the E-Nam Scheme, the state has been linked with three NAM (National Agricultural Market) schemes in order to make agricultural sale of produce more seamless, transparent, and farmer/trade man-friendly.

PM fasal Bima Yojana: - This Scheme has been implemented on 18 Feb. 2018 in all the states India. The PM Fasal Bima Yojana is an insurance programme for food crops, oilseeds, and horticulture crops that is offered in all states. Under this program, annual commercial crops are covered for 2% of the karif season's total insured value and 1.5% of the rabbi season's total insured value. The difference between the actual premium and the rate of insurance that farmers must pay is 5% of the total sum insured, and in Haryana, over 83% of people is covered by this programme. 5.34 lakh lonnee farmers benefit from it, while 6.44 lakh farmers applied for the programme in the kariff season 2020 to obtain money.

Crop diversification scheme:- Crop Diversification Program is a part of The Rastrya Krishi Vikas Yojana, which was conducted in all of India's states in 2013–14 by the "Department of Agriculture and Farmers Welfare" (DA&FW).The primary goals of the crop diversification programme are to improve the conditions for food security, address the issue of land degradation, and reduce the demand for crop watering, which is a big concern in states like Haryana, Punjab, and Uttar Pradesh where food crops are grown. By 2020, the state of Haryana will have 57% of its land cultivated in paddy. Paddy is one of the more water-intensive crops. Haryana has set a target of 2 lakh acres for crop diversification, and as part of this programme, farmers will receive an incentive of Rs 7000 per acre.

PM Kisan Smaman Nidhi Yojana: - the central government launched this programme in 2018 with a primary objective of providing income assistance of up to 6,000 to all small and marginal farmers annual. According to CAG reports, recently in Haryana, 20 lakh people benefited from this programme, and the government dispersed 42 crore rupees. All land-holding farmer families will receive payment under this programme via bank account, which will be distributed in three equal installments at a rate of 6,000 each year.

Conclusion

This study concludes that as a result of these crops' harmful effects on soil fertility and water dissolution, Haryana's farmers primarily plant basic crops. In the current state of affairs in Haryana,

15% of the land area is used for the cultivation of horticulture. The government aimed to cover the land for horticulture crops to the greatest extent possible by double producing horticulture crops by 2030. In India, the issue of marketing is extremely important because, in general, farmers do not receive a fair price for their goods. The state of the market is dependent on a number of variables, such as an excess of demand for certain goods or an excess of supply of certain commodities, as well as the profit made by charities and businesses. The government's decision to declare 2022 as the "year of millet" was one of the better ones in terms of crop diversification, but attention should be paid to boosting farmer income, crop diversification of crop patterns, and the elimination of additional critical problems which arise under agricultural development.

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Factors Affecting the Attendance of School Going Children: A Study Based on Darbhanga City

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Abstract

This research investigates the major determinants of school attendance and learning experiences among Darbhanga city students. Descriptive research design was employed to collect data from 198 school-going children using structured interviews and questionnaires. The analysis emphasized variables like infrastructure, support from parents, gender disparities, and availability of learning resources such as libraries and practical labs. Findings revealed that although 73.7% of students attended classes regularly, health problems (15.7%) and absence of basic amenities (7.6%) were key areas of irregularity. Library facilities were low, with only 67.7% visiting it once a week, and 43.4% students never visiting practical laboratory classes. Surprisingly, girls showed improved attendance than boys in both government and private schools. In addition, all parents (100%) favored skill-development activities. The research ended by stating that despite strong family support, fluctuation in the use of resources and a weak infrastructure—especially in government schools—affected normal attendance negatively. The results highlight the importance of improved health care services, better school facilities, and equal availability of educational opportunities, particularly for poorer students.

Keywords: School attendance, Educational facilities, Gender gap, Parental support, Government schools.

Introduction

Education is a key factor in deciding the future of a person and a country's socio-economic growth. One of the most important requisites for ensuring a child's uninterrupted academic development and overall progress is regular school attendance. Yet, in many areas of India, especially in underdeveloped and semi-urban areas like Darbhanga city in Bihar, uninterrupted school attendance of children is a major problem. Notwithstanding various government-initiated educational reforms, schemes, and incentives, an appreciable proportion of students either continue to be irregular or leave school altogether. The problem raises some timely questions regarding the root causes and determinants of factors inhibiting regular attendance.

Darbhangha, one of north Bihar's major cities, is not just a cultural center of Mithila but also epitomizes some of the challenges common to small Indian cities in socio-economic transition. Although urban in administrative status, much of Darbhanga remains rural in infrastructure, educational access, and economic livelihood patterns. Schools in the city of Darbhanga provide education to children from various socio-economic strata, such as lower-class families, migrant laborers, and daily wage earners. These groups of people are subjected to complex challenges, which affect their children's attendance at school directly or indirectly. Poverty, poor school infrastructure, low education levels among the parents, gender-based discrimination, inadequate transportation facilities, and child labor are significant factors.

Government programs such as the Right to Education (RTE) Act, Sarva Shiksha Abhiyan (SSA), and Mid-Day Meal Scheme have indeed raised enrolment levels. But guaranteed regular attendance is a key bottleneck. It has been found that enrolment without regular attendance, quality teaching, and inclusive learning spaces is not an adequate marker of educational progress. Hence, it is

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also important to look into not only how many are enrolled but also how many show up to school on a regular basis and what drives or impedes their presence in school.

In the case of Darbhanga, a number of studies and government audits have highlighted huge discrepancies in attendance across various schools and communities. While some private schools in urban areas experience high rates of attendance because of improved facilities and stricter administration, government and aided schools tend to grapple with persistent absenteeism. This issue is most acute among marginalized community children, scheduled castes and tribes, minorities, and economically weaker sections.

Socio-economic reasons have a direct influence on attendance habits. Economically poor children might be forced to work for household income or assist with domestic work, especially in households with more than one child. Additionally, parents who are themselves illiterate or lack proper awareness regarding the long-term advantages of education might not value the education of their children. Girls tend to be more susceptible to absenteeism because of gender roles, early marriage, and security issues. In addition, poor provision of basic facilities in schools such as clean toilets, water, and electricity also deters school attendance, particularly for adolescent girls.

School-level reasons like teacher absenteeism, poor pedagogy, large classes, and absence of child-friendly settings decrease students' motivation even further. Several children become disinterested in school if teaching is not meaningful or if personal attention is lacking. Lack of proper monitoring on the part of educational authorities and lack of effective school-community relationships also lead to irregular attendance. Seasonal migration is another significant factor in the context of Darbhanga. Large part of the population migrates seasonally to other states for livelihood, and sometimes they take their children, including those who attend school, with them. This disturbs the continuity of studies and sometimes results in dropout or long-term absence from school for a year. Climatic factors, such as frequent floods in some wards of Darbhanga, also influence school access and attendance rates, particularly during monsoon seasons.

Technological limitations increase the complexity of the issue. In comparison to metro cities where e-learning or hybrid learning can be an alternative to classroom schooling, the majority of children in Darbhanga lack the use of digital gadgets, internet access, and power supply at home. Thus, any breakdown in the physical schooling directly impacts their learning and attendance. The latest COVID-19 pandemic painfully underscored this gap, with poor urban and low-income students unable to access online classes due to resource unavailability.

The role of parents in promoting attendance at school is of utmost value. Parents who are active with schools, which attend parent-teacher conferences, and check on their children's progress, are likely to encourage regular attendance. In Darbhanga's urban poor sections, such activity is limited either because of unawareness, lack of time, or because of some unhappy experiences with formal schooling. Local practices and cultural beliefs also affect school going. In some households, education is not given priority, and early employment or traditional skills are regarded as more advantageous. For most girls, education is regarded only up to a point, after which early marriage is more desirable. Further, regional festivals, fairs, and religious affairs frequently result in substantial absenteeism for certain months. Physical and mental health problems are another overarching issue. Malnutrition, frequent diseases, unhygienic conditions, and delayed medical attention impede a child from going to school on a regular basis. Those suffering from disabilities or special needs do not get included in the mainstream school system at all.

The current study, thus, tries to investigate the numerous factors governing the school-going children's attendance in Darbhanga city. Analyzing the primary data gathered from students, teachers, and parents of upper and middle schools, and complementing it with the secondary data obtained from government reports and policy papers, the study aims to ascertain systemic and household-level determinants of absenteeism.

The relevance of this research is that it has the potential to guide local education planning and policy-making. Based on knowledge regarding major inhibitors of attendance, the local

government and school administration can initiate more specific interventions like remedial instruction, transport subsidy, parent sensitization campaigns, and school infrastructure development. In addition, results of this research will assist in designing region-based policies to improve attendance and decrease dropout rates in urban areas with rural features like Darbhanga.

Attendance is not merely a behavioral issue but a multi-layered challenge influenced by socio-economic, cultural, institutional, and environmental factors. A focused and context-sensitive approach is essential to address these challenges and ensure that every child not only gets enrolled but also stays in school and benefits from the learning process. The researcher aims to make meaningful contributions to educational access and retention discourses in Bihar and other such areas of India through this research.

Review of Literature

Arun C. Mehta (2011) compared DISE data through a quantitative method for judging school performance indicators. He found high pupil-teacher ratios, lack of functional toilets, and lack of teaching materials as being significantly related to irregular attendance in government schools.

Govinda and Bandyopadhyay (2010) undertook a systematic review of elementary education in India and identified that social stratification—more specifically, gender and caste—impacts attendance substantially. They based their study on secondary data from government reports and national surveys, with children from Scheduled Tribes and Scheduled Castes being found to be disproportionately absent from school because of discrimination, a lack of social capital, and inferior infrastructure.

Jha and Jhingran (2005) carried out fieldwork in various Indian states to study access and equity in education. Their study used interviews and school records, indicating that children of linguistic minorities and lower-caste backgrounds tend to be irregular from school through discrimination and ineffective teaching practices.

Kumar (2005) examined child-teacher relationships and classroom dynamics through a qualitative case study. He learned that fear of punishment, corporal punishment, and teachers' lack of affection resulted in government school students, particularly primary ones, avoiding school and being absent from school.

Mukherjee (2014) utilized NSSO data to assess the efficacy of the Mid-Day Meal Scheme in improving attendance. With the application of statistical measures, it was identified that offering meals had an attendant increase in the rate of attendance by 12–15%, especially among low-income families' children, thereby demonstrating the impact of nutrition on access to education.

Reddy and Sinha (2010) employed a mixed-methods design in conducting their research on rural Indian school dropouts. They found that structural factors like distance to school, absence of individual toilets for girls, and child labor play a major role in poor attendance and hence lead to early dropout as a cumulative process and not as an abrupt choice.

Sharma and Singh (2017) used a quantitative research paradigm to examine the impact of school infrastructure on attendance. Their survey-based field study in urban Rajasthan found that good sanitation, adequate seating provision, and safe drinking water were all positively associated with higher attendance rates, particularly among adolescent girls.

Smita (2008) examined seasonal migration and its educational consequences employing longitudinal tracing of the migrant households. Her research, conducted in Maharashtra and Gujarat, concluded that migrant children lose as many as six months of schooling every year. The study used both school records and household surveys to emphasize the structural deficiencies in catering to mobile groups.

Sunita Chugh (2011) did an ethnographic study in the urban slums of Delhi to study dropouts and truancy. She found that children, particularly girls, are absent from school because of domestic work, taking care of siblings, and fear for security. The qualitative approach employed was participant observation and intensive interviews.

The PROBE Report (1999), from fieldwork in five Indian states, is one of the seminal pieces of work in this field. Through qualitative interviews and school observation, the report concluded that enrollment was increasing but regular attendance was marred by teacher absenteeism, unsatisfactory school premises, and parental apathy. These conditions were particularly disadvantageous in economically backward districts.

Tilak (2003) used a socio-economic perspective to explain determinants of school participation. Based on NSSO data, he maintained that the socio-economic status of the household, specifically parental education and employment, is a key determinant of children's school attendance and continuation, and that maternal literacy is the most significant influence.

Research Methodology

The present study focuses on selecting the urban areas of Darbhanga district in Bihar as the study area. This research follows the descriptive type of research methodology. Upper and middle schools were selected through a stratified random sampling method for selecting the three stakeholder groups: 198 students, 72 teachers, and 67 parents. Thus, out of the 573 students from 8 schools, a total number of 337 students were chosen. For the collection of data, an interview schedule approach was employed to collect data from primary sources in a standardized manner. Where required, data also collected from secondary sources, such as government budgets and papers, policy reports, and school audits.

Research Objective

1. To find out whether the type of school (private or government) affects children's attendance.
2. To examine the role of parents' education in the regularity of their children's school attendance.
3. To study how the availability of basic school facilities (like toilets, drinking water, and clean classrooms) influences attendance.

Hypothesis

1. Children studying in private schools have better attendance than those in government schools.
2. Better school facilities lead to higher attendance among students.

Data Analysis

Type of School

Table: 1

Types of School		
	Frequency	Percent
Private School	154	77.8
Government School	44	22.2
Total	198	100.0

The data in table 1 reveal the students' distribution according to the kind of school they are in. Of the 198 students questioned, 154 students, or approximately 77.8%, are in private schools. Meanwhile, 44 students, or 22.2%, are in government schools. This means that far more students from the data are in private schools than in government schools.

Sex Distribution of Students

Table: 2

Sex Distribution of Students		
	Frequency	Percent
Male	127	64.1
Female	71	35.9
Total	198	100.0

The data in table 2, 198 school-going children of Darbhanga city showed a clear gender imbalance: 127 students (64.1%) were male, whereas merely 71 (35.9%) were female. This was a representation of the prevailing socio-cultural norms which tended to privilege boys' education over girls'. In areas such as Darbhanga, traditional gender roles, economic pressures, early marriage, and

concerns for safety narrowed the opportunities for girls to attend and remain at school. Most girls were required to handle domestic chores, which further restricted their schooling. Despite the attempts to increase school enrollment, the attendance of girls was consistently lower, especially in poor and semi-urban regions. It was in accordance with the conclusions drawn by the PROBE Report (1999) and scholars such as Dreze and Sen (2013), who highlighted the role of socio-economic and cultural constraints on the education of girls. Govinda and Bandyopadhyay (2010) also emphasized that gender gaps were more pronounced in poorer families, impeding girls' school enrollment.

Grade Level of Students

Table: 3

Grade		
	Frequency	Percent
Middle School(5-8)	98	49.5
Secondary School (9-10)	100	50.5
Total	198	100.0

The data depict the distribution of students according to their grade levels. Among 198 students surveyed, 98 students representing 49.5% of the sample are Middle School students, ranging from grade 5 to grade 8. In contrast, 100 students representing 50.5% of the total are Secondary School students, ranging from grade 9 to grade 10. This suggests a near even distribution between the two groups with a marginally higher number of Secondary School students.

Educational Qualification of Parents

Table: 4

Educational Qualification of Parents		
	Frequency	Percent
Matric	14	20.9
Intermediate	08	11.9
Graduation	22	32.8
Post-Graduation	07	10.4
Others	16	23.9
Total	67	100.0

Table 4 showed the parents' educational attainment of the students surveyed. Of a total of 67 parents, the largest percentage—22 individuals or 32.8%—had reached graduation level of education. Next were 16 parents (23.9%) who belonged to the "Others" group, which could include those with diplomas or with non-formal education. Fourteen parents, representing 20.9%, were matriculates, while 8 parents, representing 11.9%, had studied till intermediate level. A lesser number of 7 parents, representing 10.4%, possessed post-graduate qualifications. In total, the information revealed a diverse educational attainment among parents, with a major segment having attained higher education.

School Attendance Excitement in Students

Table: 5

School Attendance Excitement in Students		
	Frequency	Percent
Very Excited	24	12.1
Excited	83	41.9
Neutral	69	34.8
Not Excited	22	11.1
Total	198	100.0

Table 5 presented the student excitement level towards attending school, which indirectly confirmed the hypothesis that improved school facilities make students more likely to attend. Out of

the 198 students surveyed, most—107 students (54%)—were either very excited (12.1%) or excited (41.9%) to be in school, indicating a positive attitude most likely shaped by an environment that is conducive and well-equipped for learning. Conversely, 22 students (11.1%) were not enthusiastic, and 69 students (34.8%) were indifferent. As student enthusiasm is usually related to the quality of school facilities, learning resources, and general environment, the high rate of enthusiastic students can be seen as indicative evidence that improved school facilities lead to greater motivation and, in turn, enhanced attendance.

Parents Support Student Participation in Skill-building

Table: 6

Parents Support Student Participation in Skill-building		
	Frequency	Percent
Yes	72	100.0
No	00	00
Total	72	100.0

The findings revealed that all 72 parents (100%) endorsed the involvement of their children in skill-building activities. None of the parents dissented, indicating that all of them felt that these activities were necessary. This indicated that parents were aware of the need to acquire skills in addition to routine studies. They perceived such activities to make their children develop better and become future-ready. The following information indicated that parents were receptive to new and beneficial methods of learning. As a whole, the information portrayed a very positive and supportive mindset among parents towards students' skill-building programs.

Practical Lab Session Frequency in a Week

Table: 7

Practical Lab Session Frequency in a Week		
	Frequency	Percent
One Day	93	47.0
Two Days	08	4.0
More than 2 days	11	5.6
Never	86	43.4
Total	198	100.0

Table 7 revealed the number of practical lab sessions per week, indicating the school facility availability for practical learning. Among 198 students, 93 (47.0%) indicated having lab sessions once a week, 8 students (4.0%) had them twice per week, and only 11 students (5.6%) had lab sessions more than twice. Yet, quite a large number—86 students (43.4%)—indicated that they never attended practical lab sessions. This implies that many students had no access to basic school facilities. Since practical laboratory studies are a significant measure of the quality of infrastructure, this limited exposure can have a negative effect on student attendance and interest. Therefore, the data supports the hypothesis that better school facilities lead to higher attendance—because the lack of such facilities, as shown here, could discourage regular participation in school.

Library Access Frequency in School

Table: 8

Library Access Frequency in School		
	Frequency	Percent
One Days	134	67.7
Two Days	05	2.5
More than 2 Days	28	14.1
No Days	31	15.7
Total	198	100.0

Table 8 indicated the number of times the students frequented the school library in a week. Among 198 students, the majority—134 students (67.7%)—indicated that they frequented the library once a week. Just 5 students (2.5%) visited the library two times a week, and 28 students (14.1%) indicated that they visited it more than two times. However, 31 students (15.7%) reported that they never visited the library at all. This indicated that despite the library being accessible, students did not make consistent use of it. Krashen (2004) stated that consistent use of libraries assisted in the enhancement of reading and language abilities. Lance and Hofschire (2012) also discovered that students with good library access performed better in school and attended more frequently.

Student Attendance Regularity

Table: 9

Student Attendance Regularity		
	Frequency	Percent
Yes	146	73.7
No	52	26.3
Total	198	100.0

Table 9 illustrated how frequently students attended school. Among 198 students, 146 (73.7%) indicated that they attended school regularly, while 52 students (26.3%) responded that they did not. It indicates that although a majority of students had regular attendance, a significant percentage still experienced problems with consistency. The statistics also indicated that student attendance was much lower in government schools than in private schools. Further, in the government as well as private schools, the rate of absenteeism of girls was less than boys, though the total number of enrolled girls was fewer. This indicates that the girls who actually got a chance to study were more genuine and interested in studies.

These results have been consistent with earlier research like Govinda and Bandyopadhyay (2010) stressed that school life and home background are essential factors in determining attendance. Likewise, Tilak (2002) pointed out that the quality of school facilities and home environment enhances attendance as well as learning achievements. Thus, the hypothesis "Children attend private schools report better attendance than those attending government schools" is confirmed from the data, since the pattern of more attendance in private schools was easily apparent.

Responsible Factors for Low Attendance

Table: 10

Responsible Factors for Low Attendance		
	Frequency	Percent
Long Distance of school	4	2.0
Health Issues	31	15.7
Lack of facility	15	7.6
NA	148	74.7
Total	198	100.0

Table 10 explained why certain students had poor school attendance. Just 4 (2.0%) out of 198 students mentioned the long distance to school as a difficulty, 31 students (15.7%) mentioned that they missed school because of health-related problems, and 15 students (7.6%) mentioned that there was no availability of school facilities, thus affecting their attendance. But most—148 students (74.7%)—did not state any particular reason (listed as NA). This implies that although some students had genuine issues such as health and infrastructure, others did not present any tangible reason for absence, and this can be interpreted as personal or implied issues.

Conclusion

In summary, the interpretation of above data evidently indicated that although the majority of students (73.7%) went to school regularly, others still experienced issues such as health problems (15.7%) and unavailability of basic facilities (7.6%) that hindered their attendance. Most students

(67.7%) visited the library just once a week and 43.4% never visited lab classes, indicating that adequate academic resources were not completely accessible. On a positive front, all parents endorsed skill-building activities, and girls were more regular than boys in both government and private schools. Private school students' attendance was overall better. This reveals that while there is high family support, government schools particularly require improved facilities, health care, and learning access for every student.

Suggestions

Based on the above conclusion, here are some suggestions to improve student attendance and educational experiences:

1. **Improve School Infrastructure:** Government schools should be equipped with better facilities like libraries, science labs, clean toilets, and drinking water to attract and retain students.
2. **Strengthen Health Support:** Periodic health check-ups and health awareness programmes must be held in schools in order to combat health-related absenteeism among students.
3. **Enhance Learning Resources:** Increase library access and practice sessions frequency and quality to ensure learning becomes more interesting and efficient.
4. **Promote Girls' Education:** Special incentives and support systems need to be initiated in order to motivate more girls to join and pursue their education based on their demonstrated sincerity and performance.
5. **Encourage Parental Involvement:** As the parents already support skill development, schools can engage them more actively in educational activities and policy-making to foster a stronger school-home partnership.

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