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EDITOR'S NOTE

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 Scholarly and unpublished research articles, essays and interviews are invited from scholars, faculty researchers, writers, professors from all over the world.

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

Editor

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"Research Highlights"

The Missing Link: Incorporating Emotional Intelligence and Creativity into India's Educational System

Dr. Md. Fakhra Shayan*

Abstract

This article emphasizes the need to integrate Emotional Intelligence (EI) and creativity into India's educational system. It outlines how these skills enhance academic performance, psychological well-being, and future employability. The article explores the benefits of EI and creativity, identifies barriers in India, and suggests strategies to implement these elements in the curriculum. It concludes that fostering EI and creativity is essential to produce self-employed and employable citizens who can drive national development.

Keywords: Emotional Intelligence (EI), Creativity, Educational System, Employability

Introduction

The belief that intelligence is a fixed trait still prevails among many educators in India. This mindset discourages support for struggling students. Alfred Binet's work challenged this belief, suggesting that intelligence can be developed through education. However, emotional and social competencies for managing negative emotions remain largely untaught. The UNICEF Innocenti report highlights the importance of emotional and social well-being in children. Social-Emotional Learning (SEL) programs based on Salovey and Mayer's EI model aim to address these gaps by teaching emotional perception, understanding, and regulation. In India, no formal decision has been made to integrate EI into the educational curriculum. This absence persists despite the increasing need to equip young people with emotional and creative skills to contribute effectively to national development.

Emotional Intelligence (EI)

Emotional Intelligence (EI), often referred to as Emotional Quotient (EQ), is the capacity to recognize, understand, and manage one's own emotions, as well as to recognize and influence the emotions of others. This concept was first introduced by researchers Peter Salovey and John D. Mayer in 1990 and later popularized by psychologist Daniel Goleman.

EI encompasses several key components:

1. **Self-Awareness**: The ability to understand one's own emotions, strengths, weaknesses, values, and drivers, and how they impact others.
2. **Self-Regulation**: The capacity to manage or redirect disruptive emotions and impulses and adapt to changing circumstances.
3. **Motivation**: A passion for work that goes beyond money and status, and a propensity to pursue goals with energy and persistence.
4. **Empathy**: The ability to understand the emotional makeup of other people and treat them according to their emotional reactions.
5. **Social Skills**: Proficiency in managing relationships and building networks, and ability to find common ground and build rapport.

Individuals with high emotional intelligence are adept at navigating social complexities, fostering strong relationships, and making informed decisions that consider emotional implications. They can accurately perceive emotions, both in themselves and others, and use this awareness to guide their thinking and actions. In leadership contexts, emotional intelligence is particularly vital. Leaders with high EI can create more connected and motivated teams, handle stress effectively, and resolve conflicts efficiently. This ability to manage one's own emotions and understand those of

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others contributes to better decision-making and a more harmonious workplace environment. Overall, emotional intelligence plays a crucial role in personal development, interpersonal relationships, and professional success, making it an essential skill to cultivate. According to Salovey and Mayer (1997), Emotional Intelligence refers to the ability to process and manage emotional information effectively. Their model includes four key skills:

1. Recognizing and expressing emotions accurately
2. Using emotions to facilitate thought processes
3. Understanding emotional patterns and their implications
4. Managing emotions to foster emotional and intellectual growth

Benefits of Emotional Intelligence

Interpersonal Relationships

EI enhances the ability to form and sustain healthy relationships by improving communication, empathy, and conflict resolution. Research shows a strong link between EI and successful interpersonal interactions (Brackett et al., 2006; Lopes et al., 2005).

Psychological Well-being

Psychological well-being refers to the overall state of an individual's mental health, encompassing both emotional and cognitive aspects of their life experience. It is characterized by a balance between positive and negative emotions, effective functioning, and the pursuit of meaningful goals. Psychological well-being is a core feature of mental health, and may be defined as including hedonic (enjoyment, pleasure) and eudaimonic (meaning, fulfillment) happiness, as well as resilience. Carol Ryff's six-factor model of psychological well-being identifies key components that contribute to an individual's mental health:

- **Self-acceptance**: Possessing a positive attitude toward oneself and acknowledging both personal strengths and limitations.
- **Positive relations with others**: Maintaining warm, trusting interpersonal relationships and exhibiting empathy and affection.
- **Autonomy**: Being self-determining and independent, able to resist social pressures and regulate behavior from within.
- **Environmental mastery**: Effectively managing one's life and surrounding environment to meet personal needs and desires.
- **Purpose in life**: Having goals and a sense of direction, feeling that life has meaning and purpose.
- **Personal growth**: Continually developing and growing as a person, realizing one's potential, and seeking new experiences.

These dimensions collectively contribute to an individual's overall psychological well-being.

Furthermore, psychological well-being has been linked to better physical health outcomes, such as a reduced risk of heart disease and stroke. A study published in the Journal of the American Heart Association found that higher well-being, reflected in happiness and satisfaction across various life domains, was associated with healthier lifestyle habits and a lower risk of cardiovascular diseases. Psychological well-being encompasses various aspects of mental health, including emotional balance, personal growth, and meaningful relationships. Fostering these elements can lead to a more fulfilling and healthier life.

Higher EI correlates with better mental health outcomes. Students with advanced EI report:

- Lower levels of anxiety and depression
- Greater emotional regulation
- Improved problem-solving capabilities (Salovey et al., 2002; Fernandez-Berrocal et al., 2006)

Academic Performance

EI helps students manage stress and emotional challenges, leading to improved academic outcomes. By enhancing emotional regulation, students can better leverage their cognitive abilities for academic success (Fernandez et al., 2006).

Mitigating Disruptive Behaviors

Low EI is linked to impulsive and antisocial behavior. Teaching emotional regulation can reduce aggression, substance abuse, and other disruptive behaviors (Petrides et al., 2004; Brackett et al., 2004).

Creativity

Creativity is the capacity to generate novel and valuable ideas, solutions, or artistic expressions. According to Merriam-Webster, it is "the ability to create" and "the quality of being creative."

Britannica defines creativity as "the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a new method or device, or a new artistic object or form." Psychologist Robert E. Franken describes creativity as "the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others." This highlights creativity's role in problem-solving, communication, and entertainment. Creativity involves divergent thinking, which seeks multiple possible solutions, and convergent thinking, which narrows down options to find the best one. This interplay fosters innovation and adaptability. For instance, a recent study commissioned by Crayola found that 92% of children aged 6 to 12 believe that being creative boosts their self-confidence, underscoring the personal development benefits of creativity.In the context of technological advancements, the rise of artificial intelligence (AI) challenges traditional notions of creativity. AI models like Midjourney and ChatGPT can produce artistic outputs, prompting debates about whether creativity is a uniquely human trait or can be replicated by machines. Essayist Meghan O'Gieblyn reflects on this, questioning if AI-generated art lacks the personal touch and emotional depth inherent in human-created works. In creativity is a multifaceted ability encompassing the generation of original and valuable ideas or products. It plays a crucial role in various aspects of life, including problem-solving, personal development, and adaptation to new challenges. As technology evolves, our understanding of creativity continues to be redefined, prompting ongoing discussions about its essence and scope.

Creativity involves producing new ideas, reconstructing old ones, and seeking innovative solutions (Akinboye, 2002). It is essential for driving economic growth and enhancing human potential. De Bono's frameworks offer structured approaches to fostering creativity:

Six Thinking Hats

1. White Hat: Focuses on objective facts
2. Red Hat: Explores emotions and intuitions
3. Yellow Hat: Emphasizes optimism and benefits
4. Black Hat: Identifies potential risks
5. Green Hat: Encourages creative solutions
6. Blue Hat: Manages and organizes thought processes

Six Action Shoes

1. Navy Formal Shoes: Represents routine procedures
2. Orange Gumboots: Indicates emergency responses
3. Pink Slippers: Symbolizes care and support
4. Brown Brogues: Reflects practicality
5. Grey Sneakers: Promotes innovative thinking
6. Purple Riding Boots: Signifies leadership and transformation

Teaching EI and Creativity

Explicit teaching of emotional and creative skills can be achieved through structured programs focusing on:

1. Recognizing and expressing emotions
2. Understanding emotional dynamics
3. Practicing emotional regulation

These skills should be embedded in daily classroom practices to foster natural and sustainable development.

Barriers to Creativity in India

Creativity faces several obstacles in the Indian educational context:

Personal Barriers

- Overwhelmed by academic pressures
- Lack of reflective downtime

Cultural Barriers

- Resistance to change
- Societal emphasis on conformity

Emotional Barriers

- Fear of failure
- Self-doubt

Perceptual Barriers

- Limited sensory exploration
- Narrow perspectives on problem-solving

Addressing these barriers requires curriculum reform and teacher training to cultivate creative thinking.

Conclusion

Integrating Emotional Intelligence and creativity into India's educational system is essential for preparing future citizens who are resilient, innovative, and capable of contributing to national development. Countries like the US, UK, and Spain have already recognized the value of socio-emotional education. India must follow suit to ensure its youth are equipped with the necessary emotional and creative competencies to thrive in the 21st century. By investing in SEL programs and creative learning approaches, India can create a more inclusive and dynamic educational environment, ultimately fostering a generation of self-reliant and innovative individuals.

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Geospatial Mapping of Drinking Water Contaminants in Patna: Assessing the Risks of Iron, Arsenic, and Microbial Contamination

Bharti Kumari*

Abstract

This study focuses on the geospatial mapping of drinking water contaminants in Patna, specifically assessing the risks posed by iron, arsenic, and microbial contamination. Through spatial data analysis and mapping techniques, the research aims to identify areas with high contamination levels and understand the distribution patterns of these pollutants. By evaluating the potential health risks associated with exposure to iron, arsenic, and microbes in drinking water, this study provides valuable insights for public health management and policy-making, aiming to mitigate the risks and ensure safe drinking water for the residents of Patna.

Keywords:- Geospatial, Mapping Techniques, Potential, Health Risks

Introduction

In recent years, the issue of drinking water contamination has become an urgent public health challenge across many regions of India. Access to clean and safe drinking water is a fundamental human right and an essential component of public health. However, for millions of people in India, especially in rapidly growing urban areas such as Patna, the quality of drinking water has become a matter of grave concern. Patna, the capital city of Bihar, has witnessed rapid urbanization and population growth, which has placed immense pressure on its water resources. The majority of Patna's residents depend on groundwater sources for their daily water needs, yet these sources are increasingly being threatened by a range of contaminants, including iron, arsenic, and microbial pathogens. The contamination of drinking water by these pollutants has serious public health implications, contributing to the rise of waterborne diseases, long-term chronic illnesses, and even deaths. In response to this growing concern, geospatial mapping has emerged as a powerful tool to assess, monitor, and mitigate the risks associated with water contamination. By using geographic information systems (GIS) and other geospatial technologies, authorities can systematically track the spread of contaminants and implement targeted measures to protect the public.

One of the most prevalent contaminants in Patna's drinking water is iron, which is commonly found in high concentrations in the region's groundwater. While iron is not typically considered hazardous to health in moderate amounts, its excessive presence in drinking water can lead to various aesthetic issues, such as discoloration of water and staining of laundry and plumbing fixtures. More importantly, high iron concentrations can serve as an indicator of broader water quality concerns and, in some cases, may coexist with other harmful contaminants. Among the most concerning of these is arsenic, a toxic metalloid that is widely present in the groundwater of Patna and surrounding areas. Arsenic contamination is especially alarming because of its carcinogenic properties and its ability to cause long-term health issues such as skin lesions, lung and bladder cancer, and neurological damage. Research has shown that Patna and other districts in Bihar are among the areas where arsenic concentrations in groundwater exceed safe limits, posing a significant health threat to those who consume contaminated water over extended periods.

In addition to the chemical contaminants like iron and arsenic, microbial contamination remains a pressing challenge in Patna's drinking water supply. The region's sanitation infrastructure is often inadequate, leading to the contamination of water sources with pathogenic microorganisms such as bacteria, viruses, and protozoa. These pathogens can cause a range of diseases, including

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cholera, dysentery, diarrhoea, and typhoid, all of which disproportionately affect vulnerable populations, including children and the elderly. The presence of microbial contamination is further exacerbated by the lack of proper wastewater treatment and disposal systems in many parts of the city, as well as the contamination of surface water bodies used for drinking.

Geospatial mapping plays an essential role in identifying the geographical distribution of water contaminants across Patna. *Geospatial mapping* is a spatial visualization technique that uses computerized data and Geographic Information Systems (GIS) to create customized maps, showing objects with geographic coordinates in a geographical context, providing a representation of the physical world. Through the use of GIS technologies, researchers and public health authorities can map the concentration of iron, arsenic, and microbial pathogens in groundwater and surface water sources throughout the city. This allows for the identification of areas that are at the highest risk for contamination, providing invaluable data for water management strategies. Geospatial tools can also be used to trace the sources of contamination, whether they originate from natural geological formations, industrial activities, or poor sanitation practices. This spatial analysis helps to uncover patterns of contamination, which can inform targeted interventions, such as the installation of water filtration systems, the improvement of sanitation infrastructure, or public health campaigns aimed at raising awareness about the risks of consuming unsafe water.

The use of geospatial mapping also facilitates the monitoring of water quality over time, allowing authorities to track changes in contamination levels and evaluate the effectiveness of water treatment and regulatory measures. For instance, if a particular area shows a high concentration of arsenic or microbial pathogens, authorities can take immediate action to provide safe drinking water alternatives, such as bottled water or water purification systems. Additionally, by incorporating real-time data into geospatial models, it is possible to predict potential future contamination risks and proactively implement measures to protect at-risk communities.

Furthermore, the integration of geospatial mapping with water quality monitoring can improve public health outcomes by enabling more informed decision-making. Stakeholders, including government agencies, NGOs, and community organizations, can collaborate more effectively when they have access to comprehensive, location-specific data on water contamination. This collaborative approach can lead to better resource allocation, more efficient water treatment programs, and stronger enforcement of water safety regulations.

The following analysis will explore the issue of drinking water contamination in Patna in greater detail, focusing on the specific risks associated with iron, arsenic, and microbial contamination. It will discuss how geospatial mapping technologies are being utilized to assess the extent of these contaminants and the steps being taken to mitigate their impact on public health. This work aims to contribute to a broader understanding of the challenges surrounding water safety in Patna, highlighting the role of geospatial technologies in providing solutions that ensure access to safe and clean drinking water for all residents. By addressing these critical issues, the essay will underscore the importance of continued innovation and collaboration in improving water management practices and safeguarding public health in urban areas across India.

The geospatial mapping of drinking water contaminants in Patna plays an essential role in identifying and addressing the public health dangers associated with contaminants such as iron, arsenic, and harmful microbes. By mapping the distribution of these pollutants, authorities can pinpoint areas of the city most affected, allowing for targeted interventions to prevent health risks. As Patna's water quality continues to be compromised by issues like inadequate sanitation and outdated water treatment systems, geospatial mapping becomes an invaluable tool in tracking and managing these challenges in real-time, ultimately protecting the health of the population.

Iron contamination, while not directly hazardous, affects water quality and can indicate the presence of other harmful substances, such as arsenic. Arsenic, a highly toxic substance, poses severe health risks, including cancer and skin disorders, making its identification and mitigation crucial. On the other hand, microbial contamination, primarily from inadequate waste management systems,

results in waterborne diseases like cholera and typhoid, which are especially prevalent during monsoons. By using geospatial mapping technologies, public health officials can effectively monitor these contaminants and take focused actions in areas that need urgent attention, ensuring that people are not exposed to these dangerous risks.

Additionally, geospatial mapping empowers both the community and officials by providing clear, visual data that informs water safety practices. Residents can be made aware of contamination risks in their areas, encouraging behaviours like water purification or seeking cleaner sources. This data-driven approach also helps in assessing the success of current water quality improvement programs and adapting strategies as needed. With continuous monitoring through geospatial mapping, Patna can enhance its water safety protocols, reduce health hazards, and work towards providing all its residents with access to safe, clean drinking water.

Conclusion

In conclusion, *geospatial mapping* has proven to be an indispensable tool in addressing the ongoing challenge of drinking water contamination in Patna. As a city facing rapid urban growth and increasing pressures on its water resources, Patna's residents are exposed to various harmful contaminants such as iron, arsenic, and microbial pathogens in their water supply. By utilizing geospatial technologies, the spatial distribution of these contaminants can be accurately assessed, offering valuable insights that help authorities prioritize areas most at risk. This targeted approach allows for efficient allocation of resources and ensures that interventions are focused where they can have the most significant impact on improving water safety.

Iron contamination, while not inherently dangerous, can often be a precursor to other more harmful pollutants, signalling potential issues with water quality. Arsenic, on the other hand, is a highly toxic substance that poses severe long-term health risks, including cancer and organ damage. The presence of microbial contamination further compounds the issue, leading to waterborne diseases such as cholera, dysentery, and typhoid, particularly in vulnerable communities. Geospatial mapping not only helps identify and monitor these contaminants but also enables the identification of sources, whether from natural geologic deposits, industrial activities, or poor sanitation systems. Such comprehensive data empowers decision-makers to take swift and informed action to mitigate contamination and reduce public health risks.

Moreover, geospatial mapping serves an important role in raising awareness and engaging the local community. By providing clear visual representations of contamination patterns, it becomes easier for residents to understand the risks they face and take appropriate measures to safeguard their health. Public health campaigns can be designed based on this data, promoting behaviours like boiling water, using filtration systems, or seeking alternative water sources when necessary. In this way, geospatial mapping not only supports government and health officials in their efforts but also fosters a more informed and proactive community.

The ability to track contamination trends over time is another significant advantage of geospatial mapping. By continuously monitoring water quality, authorities can evaluate the effectiveness of current water treatment strategies, sanitation improvements, and regulatory measures. If an area's water quality deteriorates, rapid intervention becomes possible, reducing the impact of contamination outbreaks. This real-time feedback loop makes water management more dynamic and adaptable, ensuring that Patna's water resources remain protected as environmental, demographic, and infrastructural changes occur.

Geospatial mapping also plays a key role in improving policy development. By understanding the spatial patterns of contamination, policymakers can make more informed decisions about where to focus efforts and how to design long-term solutions to the city's water quality problems. This can involve prioritizing investments in water filtration technologies, improving waste management systems, or strengthening regulations on industrial practices that contribute to contamination. Over time, such informed policy decisions can help move Patna closer to achieving the goal of providing every resident with safe and reliable drinking water.

In the broader context, the application of geospatial technologies in water quality management reflects a shift towards data-driven, science-backed decision-making in addressing urban environmental challenges. For Patna, integrating geospatial mapping into water resource management strategies is not just a technological advancement, but also a crucial step toward ensuring that the city's water supply remains sustainable, safe, and accessible for future generations. With continued advancements in mapping technologies, coupled with robust water quality monitoring and community engagement, Patna has the potential to build a more resilient water system, improving the health and quality of life for all its residents.

Ultimately, geospatial mapping offers a comprehensive, forward-thinking solution to the complex issue of drinking water contamination in Patna. By leveraging this technology, the city can better address the immediate threats posed by iron, arsenic, and microbial contamination, while also laying the foundation for long-term improvements in water management and public health. The combination of accurate data, informed decision-making, and community awareness will ensure that Patna can meet its water safety challenges head-on, promoting a healthier, more sustainable future for its growing population.

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Long-term Wealth Accumulation Strategies Through Indian Equity Markets Based on Household Portfolios

Dr. Syamlal G.S.[*]

Abstract

This research paper examines the significant wealth accumulation achieved by Indian households through equity market participation over the past decade, with particular focus on the post-pandemic period. Using data from the National Stock Exchange of India (NSE), we analyze the unprecedented growth in retail investor participation through both direct equity investments and mutual fund holdings. Our findings indicate that Indian households have accumulated over ₹46 lakh crore in wealth through equity markets in the last five years alone, with their combined direct and indirect market ownership surpassing that of Foreign Portfolio Investors (FPIs) for the first time since 2006. We propose strategic approaches for sustained wealth creation through disciplined investment in Indian equities, considering the evolving market dynamics and retail investor behavior patterns.

1. Introduction

The Indian equity markets have witnessed a transformative shift in investor demographics over the past decade, particularly following the COVID-19 pandemic. Historically dominated by institutional investors and foreign capital, the markets have seen retail investors emerge as key stakeholders both directly and through mutual fund investments. This paper explores the magnitude of this shift, analyzing the strategies that have facilitated substantial wealth creation for Indian households.

The pandemic-induced market volatility in early 2020 served as a catalyst for unprecedented retail participation in Indian equities. After an 11-year hiatus between 2009 and 2019, individual investors turned net buyers of Indian equities in 2020, marking a pivotal shift in market dynamics. This pattern of sustained retail participation has fundamentally altered the ownership structure of Indian equity markets, with profound implications for long-term wealth building strategies employed by households.

2. Review of Literature

The history of the Indian equity market is rich and multifaceted, evolving significantly over the years due to various socio-economic transformations and regulatory changes. Organized stock trading in India can be traced back to the 1830s in Mumbai, a burgeoning commercial hub facilitated by the British East India Company. The necessity for capital to fund large-scale infrastructure projects, such as railways and textile mills, led to the formation of joint-stock companies, which initiated early stock trading practices (Bhaisora, 2024).[1] The first recorded instance of organized share trading occurred in the 1850s when a group of brokers began transactions under a banyan tree in front of the Town Hall in Bombay. This informal setting eventually laid the groundwork for the Bombay Stock Exchange (BSE), which was formally established in 1875, making it one of Asia's oldest stock exchanges. The National Stock Exchange (NSE) later followed, commencing operations in 1994, which further enhanced the structure of the Indian stock market (InduQin, 2024)[2], (Team & Team, 2024). [3]

Significant events have shaped the Indian stock market's trajectory. The economic liberalization in 1991, initiated under Prime Minister P.V. Narasimha Rao and Finance Minister Dr. Manmohan Singh, marked a pivotal moment. Faced with a balance of payments crisis, the government implemented extensive reforms that included reducing tariffs, deregulating industries,

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and allowing foreign institutional investors (FIIs) access to the Indian market. These changes spurred a surge in market capitalization and liquidity, attracting both local and global investors (Lakshmishree, 2023).[4] In contrast, the global financial crisis of 2008 had adverse effects on the Indian stock market, as investors faced steep declines in stock prices, driven by uncertainty stemming from the collapse of Lehman Brothers. Prior to this, the Indian market experienced a boom during the 1920s, driven by global economic prosperity, but was also marred by speculative bubbles that culminated in a crash mirroring the Wall Street Crash of 1929 (Lakshmishree, 2023).

Over the years, the investor base in India has evolved, with a notable increase in retail participation, particularly among younger demographics. Currently, approximately 40% of investors are under the age of 30, with an increasing number of women engaging in equity investments, reflecting a growing recognition of the stock market as a viable wealth creation tool (InduQin, 2024), (Sarkar, 2023)[5]. This shift has contributed to a more resilient and stable investment environment, reducing the market's reliance on foreign capital flows and fostering domestic confidence in equity investments.

3. Methodology and Data Sources

This study utilizes comprehensive data from the National Stock Exchange of India (NSE), including:

- Direct investment flows from individual investors in NSE's capital market segment
- Demat account additions and registered investor base growth
- Market capitalization figures for NSE-listed companies
- Shareholding patterns across investor categories
- Mutual fund Assets Under Management (AUM) by investor type

The methodology employed involves calculating wealth accretion by adding quarter-on-quarter changes in absolute holding values of individuals in NSE-listed companies through both direct and indirect channels, net of fresh investments during each quarter. For indirect investments through mutual funds, we assume individuals have the same share in net investments as they have in the fund's equity-linked AUM.

4. Evolution of Individual Investor Participation in Indian Equities

4.1 Direct Retail Participation Trends

Individual investor participation in Indian equities witnessed significant growth during 2020 and 2021, triggered by the market crash in March 2020 following the COVID-19 pandemic. The subsequent strong market rebound further strengthened retail sentiment, resulting in continued participation through 2022. Between January 2020 and December 2022, individual investors invested a total of ₹2.8 lakh crore in NSE's capital market segment (secondary market only).

After a relatively muted 2023, individual investors resumed net buying in 2024, with net inflows reaching a record high of ₹1.7 lakh crore during the year. This contributed to total net direct investments of ₹4.6 lakh crore by individual investors over the last five years, representing a fundamental shift in their market positioning.

The robust growth in investor accounts further substantiates this trend. The depositories have recorded 13.5 crore demat account additions since April 2020, accounting for 73% of outstanding accounts as of December 31, 2024. The registered investor base at NSE has more than tripled in the last five years, standing at approximately 11.1 crore as of January 31, 2024.

4.2 Growth in Indirect Participation via Mutual Funds

Complementing direct market participation, individuals' indirect ownership via mutual funds has also seen substantial growth. Individuals now account for approximately 84.7% of the total equity AUM of mutual funds—the highest share in 11 years. This has elevated their indirect non-promoter ownership of the market to a record high of 8.4%, up from 2.9% eleven years ago (March 2014).

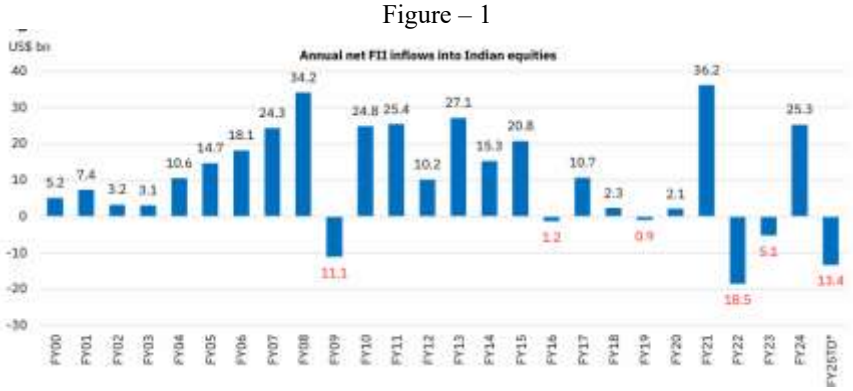
In value terms, individuals' indirect ownership stood at ₹36.8 lakh crore in the December 2024 quarter, reflecting the growing preference for professional fund management alongside direct investments.

5. Wealth Accumulation Outcomes and Strategies

5.1 Quantifying Household Wealth Creation

The combination of strong market returns and increased retail participation has resulted in substantial wealth accretion to Indian households. Based on our analysis, household wealth in Indian equities has increased by over ₹46 lakh crore in the last five years, with over ₹30 lakh crore accumulated in just the last two years (2023-2024).

Figure – 1



*Source : Refinitiv Datastream, NSE EPR. * As of February 24th, 2024.*

As of December 2024, direct and indirect (via mutual funds) holdings of individuals in NSE-listed companies stood at ₹79.6 lakh crore, representing a nearly five-fold increase since March 2020. This translates to an annualized growth rate of 40% during this period. Even over a 15-year timeframe, the annualized growth remains impressive at over 17.8%.

Significantly, individuals now directly and indirectly hold 18.2% of the Indian market capitalization, surpassing the share held by FPIs by almost a percentage point for the first time since 2006. This represents a remarkable transition from March 2014, when the gap was as high as 11 percentage points in favor of FPIs.

5.2 Effective Wealth Building Strategies

Based on the observed patterns of successful wealth creation, we identify several key strategies that have proven effective for household wealth accumulation through Indian equity markets:

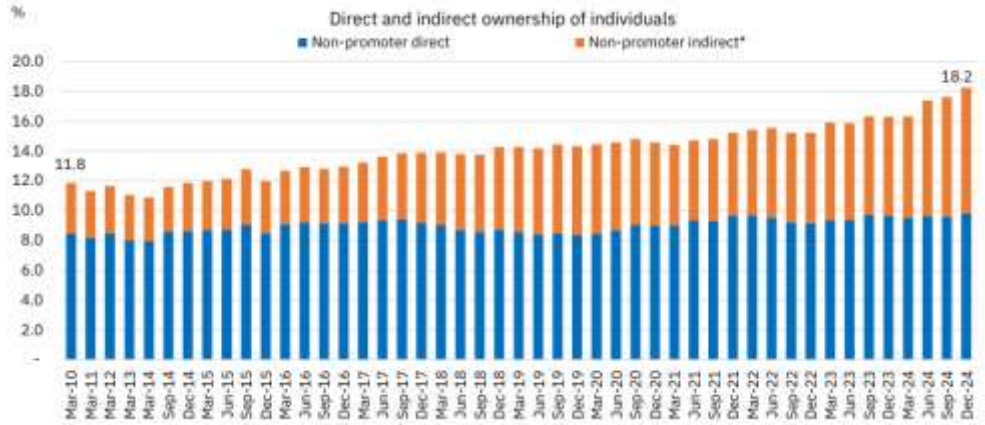
1. **Counter-cyclical Investment Approach**: The data suggests that market downturns, such as the March 2020 crash, have presented significant entry opportunities. Households that increased their equity allocation during such periods have benefited disproportionately from subsequent recoveries.

Figure – 2

Source : CMIE Prowess, AMFI, NSE EPR calculations.

2. **Balanced Direct-Indirect Participation**: The optimal approach appears to combine direct equity investments with mutual fund holdings. While direct investments provide greater control and potentially higher returns in select stocks, mutual funds offer professional management, diversification, and systematic investment discipline.
3. **Consistency Through Market Cycles**: The sustained participation of retail investors across market cycles has been a critical factor in wealth creation. The consistency of inflows, particularly through systematic investment plans (SIPs) in mutual funds, has allowed for effective rupee-cost averaging.
4. **Long-term Holding Perspective**: The substantial wealth accretion observed correlates strongly with investors' lengthening time horizons. The transition from short-term trading to long-term investing has been a defining characteristic of successful household portfolios.

Figure – 3



Source : CMIE Prowess, AMFI, NSE EPR calculations.

5. **Increasing Allocation to Equities**: Households that have progressively increased their equity allocation as a percentage of total financial assets have generally achieved superior wealth accumulation outcomes.

6. Structural Shifts in Market Ownership and Implications

6.1 The Changing Balance of Market Power

The shift in market ownership from FPIs to domestic individual investors represents a structural change in the Indian equity markets. As of December 2024, individuals (directly and indirectly) hold 18.2% of the market, surpassing FPIs for the first time since 2006. This shift has several implications:

1. **Reduced Market Vulnerability to FPI Outflows**: The growing domestic investor base provides a counterbalance to FPI flows, potentially reducing market volatility during periods of global risk aversion.
2. **Enhanced Market Stability**: The increasing share of retail investors, particularly through mutual funds, introduces a more stable, long-term-oriented capital base to the market.
3. **Democratization of Wealth Creation**: The broader participation base suggests that equity market returns are benefiting a larger segment of the population than in previous market cycles.

6.2 Retail Investor Resilience

One of the most notable developments has been the resilience of retail investor participation through market cycles. Unlike previous patterns where retail investors typically entered near market peaks and exited during downturns, the current cycle has seen more countercyclical behavior, with substantial buying during market corrections.

This evolution in investor behavior suggests a maturing investor base that increasingly recognizes the long-term wealth creation potential of equities, looking beyond short-term market fluctuations.

7. Future Outlook and Strategic Recommendations

7.1 Outlook for Household Wealth Accumulation

Based on current trends and structural market changes, we project continued strong wealth accumulation potential for Indian households through equity markets, supported by:

1. **Deepening Market Penetration**: With retail investor accounts still representing only a fraction of the adult population, significant headroom exists for continued growth in market participation.
2. **Financial Literacy Improvements**: Ongoing improvements in financial literacy and access to market information should drive more informed investment decision-making.
3. **Technological Enablement**: Advances in financial technology have reduced barriers to entry and transaction costs, making equity investment more accessible.
4. **Favorable Demographic Dividend**: India's young population and growing middle class provide a structural tailwind for continued equity market participation.

7.2 Strategic Recommendations for Household Portfolios

For households seeking to optimize long-term wealth creation through Indian equity markets, we recommend the following strategic approaches:

1. **Systematic Allocation Strategy**: Implement a disciplined approach to equity investments through systematic investment plans (SIPs) or similar regular investment mechanisms.
2. **Lifecycle-based Asset Allocation**: Adopt age-appropriate asset allocation models that gradually adjust equity exposure based on investment horizons and risk tolerance.
3. **Direct-Indirect Investment Balance**: Maintain a balanced approach between direct equity investments for potentially higher returns and mutual funds for diversification and professional management.
4. **Tactical Rebalancing**: Periodically rebalance portfolios to target allocation, using market corrections as opportunities to increase equity exposure within risk parameters.
5. **Tax-efficient Investment Structures**: Utilize tax-advantaged investment vehicles such as Equity Linked Savings Schemes (ELSS) and long-term holdings to maximize after-tax returns.

8. Conclusion

The Indian equity markets have emerged as a significant wealth creation engine for households, with documented wealth accretion of ₹46 lakh crore over the past five years. This wealth creation has been driven by a fundamental shift in market participation patterns, with individual investors becoming increasingly important stakeholders both directly and through mutual funds.

The combined direct and indirect ownership of individuals now exceeds that of foreign portfolio investors, representing a historic milestone in the evolution of Indian capital markets. This transition suggests a more stable, domestically anchored market with enhanced resilience to external shocks.

For households, a strategic approach to equity market participation—combining disciplined investment, appropriate diversification, and a long-term perspective—offers continued potential for substantial wealth accumulation. As market participation continues to broaden across the population, equity investments are likely to play an increasingly central role in household financial planning and wealth creation strategies.

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CMIE Prowess, AMFI, NSE EPR calculations.

SEBI Bulletin, 2020-2025 series.

Strategic Asset Allocation Patterns of Domestic Mutual Funds Amidst Changing Indian Market Dynamics

Dr. Deepa B[*]

Abstract

This research paper examines the evolving strategic asset allocation patterns of domestic mutual funds (DMFs) in India amid significant market transformations over the past five years. Using data from the National Stock Exchange of India (NSE) and the Association of Mutual Funds in India (AMFI), we analyze how DMFs have adjusted their investment strategies in response to changing market conditions. Our findings reveal that DMF ownership in NSE-listed companies has reached an unprecedented 10% of total market capitalization as of December 2024, with active funds demonstrating greater resilience than passive funds during recent market corrections. This strategic positioning has been primarily driven by sustained retail participation through systematic investment plans (SIPs), enabling DMFs to surpass foreign portfolio investors (FPIs) in market significance for the first time since 2006.

1. Introduction

The Indian mutual fund industry has undergone a remarkable transformation, with domestic mutual funds commanding increasingly significant ownership stakes in Indian equities. This research explores how DMFs have adapted their allocation strategies to navigate a complex interplay of factors including:

- Changing retail investor participation patterns
- Volatile global capital flows and FPI investment trends
- The stability provided by systematic investment plans (SIPs)
- Competitive dynamics between active and passive investment approaches

The strategic decisions made by fund managers regarding asset allocation have significant implications for market efficiency, price discovery, and overall market development in India's growing financial ecosystem.

2. Review of Literature

The mutual fund industry in India has undergone significant evolution since its inception, which can be traced back to the establishment of the Unit Trust of India (UTI) in 1963. UTI was the first mutual fund set up under the UTI Act, aimed at mobilizing savings from small investors to channelize them into the capital markets for wealth creation (Admin, 2024). Over the decades, the industry has grown from a small investment vehicle into a robust and diverse sector, adapting to various economic reforms and market conditions.

The mutual fund landscape in India expanded considerably during the 1990s, following economic liberalization efforts initiated by the government (Khanna, 2024). This era marked the entry of private players into the mutual fund space, allowing international asset management companies to collaborate with Indian firms. By the early 2000s, the industry was characterized by a surge in the number of mutual funds, with 33 mutual funds managing assets worth Rs 1,21,805 crores by January 2003(Khanna, 2024). In recent years, the mutual fund industry has witnessed remarkable growth, with total inflows rising significantly. For instance, total inflows into the mutual fund industry grew by 135.38% to Rs 60,295.30 crore in November 2024, compared to Rs 25,615.65 crore in the same month the previous year (Boyte-White, 2025) . This upward trend is reflective of

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increasing investor participation and confidence in mutual funds as a preferred investment vehicle amidst evolving market dynamics.

3. Methodology and Data

This study utilizes comprehensive data from multiple authoritative sources:

- Quarterly shareholding patterns of NSE-listed companies (2014-2024)
- Monthly mutual fund AUM data from AMFI, categorized by fund type
- Fund flow data from AMFI, including SIP contributions
- Market capitalization and return data from NSE
- NSE Market Pulse reports, including the February 2025 edition

We employ a mixed-methods approach combining quantitative analysis of allocation patterns with qualitative insights from industry reports to identify both structural trends and tactical shifts in allocation strategies.

4. Evolution of Domestic Mutual Fund Market Influence

4.1 Growth Trajectory and Ownership Structure

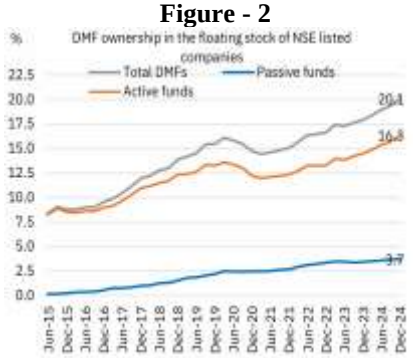
Domestic mutual funds' share in the NSE-listed universe has risen to a record-high 10.0% in the December 2024 quarter, representing a significant increase of 48 basis points quarter-on-quarter. In value terms, DMFs' holding stood at ₹43.4 lakh crore, down only 2% quarter-on-quarter despite a much larger 6.8% drop in overall market capitalization during the same period.

Figure - 1

Source : CMIE Prowess, AMFI, MFI Explorer, NSE EPR.

This resilience amid market volatility reflects the impact of sustained fresh buying by DMFs, which injected a net amount of ₹1.86 lakh crore into Indian equities in the third quarter of FY25 alone. For the first 10 months of FY25 (April-January), total net inflows reached an unprecedented ₹4.86 lakh crore, surpassing net investments seen in any previous fiscal year.

Figure - 2



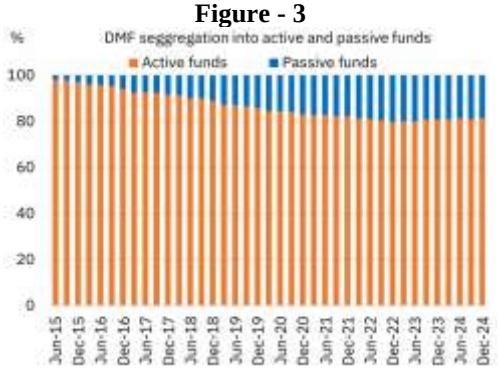
Source : Source : CMIE Prowess, AMFI, MFI Explorer, NSE EPR.

When examining floating stock (non-promoter holdings), DMF ownership has increased even more dramatically, rising to an all-time high of 20.1% in December 2024. This represents an increase of 2.2 percentage points over the calendar year 2024 alone.

4.2 Active vs. Passive Fund Dynamics

A notable trend within the broader DMF landscape is the divergence between active and passive fund performance. Out of the total DMF market share of 10%, passive funds (including ETFs and index funds) accounted for a relatively stable 1.8% in December 2024, while active funds commanded 8.1%, up 44 basis points quarter-on-quarter.

Figure - 3



Source : Source : CMIE Prowess, AMFI, MFI Explorer, NSE EPR.

This relationship becomes more pronounced when examining ownership of floating stock, where active funds held 16.3% compared to passive funds' 3.7%. The quarter ending December 2024 saw passive funds' AUM drop by 4.7% quarter-on-quarter to ₹8.0 lakh crore, marking the first sequential decline in seven quarters. In contrast, active funds demonstrated greater resilience, with AUM declining by only 1.4% to ₹35.4 lakh crore.

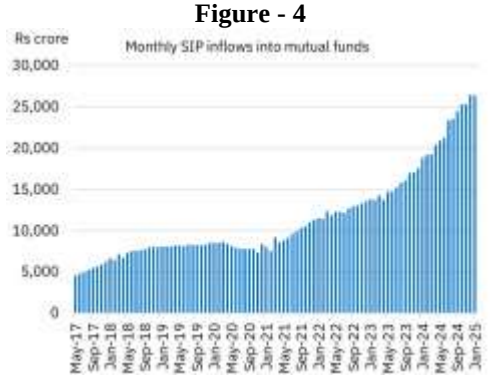
This divergence suggests that during periods of market stress or correction, active management strategies may demonstrate relative outperformance or experience lower redemption pressures compared to passive strategies.

5. Key Drivers of Strategic Asset Allocation Shifts

5.1 Systematic Investment Plans: The Stability Engine

One of the most significant factors influencing the strategic asset allocation decisions of domestic mutual funds has been the steady and predictable inflow of capital through systematic investment plans. Monthly SIP contributions have shown remarkable resilience and growth, with average monthly inflows reaching ₹25,701 crore in Q3 FY25, an increase of 8.0% quarter-on-quarter.

Figure - 4

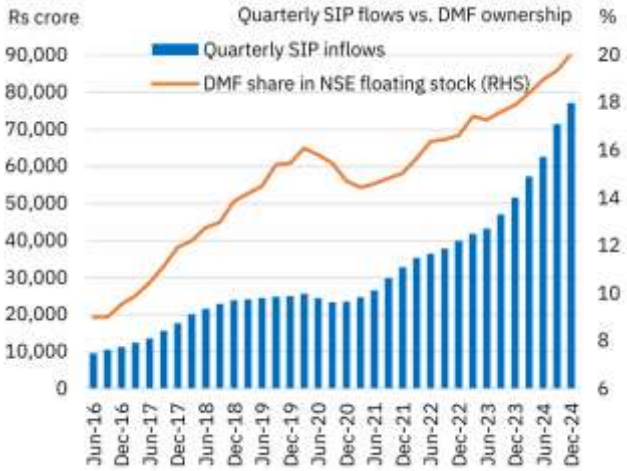


Source : AMFI, NSE EPR.

This consistent capital flow provides fund managers with a stable liquidity base that enables more strategic and long-term allocation decisions rather than being forced into reactive positioning based on short-term market movements. The average monthly SIP inflows in the first 10 months of FY25 stood at ₹23,743 crore, approximately 43% higher than the average monthly inflows of ₹16,602 crore in FY24.

The correlation between rising SIP inflows and increasing DMF ownership in the floating stock of NSE-listed companies highlights how this steady capital stream has enabled fund managers to systematically increase their market presence, even during periods of heightened volatility.

Figure - 5

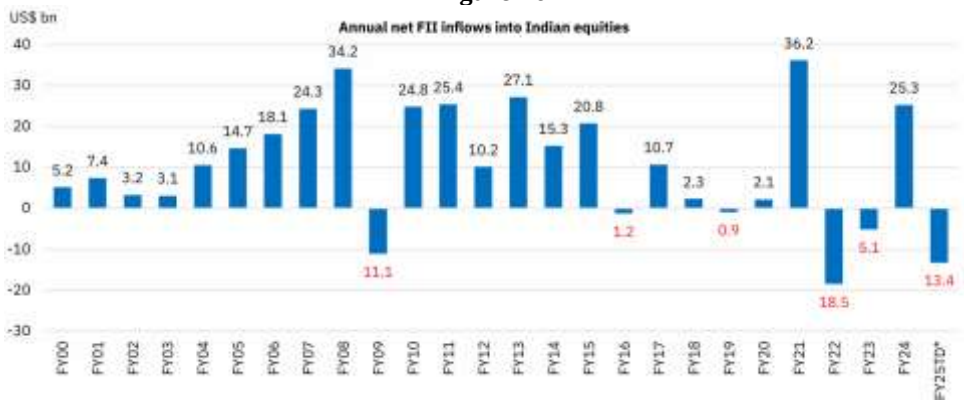


Source : AMFI, NSE EPR.

5.2 Shifting Competitive Dynamics with FPIs

A fundamental shift in the Indian market has been the changing relationship between domestic mutual funds and foreign portfolio investors. As of December 2024, individuals' share in equity markets as non-promoter shareholders, combining both direct holdings (9.8%) and indirect holdings via mutual funds (8.4%), reached 18.2%, surpassing FPIs' share by almost a percentage point for the first time since 2006. This represents a dramatic reversal from March 2014, when the gap stood at 11 percentage points in favor of FPIs.

Figure - 6



*Source: Refinitiv Datastream, NSE EPR. * As of February 24th, 2024.*

This shifting competitive landscape has strategic implications for how domestic mutual funds allocate assets. With FPIs becoming net sellers in the December 2024 quarter (outflows of US$11.9 billion, the highest in 10 quarters), domestic mutual funds have increasingly adopted counter-cyclical investment strategies, stepping in to purchase quality stocks during foreign-driven sell-offs.

Several factors contributed to FPI outflows, including growth concerns, elevated valuations, tapering expectations of rate cuts in the US after the Trump re-election, and trade uncertainties affecting emerging markets broadly. The ability of DMFs to maintain and even increase their market share during periods of FPI selling demonstrates strategic flexibility and increasing independence in their allocation decisions.

5.3 Retail Investor Behavior and Preferences

The composition of mutual fund investors has seen a notable shift toward greater retail participation. As of December 2024, individual investors (retail and HNIs combined) accounted for 84.7% of total mutual fund investments into equity, the highest share in 11 years.

This demographic shift influences asset allocation strategies in several ways:

1. **Risk Tolerance Management**: Fund managers must balance the desire for competitive returns against the typically lower risk tolerance of retail investors, particularly first-time market participants.
2. **Investment Horizon Alignment**: With a significant portion of inflows coming from SIPs with long-term investment horizons, allocation strategies can prioritize long-term growth prospects over short-term tactical positioning.
3. **Liquidity Considerations**: The broader retail investor base necessitates maintaining adequate portfolio liquidity to manage potential redemption pressures during market downturns.

The direct participation of individual investors has also remained strong, with net inflows of ₹56,124 crore in the December quarter, translating into net investments of ₹1.1 lakh crore in FY25 thus far (as of January 31, 2025). This parallel growth in both direct and indirect participation reflects a maturing investment landscape that fund managers must navigate.

6. Strategic Asset Allocation Patterns

6.1 Market Capitalization Tilts

Domestic mutual funds have demonstrated distinct patterns in their allocation across market capitalization segments:

1. **Large and Mid-Cap Focus**: The increase in DMF ownership was more pronounced in large and mid-cap companies, suggesting a rotation toward quality and liquidity during periods of market uncertainty.
2. **Selective Small-Cap Exposure**: DMF participation in smaller companies increased only marginally, indicating a more cautious approach to the smaller, potentially more volatile segment of the market.
3. **Emerging Interest in Micro-Caps**: Interestingly, while FPIs reduced exposure across large, mid, and small-cap segments, they increased allocation to micro-cap companies (those outside the Nifty 500), with their share rising by 30 basis points quarter-on-quarter to 13.2% in December 2024.

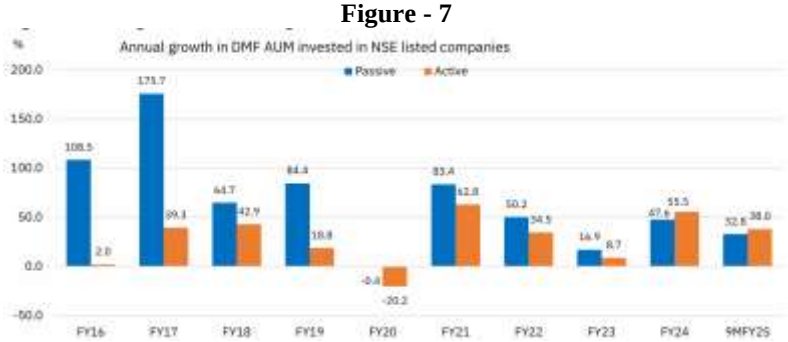
This bifurcated approach to market capitalization allocation suggests that fund managers are implementing a barbell strategy—maintaining core positions in established large and mid-caps for stability while selectively identifying specific opportunities in the micro-cap space for alpha generation.

6.2 Active vs. Passive Strategic Divergence

The strategic allocation approaches between active and passive funds show increasing divergence:

1. **Growth Trajectory Differentiation**: Passive funds demonstrated dramatic growth, with AUM expanding at a CAGR of 59% over the nine years through December 2024, compared to 26.8% for active funds. However, this growth differential appears to be narrowing.

Figure - 7



Source: AMFI, MFI Explorer, NSE EPR.

2. **Market Correction Resilience**: During the market correction in the December quarter, active funds demonstrated greater resilience, suggesting that their ability to adjust allocations provided some downside protection compared to the more mechanical approach of passive vehicles.
3. **Strategic Flexibility**: Active funds' share of total DMF market ownership increased by 44 basis points to 8.1% in December 2024, while passive funds remained stable at 1.8%. In floating stock terms, active funds' share rose by 67 basis points to 16.3%, while passive funds held steady at 3.7%.

The data suggests that while passive strategies have gained significant traction due to their low costs and simplicity, active managers have been able to demonstrate value during periods of market stress through superior downside protection and tactical allocation adjustments.

6.3 Counter-Cyclical Investment Approach

One of the most notable strategic patterns emerging from the data is domestic mutual funds' increasing tendency to adopt counter-cyclical investment approaches:

1. **FPI Outflow Opportunities**: During the December 2024 quarter, when FPIs sold Indian equities worth US$11.9 billion, domestic mutual funds injected ₹1.86 lakh crore, effectively providing a stabilizing counterbalance to the market.
2. **Value-Oriented Purchases**: The continued net buying by DMFs during a period of market correction (the NSE-listed universe saw a 6.8% decline in market capitalization in the December quarter) indicates a value-oriented approach, with fund managers taking advantage of lower valuations.

This counter-cyclical strategy reflects growing confidence among domestic fund managers in their independent analysis and investment convictions, rather than following FPI lead as may have been more common in previous market cycles.

7. Impact on Market Dynamics and Future Outlook

7.1 Market Stability Enhancement

The growing prominence of domestic mutual funds has fundamentally altered the stability characteristics of the Indian equity market. As DMF ownership in the floating stock has reached 20.1%, their steady and predictable investment patterns—anchored by SIP flows—have created a stabilizing force that partially offsets the historically more volatile FPI flows.

This stability enhancement is evidenced by:

1. **Reduced Correlation with Global Markets**: The increased domestic institutional ownership has contributed to a partial decoupling of Indian markets from global risk-off episodes.
2. **Lower Volatility During FPI Outflows**: Despite significant FPI selling in the December quarter (US$11.9 billion), the market decline was relatively contained at 6.8%, suggesting the cushioning effect of DMF buying.

The strategic allocation decisions of DMFs have thus contributed to a more resilient market structure, potentially reducing systemic risks associated with sudden capital flight.

7.2 Future Evolution of DMF Allocation Strategies

Based on the observed patterns and structural shifts, we project several key developments in domestic mutual fund allocation strategies:

1. **Continued Active-Passive Bifurcation**: The divergence between active and passive strategies is likely to persist, with passive vehicles capturing systematic market exposure while active managers focus increasingly on alpha generation in specific segments.
2. **Increased Sectoral Rotation**: As DMFs gain scale and sophistication, we anticipate more dynamic sectoral rotation strategies responding to changing economic conditions and relative valuations.
3. **Greater International Diversification**: While maintaining their primary focus on domestic equities, larger DMFs may gradually increase international allocations to provide diversification benefits as regulatory frameworks evolve.
4. **ESG Factor Integration**: Environmental, social, and governance considerations are expected to become increasingly important inputs in the allocation decision process, reflecting both global trends and evolving domestic investor preferences.

7.3 Challenges and Opportunities

The changing landscape presents both challenges and opportunities for domestic mutual fund managers:

Challenges:

1. **Performance Pressure**: With increasing retail participation, fund managers face greater pressure to deliver consistent performance while managing volatility within retail investors' risk tolerance.
2. **Fee Compression**: The growth of passive strategies and increasing competition may continue to pressure management fees, requiring efficiency improvements.
3. **Talent Acquisition**: As strategies become more sophisticated, attracting and retaining investment professionals with specialized skills presents a growing challenge.

Opportunities:

1. **SIP Growth Potential**: Despite impressive growth, SIP penetration remains relatively low compared to the potential market, offering significant runway for sustained AUM growth.
2. **Retirement Asset Capture**: The underdeveloped retirement savings market in India presents a substantial opportunity for long-term, stable AUM growth.
3. **Product Innovation**: The maturing market creates opportunities for innovative product offerings addressing specific investor needs or market niches.

8. Conclusion

The strategic asset allocation patterns of domestic mutual funds in India have evolved significantly in response to changing market dynamics. DMFs have reached an unprecedented 10% ownership of the total market capitalization and 20.1% of the floating stock of NSE-listed companies, reflecting their growing influence in the Indian equity markets.

This transformation has been primarily driven by sustained retail investor participation through systematic investment plans, which have provided fund managers with stable, predictable capital flows. The divergence between active and passive strategies has become more pronounced, with active funds demonstrating greater resilience during recent market corrections.

Significantly, domestic mutual funds have increasingly adopted counter-cyclical investment approaches, providing a stabilizing counterbalance to more volatile foreign portfolio investment flows. This has contributed to a fundamental shift in market ownership, with domestic individuals—directly and through mutual funds—surpassing FPIs in market share for the first time since 2006.

The journey from being secondary players in a market dominated by foreign capital to becoming primary drivers of market dynamics represents a significant maturation of India's financial ecosystem. How domestic mutual funds continue to evolve their strategic asset allocation patterns will substantially influence the future development of Indian capital markets.

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An Exploration of the Status of Preschool Education in Private English Medium Schools in Aizawl, Mizoram

Ruth Rosangpuii[*]
Dr. Krishna Kant Tripathi[**]

1. Introduction

Children develop at different rates and in ways emotionally, intellectually, morally, socially, physically and spiritually and each dimension is interwoven with others. All the activities have to be planned with a view to achieve the objectives of proper growth and development of the child. To achieve such goals, the management of pre-schools must be able to provide all the play material and equipment for the children along with trained pre-school teachers. Pre-school education programme is typically a play and activity based program for which the vital necessity is ample space for indoor and outdoor activities which is appropriate and safe with adequate light and ventilation. The pre-school center should have a well-planned curriculum reflecting the global situation in terms of duration, content and methodology. To cater to the requirement of our society today we need to look deeper into the education system and check on whether it will be able to produce creative, intelligent and efficient individuals. Recent development of research by psychologists, educators, pediatricians, psychiatrists, anthropologists and nutritionists have proved that the child's early years are the most impressionable period and during this period vital foundations will be laid for optimum development of an individual's personality. This early childhood period is the time when learning and intellectual growth and development of the child is in its maximum. The early years in a child's life are considered crucial for brain development and socialization. Therefore, pre-school years are the foundation of a child's development and will have its consequences even in the later years of life.

2. Review of Related Literature

An exploratory study of play preferences of pre-school children in Delhi was conducted by **Muralidharan and Benerji (1972)**. The sample consisted of 68 children attending pre-school. Observation technique was used for five days after giving the same type of equipment to all the children. They found that the slides, sandpit and nesting frames were most popular in outdoor play. The least popular were ball, ring, see-saw and jungle gym. Regarding indoor play activities, crayon drawing and brush painting were found to be most popular. Block play, paper cutting and collage work was preferred by younger boys and girls. Beads and constructive materials, puzzles, sorting materials were found to draw little attention from the younger groups. Number cards, blocks and water play aroused minimum interest.

Lalhmasai Chuango (2001) in her analysis of the pre-school education in Mizoram, she found that majority of the pre-schools are not in conformity with the desired standards regarding the physical infrastructure and equipments; all of the schools selected for the research do not have a science corner, dolls corner, books corner and plants corner and that majority of the pre-schools do not have outdoor space and the pre-school surroundings are not safe for the children due to steep stairs or steps. Majority of the schools also do not fulfill the requirement for of having storage space, toilet and sanitary facilities, drinking water, clean walls, display of children's work as well as ready-made pictures. There was also lack of indoor play materials and audio-visual equipment. She also found that the head of the school and the teachers are also not trained in ECE and exceed the desired teacher pupil ratio, 94% of the schools do not make short or long term planning, focuses on teaching of the 3 R's and neglects activities for different aspects of development for pre-school children, home

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work were also given and English was used as a medium of instruction which is alien to the children. Records of developmental history, habits and interests, teachers' assessment and health of children were also not maintained in majority of the pre-schools.

3. Justification:

Our system of education especially in the pre-primary and primary stages need special attention and careful planning otherwise there might be a failure in producing individuals who possess the kind of higher-order thinking and problem solving abilities that will be needed in the 21st century and beyond. What is important is the fact that the education of even a very small child does not aim at preparing him only for school but for life. Children are the most valuable human resources of the society. The formative years of the child are decisive in unfolding the psychological abilities of the children. If the child is provided early formalized experiences through pre-school activities, his creativity and problem solving skills and capacity can be developed considerably, therefore, well designed programmes are required for the child's growth and development.

The primary purpose of this study, in addition to gaining insight into prior or existing initiatives, is to enable reflection and assist in the identification of future change especially for the implementation of NPE 2020. Without an in depth understanding of the real situation and quality of the pre-school education program that has been put into practice, formulations of plans and how to make the next step will be difficult. Therefore, the present study has been taken up with the anticipation that it would help the government in planning and implementation of quality pre-school education both in the government and the private sector.

4. Objectives:

4.1. To study the academic and professional quality of the pre-school teachers

4.2. To observe the teaching-learning materials used in pre-schools.

4.3. To examine the curricular and co-curricular activities of pre-schools.

5. Methodology

For this study, 55% (i.e 64 out of a total of 117) schools were selected randomly from the list of schools provided by the Department of School Education, Government of Mizoram. The field investigators observe the school in terms of activities and infrastructure. After that, questionnaire and interview schedule was administered to collect the data from the pre-school teachers. Basically it is an evaluative survey, as it evaluates the status and implementation of the pre-school education programme in the private English medium schools within Aizawl city.

After seeking permission from the Principals, field investigators observed classroom setting and the teachers also answered and completed the questionnaire that addressed their background, classroom resources, activities conducted for various levels of development, instructional practices, the types and of classroom activities, general classroom information and the tasks given to the students in the class room as well as home work.

The primary data collected through classroom observation and questionnaire for teachers were then tabulated and analyzed using the percentage method which makes the paper a quantitative research.

6. Results and Discussion

The primary data was collected through questionnaire and observation of the schools, and the collected data was then analyzed using the percentage method. The questionnaire for the teachers were divided into the following heads: Training of teachers, Teaching Learning Facilities, Physical and Motor Development- Gross motor and fine muscle development, Socio-Emotional Development, Cognitive Development- Language development, reading readiness and pre-number concept, and Home works given daily.

6.1. Training of Teachers

Table 6.1: No. of Trained and Untrained Teachers

Class	Trained	Percentage	Untrained	Percentage	Total No of teachers
Nursery	3	4.4	65	95.6	68
KG	1	1.5	66	98.5	67

A cursory glance at **Table 6.1** shows that the kind of preschool education imparted is poor as the Pre-schools are manned by teachers without having the essential professional qualification. Since there is no control to regulate the functioning of the private Pre-schools, the owners of the private schools have the liberty to pick and choose any teachers for their schools, and much cannot be done from the side of the Government.

6.2. Teaching Learning Facilities

Table 6.2.1: Number of Teaching Aids (out of 64 schools)

Class	Commercial		Teacher made			
Range	**1-3**	**4-6**	**1-3**	**4-6**	**7-9**	**10 - above**
Nursery	34	2	9	1	-	1
KG	22	2	14	1	-	-

Table 6.*2.1* revealed that majority of the schools lack both commercial and teacher made teaching aids. Considering the amount and type of teaching learning materials available in the school under study, it is felt that the Pre-schools were severely deficient in this area. It was observed that enough attention is not paid to utilization of teaching aids in the teaching-learning process, and lesser attention to the physical and socio-emotional aspect of the development of the child.

6.3. Physical and Motor Development

Table 6.3.1: Activities for Gross Muscle Development

	Nursery		KG-II	
Activity	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Jumping	59	93	54	85
Running	52	82	49	77
Climbing	5	8	6	10
Hopping	0	0	0	0
Skipping	0	0	0	0
Other	0	0		

For the development of the gross motor, activities like walking, jumping, running, balancing, crawling, rolling, swinging, climbing, hopping, kicking, skipping etc. are excellent activities. The present study highlighted that such activities like jumping and running were regularly done in about 93 % in Nursery and 85% in KG but only a handful i.e. 8% in Nursery and 10% in KG practiced climbing. Other activities mentioned above were more or less absent in the sampled Pre-schools as shown in **Table 6.3.1.**

Table 6.3.2: Activities for Fine Muscle Development in Nursery

	Nursery		KG	
Activity	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Clapping	49	76	51	79
Catching	24	37	27	42
Tearing & Pasting	7	10	8	12
Cutting	2	3	0	0
Sorting	1	1	0	0
Threading	5	7	6	9
Other	1	1	0	0

It is expected that the Pre-school programme be planned in ways that would promote the children's gross/large muscles by conducting various activities. However it is found that such activities were not practiced as desired and if practiced, it is not structured and organized as it ought to be. Since writing involves the use of the small/fine muscle, teaching children to write before they are developmentally ready can be detrimental. Therefore it is desirable that before children are made to hold a pencil in their hand, various activities and plays are to be introduced in the Pre-school to develop their small muscles. Simple activities like clapping, catching, tearing, pasting, cutting, sorting, threading, colouring, etc. are good activities for the development of the fine or small muscle. The present study reveals that for small muscle development, clapping was regularly done in about 70% of the schools, about 37 % in Nursery classes and 42 % in the KG classes practiced catching. About 10% of the school does activity like tearing and pasting. Activities like cutting, sorting and threading were hardly practiced in all the schools as is evident from **Table 6.3.1**. It can be concluded that except for the activity of coloring which is not even a structured activity, other activities for the development of the small/fine muscle is minimal and far from adequate even where it was done.

6.4. Socio-Emotional Development

Table 6.4.1: Activities for Socio Emotional Development in Nursery

	Nursery		KG	
Activity	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Group Play	29	45	27	42
Drama	2	3	3	4
Singing	59	92	61	95
Role Play	1	1		
Others	2	3		

Activities like group play and singing were done in most of the schools, but drama and role plays were few to be found. It is expected that the Pre-school programme be planned in ways that would promote the children's social and emotional development through play and activity method, however, from the analysis of **Table 6.4.1,** it is shown that such activities were not practiced as desired except an activity for group play and group singing.

6.5. Cognitive Development

6.5.1. Language Development

Table 6.5.1.1: Activities for Language Development in Nursery

	Nursery		**KG**	
Activity	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Free conversation	53	82	57	89
Story Telling	45	70	51	79
Riddles	8	12	14	21
Picture Games	30	46	29	45
Picture Reading			2	3

Table 6.5.1.2: Activities for Reading Readiness in Nursery

	Nursery		KG	
Activity	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Sound discrimination	11	17	23	35
Visual discrimination	15	23	19	29
Audio-visual discrimination	11	17	13	20
Sense of direction	22	23	21	32
Vocabulary building	15	62	27	42

The tables above revealed that not even half of the Pre-schools are doing activities like sound and audio discrimination, visual discrimination, vocabulary building, and sense of direction. However, almost 90 % of the Pre-schools practice free conversation and about 90% have story telling activity. Around 46% also profess of doing picture games. The Pre-school programme has to be planned in ways that would promote the children's language development through orientation of play and activity. From the analysis of the mentioned tables, it can be concluded that the activities were unstructured and not practiced as desired.

Again, in the absence of proper orientation and training on how to run a Pre-school, and where all the teachers under the study were untrained, the need and importance of conducting various activities prior to introduction of formal writing with a pencil remains time wasting and unnecessary activities in the minds of the teachers and more so in the perspective of the parents.

6.5.2. Pre-number concepts

Table 6.5.2.1: Activities for Pre-number Concepts

	Nursery		*KG*	
Activity (nursery)	Out of 64 schools	Percentage	Out of 64 schools	Percentage
Big & Small	37	57	46	71
Tall & Short	36	56	45	70
Space	12	18	23	35
Seriation	14	21	18	28
Day and Night	24	37	34	53

Pre-number concepts are concepts like big and small, long and short, heavy and light, thick and thin, more and less, etc. It is very important that the children can make correct assessment about the values of the numbers before they are taught the complex mathematical principles. If children are taught mathematics prior to acquisition of the pre-number concepts, they are likely to end up memorizing without fully understanding the concept. The children therefore are at the risk of facing difficulty when they are supposed to apply their understanding and knowledge to more complex level of reasoning and analysis.

From the **table *6.5.2.1***, activities like big and small and tall and short were done quite satisfactorily but other activities on space, day and night and seriation were minimal. It is imperative that the children have number readiness before any formal learning on numbers are imposed on them. The Pre-school programme should therefore be planned in such a way that different activities that will foster the formulation of pre-number concepts can be practiced.

Table 6.5.2.2.:Reading Numbers in Figures in Nursery & KG

Activity (nursery)	Out of 64 schools	Percentage	Out of 64 schools	Percentage
1-50	6	9	11	17
1-100	54	84	47	73
1-200	4	6	6	9

Table 6.5.2.3: Writing Numbers in words in Nursery & KG

Activity (nursery)	Out of 64 schools	Percentage
1-10	8	12
1-20	27	42
1-30	5	7
1-50	20	31
1-100	4	6
Activity (kg)	Out of 64 schools	Percentage
1-100	11	17
1-200	13	20
1-300	7	10
1-500	19	29
1-1000	14	21

Table 6.5.2.4: Writing Numbers in Figures in Nursery& KG		
Activity (nursery)	Out of 64 schools	Percentage
1-100	10	15
1-200	13	20
1-300	10	15
1-500	17	26
1-1000	14	21
Activity (kg)	Out of 64 schools	Percentage
1-50	3	4
1-100	36	56
1-200	12	18
1-300	10	15
1-500	3	4

Table 6.5.2.5: Operations in Nursery		
Activity (nursery)	Out of 64 schools	Percentage
Addition	2	3
Subtraction	1	1
2 Times	3	4
Activity (kg)	Out of 64 schools	Percentage
Addition	47	73
Subtraction	45	70
Multiplication	5	4
Division	3	
Times (KG)		
2 Times	0	0
3 Times	13	20
4 Times	4	6
5 Times	14	21
More	15	23

Analysis of the **tables *6.5.2.1- 6.5.2.5*** and considering the range of reading and writing numbers in figures and in words, majority of the Pre-schools goes beyond the developmental level of the children aged 4 to 5 years. Pressurizing to read and write numbers has no meaning if it is not learned with the objects they represent. As is evident, writing numbers till 500 and in some cases till 1000 is practiced in some of the schools and it is doubtful that the children learnt what has been imposed fully acquiring the concept of what the numbers are. Teaching the children operations like addition, subtraction, multiplication and division may not be developmentally appropriate as such operations require abstract thinking which is still underdeveloped in the Pre-school age group. Children learn better when they are allowed and encouraged to learn to read and write symbols in their own way and at their own pace. They can only enjoy reading and writing symbols when they know what they represent and understand how these can be used meaningfully.

6.6. Home Works Given Daily

Table 6.6.1: Home Works given daily		
Class	Out of 64 schools	Percentage
Nursery/ KG-I	62	96
KG/KG-II	63	98

Table 6.6.2: Number of Reading Tasks given as Homework				
	Nursery		KG	
Range (nursery)	Out of 64 schools	Percentage	Out of 64 schools	Percentage
1 page	32	50	48	75
2 pages	1	1	6	9
3 pages			3	4

Table 6.6.3: Number of writing tasks given as Homework				
	Nursery		KG	
Range	Out of 64 schools	Percentage	Out of 64 schools	Percentage
1 page	37	57	38	59
2 pages	24	37	23	35
3 pages			5	7

Analysis of **tables 6.6.1- 6.6.3** revealed that the Pre-schoolers are also burdened with homework too. Reading and writing tasks are the main form of home works given to the children and the amount of tasks given varies in different schools. For want of early education, parents tend to aspire maximum learning for their children and parents tend to demand homework for their children and expecting them to toil in their studies even after schools and leaving no time for them to play and enjoy their childhood. Parents need to be aware that homework at this young age gives burden and unnecessary stress to the children and ultimately to the parents as well. The National Curriculum Framework 2005 had reiterated that home work should be discouraged even at the primary stage.

7. Conclusion and Implications of the Study

The present study revealed that even though the Nursery and KG classes fall under the nomenclature of Pre-school, the curriculum followed, the textbooks and workbooks used and their overall functioning are more like a downward extension of Primary School. All the policies had also cautioned against making the ECCE or the Pre-schools a place where the children are made to do rigorous work and where the formal teaching of the 3R's should be avoided. However, the report of the study has shown otherwise.

In the absence of formal instructions from the government, the curriculum followed differs in all the schools and there is no uniformity in the way Pre-schools is being run. Each school chose the learning materials of their own liking thereby, most of the schools were found to have prescribed as many as 5 – 10 textbooks and workbooks. It was also observed that teaching aids whether teacher made or commercial readymade were few to be found in the Nursery and KG classes. The general observation is that the Pre-schools under study appears to have put too much emphasis on formal learning of reading, writing and arithmetic and the few hours that the children spend in the school is utilized for writing in the workbook and reading which leaves very little or no time to play and do activities for the physical or socio emotional development for the children. Most of the schools are situated in private buildings without much of a compound or free space for children to do outdoor activities. The classrooms are usually situated next to the other higher classes which may have caused inconvenience to do activities and plays in the Nursery and KG classes.

A huge drawback is lack of professional training of the teachers. Unless the situations regarding the teachers improve and more trained teachers are in the system to teach in the Pre-school, it may be difficult to lay a solid educational foundation for the children. Since most of the parents choose to send their children to the private sectors, it is important from the side of the academic authority of the state government to spell out at least the basic minimum requirement to run a Pre-school. The pertinent issue at this point is that there should be a teacher training course for Pre-

school teachers so that the prospective teachers can get professional training in the teaching of Pre-schools. Unless there is a place for training it is difficult to demand for trained teachers.
The following recommendations are suggested:

1. Anganwadis may be co-located with government primary schools and strengthened with pre-school sections having child-friendly and quality infrastructure and play equipments so that quality pre-school education will be accessible easily to all as outlined in 1.4 of NEP 2020.
2. The academic authority may be entrusted to prescribe pre-school curriculum and state specifications/ minimum requirements to be followed both in Government and Private sector.
3. Refresher/orientation programme to Pre-school teachers both in government and private sector.
4. The state government may give effort to open diploma/certificate course in ECCE to achieve NEP 2020.
5. Awareness programmes for the parents and the general public through different media may be organised.

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The Transformative Power of Quality Education: Empowering Society for a Sustainable Future

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Abstract

This paper investigates the transformative power of quality education as a cornerstone for achieving a sustainable future. It argues that education, beyond basic literacy, equips individuals with the critical thinking, ethical values, and practical skills necessary to address the complex challenges of sustainability, defined as development that meets present needs without compromising future generations. Quality education, as articulated in Sustainable Development Goal 4, fosters awareness of interconnected systems, promotes responsible decision-making, and inspires innovative solutions. Through global initiatives and the specific context of India's development strategies, this paper examines how education translates into tangible progress. Encompassing formal, non-formal, and informal learning, education shapes informed and engaged citizens. Effective pedagogical approaches, such as inquiry-based and experiential learning, are crucial for integrating sustainability into education. Curriculum development must prioritize core sustainability themes and promote interdisciplinary learning. Policy interventions by governments and educational institutions are essential to mainstream sustainability within educational frameworks.

Ultimately, this paper concludes that quality education is not merely a desirable goal but a fundamental catalyst for empowering societies to create a sustainable and equitable world. By cultivating critical thinking, fostering ethical values, and promoting active citizenship, education drives the essential transformation towards a more sustainable future.

Key Words: Quality Education, Sustainable Development, Empowerment

Introduction: Defining Sustainability and Its Interconnectedness with Education

The term "sustainability" is etymologically rooted in the Latin language, carrying a rich tapestry of meanings: "to carry on," "to endure," "to live through," "to maintain," "to sanction," "to prolong," "to encourage," and "to support the life of" (Chambers Concise Dictionary). At its heart, sustainability embodies the concept of endurance, the capacity to maintain ecological balance, and the resilience to withstand environmental and social challenges. It transcends a mere static state; rather, it signifies a dynamic process of maintaining the vitality of essential systems.

In a broader context, sustainability is frequently articulated as the attainment of a harmonious equilibrium between developmental progress and the imperatives of environmental preservation (Shukla, 2009). This perspective acknowledges that economic advancement and ecological integrity are not mutually exclusive but rather intrinsically linked facets of a shared global reality. The pursuit of sustainability necessitates a departure from the paradigm of unchecked growth and a transition toward a model that prioritizes long-term well-being.

The most widely recognized and influential definition of sustainable development originates from the World Commission on Environment and Development (WCED), articulated in their seminal report, "Our Common Future" (1987). Sustainable development, as defined by the WCED, is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). This definition encapsulates the core principle of intergenerational equity, emphasizing that current progress should not come at the expense of the

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well-being of generations yet to come. It underscores the ethical obligation to safeguard the planet's resources and ecological integrity for posterity.

This concept necessitates a holistic and integrated approach that extends beyond purely environmental considerations. Sustainable development is not solely about protecting forests or reducing pollution; it encompasses a delicate balancing act between economic growth, environmental stewardship, and social equity. Economic growth must be pursued in a manner that does not deplete natural resources or exacerbate social disparities. Environmental stewardship requires safeguarding ecosystems, preserving biodiversity, and mitigating climate change. Social equity demands the creation of inclusive societies where all individuals have access to opportunities, resources, and a decent standard of living. In essence, sustainable development seeks to ensure a high quality of life for all members of society, both in the present and in the future.

Within this complex framework, quality education, as articulated in Sustainable Development Goal 4, emerges as a cornerstone for achieving sustainability. Quality education transcends the acquisition of basic literacy and numeracy skills; it empowers individuals with the comprehensive knowledge, diverse skills, core values, and proactive attitudes essential to confront the multifaceted challenges of sustainability and to actively participate as responsible and engaged global citizens. It equips individuals with the capacity to critically analyze complex issues, make informed decisions, and contribute meaningfully to the creation of a more sustainable and equitable world.

Moreover, quality education plays a pivotal role in safeguarding the environment and ensuring the planet's continued capacity to support life for generations yet unborn. By fostering environmental awareness, promoting sustainable practices, and cultivating a sense of responsibility toward the natural world, education empowers individuals to become effective stewards of the environment. It is through education that societies can cultivate a collective commitment to preserving biodiversity, mitigating climate change, and managing resources sustainably.

The pursuit of sustainable development necessitates a fundamental transformation in societal values, individual behaviors, and collective practices. This transformation demands a potent catalyst, and education serves as precisely this instrument of change. Education is far more than the simple transmission of information from one individual to another; it is a dynamic and transformative process that shapes mindsets, nurtures critical thinking faculties, and empowers individuals to become proactive agents of change within their communities and the world at large. It cultivates the capacity for innovation, problem-solving, and ethical decision-making, all of which are indispensable for navigating the complexities of sustainability.

This paper delves into the symbiotic and multifaceted relationship between quality education and sustainability. It posits that empowering societies to achieve sustainability is inextricably linked to ensuring widespread access to and the promotion of quality education at all levels of learning and across all segments of society. The paper will explore the diverse ways in which education can drive the essential shift toward a more sustainable future, examining pedagogical approaches, curriculum development, policy interventions, and the challenges and opportunities in Education for Sustainable Development.

Sustainable Development in Action: The Indian Context and Global Initiatives

India, as a rapidly developing nation with a significant global presence, has demonstrated a strong commitment to achieving the Sustainable Development Goals (SDGs). The country has launched a diverse array of initiatives aimed at addressing key developmental challenges and fostering sustainable development across various sectors of its economy and society. These initiatives reflect India's recognition of the interconnectedness of social, economic, and environmental factors in the pursuit of sustainability. Here are some notable examples that highlight India's efforts:

- **Poverty Eradication:**
  - **Pradhan Mantri Jan Dhan Yojana (PMJDY):** This ambitious financial inclusion program aims to provide every household in India with access to formal banking services. By integrating marginalized populations into the formal financial system,

PMJDY seeks to empower individuals, promote economic participation, and reduce vulnerability to poverty. Access to banking services facilitates savings, credit, and insurance, providing a crucial foundation for economic security.

- **Pradhan Mantri Awas Yojana (PMAY):** Recognizing the fundamental importance of adequate shelter, this housing scheme is designed to provide affordable homes to economically weaker sections of society. By addressing the critical need for housing, PMAY aims to improve living standards, enhance social well-being, and create more inclusive communities.

- **Quality Education:**
  - **Sarva Shiksha Abhiyan (SSA):** This flagship program endeavors to provide universal elementary education, ensuring that all children in India have access to free and compulsory education. SSA has played a transformative role in increasing enrollment rates, reducing gender disparities, and improving educational infrastructure across the country.
  - **Rashtriya Madhyamik Shiksha Abhiyan (RMSA):** Complementing SSA, this initiative focuses on improving the quality of secondary education. RMSA seeks to enhance curriculum relevance, teacher quality, and school facilities to prepare students for higher education, vocational training, and the demands of the modern workforce.
  - **Beti Bachao Beti Padhao (BBBP):** This social campaign promotes girls' education and addresses deeply rooted social issues such as female foeticide and child marriage. BBBP aims to empower girls, challenge gender stereotypes, and create a more equitable society where girls have the opportunity to reach their full potential.
- **Gender Equality:**
  - **Sukanya Samriddhi Yojana:** This small deposit scheme for girls is designed to help families save for their education and marriage expenses. By providing financial support for girls' future, this scheme reduces the economic burden associated with raising daughters and encourages investment in their well-being.
  - **National Mission for Empowerment of Women:** This mission takes a holistic approach to empowering women socially, economically, and politically. It addresses gender-based discrimination, promotes women's rights, and seeks to create an enabling environment where women can participate fully in all spheres of life.
- **Decent Work and Economic Growth:**
  - **Make in India:** This initiative aims to promote manufacturing and job creation in India, transforming the country into a global manufacturing hub. By attracting investment, fostering innovation, and improving infrastructure, Make in India seeks to boost economic growth and create employment opportunities for India's large and growing workforce.
  - **Skill India Mission:** Recognizing the importance of a skilled workforce for economic competitiveness, this mission focuses on providing vocational training and skills development to the youth. By equipping individuals with the skills demanded by the labor market, Skill India Mission enhances employability, reduces unemployment, and contributes to inclusive economic growth.

    These examples illustrate India's multifaceted and integrated approach to sustainable development, demonstrating a commitment to addressing the interconnectedness of various social, economic, and environmental challenges. However, India's efforts are part of a broader global movement toward sustainability.

The 2030 Agenda for Sustainable Development: A Global Roadmap

In 2015, world leaders forged a historic global consensus on the 2030 Agenda for Sustainable Development, a transformative framework comprising 17 Sustainable Development Goals (SDGs). The 2030 Agenda represents a universal call to action to address the most pressing challenges facing

humanity and the planet, providing a shared blueprint for peace and prosperity for people and the planet, now and into the future.

The 17 Sustainable Development Goals are:

1. **Goal 1: No Poverty:** End poverty in all its forms everywhere.
2. **Goal 2: Zero Hunger:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. **Goal 3: Good Health and Well-being:** Ensure healthy lives and promote well-being for all at all ages.
4. **Goal 4: Quality Education:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. **Goal 5: Gender Equality:** Achieve gender equality and empower all women and girls.
6. **Goal 6: Clean Water and Sanitation:** Ensure availability and sustainable management of water and sanitation for all.
7. **Goal 7: Affordable and Clean Energy:** Ensure access to affordable, reliable, sustainable and modern energy for all.
8. **Goal 8: Decent Work and Economic Growth:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. **Goal 9: Industry, Innovation and Infrastructure:** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. **Goal 10: Reduced Inequalities:** Reduce inequality within and among countries.
11. **Goal 11: Sustainable Cities and Communities:** Make cities and human settlements inclusive, safe, resilient and sustainable.
12. **Goal 12: Responsible Consumption and Production:** Ensure sustainable consumption and production patterns.
13. **Goal 13: Climate Action:** Take urgent action to combat climate change and its impacts.
14. **Goal 14: Life Below Water:** Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. **Goal 15: Life on Land:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. **Goal 16: Peace, Justice, and Strong Institutions:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. **Goal 17: Partnerships for the Goal:** Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

These 17 goals underscore the interconnectedness of the economic, social, and environmental dimensions of sustainable development. They recognize that progress in one area is often contingent upon progress in others. For instance, achieving gender equality (Goal 5) is crucial for reducing poverty (Goal 1) and promoting economic growth (Goal 8). Similarly, protecting ecosystems (Goals 14 and 15) is essential for ensuring food security (Goal 2) and mitigating climate change (Goal 13).

Achieving the ambitious targets set by the 2030 Agenda requires concerted effort and unprecedented collaboration from governments, civil society organizations, the private sector, academic institutions, and individuals across the globe. It necessitates a shared commitment to multilateralism, a willingness to forge partnerships, and a recognition that global challenges demand global solutions.

Understanding Quality Education: A Foundation for Sustainable Development

Education is a complex, dynamic, and multifaceted concept that extends far beyond the confines of traditional schooling. It is a lifelong process of acquiring knowledge, developing skills, internalizing values, shaping beliefs, and cultivating habits. Education is not merely about

accumulating information; it is about fostering critical thinking, promoting personal growth, and empowering individuals to participate fully in society.

Education unfolds in diverse settings throughout an individual's life, encompassing formal institutions such as schools, colleges, and universities, as well as non-formal settings like workshops, training programs, community centers, and informal settings such as homes, workplaces, and everyday interactions. This recognition of the varied contexts of learning underscores the importance of a holistic and lifelong approach to education.

To better understand the scope and nature of education, it can be broadly categorized into three main types:

- **Formal Education:** Formal education is characterized by its structured and systematic nature. It takes place within established educational institutions, such as schools, colleges, and universities, and follows a defined curriculum that is typically approved by relevant authorities. Formal education progresses in a hierarchical manner, with learners advancing through different levels or grades. It leads to the attainment of recognized qualifications, such as diplomas, certificates, and degrees, which are formally validated by the institution.
- **Non-Formal Education:** Non-formal education encompasses organized learning experiences that occur outside the formal education system. It is often more flexible and learner-centered than formal education, adapting to the specific needs and interests of participants. Non-formal education can take various forms, including workshops, training programs, community-based initiatives, adult education courses, and online learning platforms. It may or may not lead to formal qualifications but plays a vital role in providing skills development, vocational training, and lifelong learning opportunities.
- **Informal Education:** Informal education is the most pervasive and often unintentional form of learning. It is acquired through everyday experiences, interactions with family and friends, observations of the world around us, and self-directed learning. Informal education is unstructured, spontaneous, and does not follow a specific curriculum. It plays a crucial role in shaping individuals' values, attitudes, and practical skills.

While all three types of education contribute to an individual's development, the concept of *quality education* has gained increasing prominence, particularly in the context of sustainable development. Quality education goes beyond simply providing access to schooling; it emphasizes the importance of effective learning processes, positive learning outcomes, and the overall well-being of learners.

Quality education ensures that all children, adolescents, and adults, regardless of their background, circumstances, or abilities, have the opportunity to learn and succeed in their lives. It recognizes that education is a fundamental human right and a powerful tool for individual empowerment and social transformation.

The Role of Quality Education in Empowering Society for Sustainable Development

Education is fundamental to achieving sustainable development. It equips people with the necessary knowledge, skills, values, and attitudes to tackle the world's complex challenges. Here's how:

1. **Enhancing Awareness and Comprehension:**
   - Education helps people understand the interconnectedness of environmental, social, and economic systems and how human actions affect the planet and future generations.
   - It raises awareness of crucial issues like climate change, biodiversity loss, resource depletion, and social inequality, motivating people to take action.
2. **Cultivating Critical Thinking and Problem-Solving Abilities:**
   - Education enables individuals to analyze sustainability challenges critically, identify their root causes, and assess potential solutions.
   - It fosters problem-solving skills, encouraging the development of innovative and creative approaches to address sustainability issues.

3. **Fostering Ethical Values and Responsible Conduct:**
   - Education instils ethical values such as respect for the environment, social justice, and fairness across generations.
   - It promotes responsible behavior by encouraging sustainable lifestyles, mindful consumption, and active participation in community initiatives.
4. **Enabling Action and Involvement:**
   - Education empowers individuals to act for sustainable development through personal choices, community engagement, and advocating for policy changes.
   - It cultivates a sense of agency and responsibility, motivating individuals to become active agents of change in their communities and beyond.
5. **Stimulating Innovation and Research:**
   - Education promotes innovation and research, leading to the development of sustainable technologies, practices, and solutions.
   - It supports scientific inquiry and critical thinking, driving progress in areas like renewable energy, sustainable agriculture, and resource management.
6. **Developing Capacity for Sustainable Development:**
   - Education builds the capacity of individuals and organizations to implement sustainable development initiatives effectively.
   - It provides training and skills development in areas such as environmental management, sustainable business practices, and community development.
7. **Promoting Global Citizenship and Collaboration:**
   - Education fosters a sense of global citizenship, encouraging individuals to recognize their interconnectedness with people and ecosystems worldwide.
   - It promotes intercultural understanding, empathy, and cooperation, enabling individuals to work together to address global sustainability challenges.

Education and sustainability are mutually supportive. Education provides the necessary tools to understand and address sustainability issues, while sustainability offers a relevant context for meaningful learning. A sustainable society relies on informed and engaged citizens who make responsible choices and contribute to a more equitable and environmentally sound future. Quality education empowers individuals to:

- **Develop Critical Thinking and Problem-Solving Skills:** Sustainability challenges are complex, requiring strong critical thinking and problem-solving abilities to analyse issues, evaluate solutions, and create innovative strategies. Education can provide these skills.
- **Cultivate Global Citizenship:** Sustainability is a global issue requiring collective action. Education can foster a sense of global citizenship, promoting understanding of interconnectedness, respect for diversity, and commitment to collaboration.
- **Promote Sustainable Behaviors:** Education can empower individuals to adopt sustainable lifestyles, make responsible consumer choices, and actively participate in community initiatives that promote environmental and social sustainability.
- **Drive Innovation and Technological Advancement:** Addressing sustainability challenges requires ongoing innovation and technological progress. Education can stimulate creativity, enhance scientific literacy, and foster entrepreneurship, leading to the development of sustainable technologies and solutions.

Pedagogical Approaches for Sustainability Education:

Integrating sustainability into education requires a shift from traditional teaching methods to more learner-cantered, participatory, and experiential approaches. These include:

- **Inquiry-Based Learning:** Students investigate real-world sustainability issues, developing critical thinking and analytical skills.
- **Project-Based Learning:** Students collaborate on projects that address sustainability challenges in their communities, applying knowledge practically and engaging with the community.

- **Experiential Learning:** Students learn through hands-on activities, field trips, and community engagement, gaining real-world context and deeper understanding.
- **Collaborative Learning:** Students work together to explore complex issues, share perspectives, and develop solutions, promoting teamwork and communication.
- **Systems Thinking:** Students learn to understand the interconnectedness of social, environmental, and economic systems, enabling them to analyse complex interactions.

Curriculum Development for Sustainability Education:

Effective curriculum development is essential for integrating sustainability into education. Sustainability should be woven across the curriculum, addressing core themes and promoting interdisciplinary learning. A well-designed curriculum should:

- **Address Core Sustainability Themes:** Cover topics such as climate change, biodiversity loss, resource depletion, social inequality, and sustainable economic development.
- **Promote Interdisciplinary Learning:** Connect different subjects to explore the interconnectedness of sustainability challenges.
- **Incorporate Local and Global Perspectives:** Examine sustainability issues at both local and global levels, highlighting the link between local actions and global impacts.
- **Develop Essential Skills:** Focus on critical thinking, problem-solving, communication, and collaboration skills.
- **Encourage Action and Engagement:** Empower students to take action and participate in sustainability initiatives.

Policy Interventions for Sustainability Education:

Governments and educational institutions must champion sustainability education through:

- **Integrating Sustainability into National Education Standards and Policies:** Ensuring sustainability is a core component of education frameworks.
- **Providing Funding and Resources:** Supporting the development and implementation of sustainability education programs.
- **Developing Teacher Training Programs:**Equipping educators to teach sustainability effectively.
- **Promoting Collaboration:** Fostering partnerships between educational institutions, NGOs, community groups, and other stakeholders.

In conclusion, quality education is not merely a desirable goal but an indispensable catalyst for achieving a sustainable future. It is through education that we can foster critical thinking, promote responsible decision-making, and inspire innovative solutions to the environmental, social, and economic issues that threaten our world. Moreover, quality education empowers individuals to become active and engaged citizens, capable of driving positive change within their communities and beyond.

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High Speed Solar Wind Streams and Cosmic Ray Intensity Variation

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Abstract

We have done a systematic study to observe the effects of High speed solar wind streams on cosmic ray intensity variation. The analysis has been done for the period of 1996 to 2008, covering the period of solar cycle 23. A chree analysis of super epoch method has been adopted using the daily values of Oulu neutrom monitor. Result of our analysis depicts a significant decrease in cosmic ray intensity on short term basis.

Keywords: Solar wind, cosmic rays, intensity variations, Intensity Decrease, high-speed streams, Solar Wind Plasma, Wind Measurement and interplanetary magnetic field

Introduction

The solar wind is the supersonic outflow into interplanetary space of plasma from the Sun's corona, the region of the solar atmosphere beginning about 4000 km above the Sun's visible surface and extending several solar radii into space. It is composed of approximately equal numbers of ions and electrons; the ion component consists predominantly of protons (95%), with a small amount of doubly ionized helium and trace amounts of heavier ions. Embedded in the out flowing solar wind plasma is a weak magnetic field known as the interplanetary magnetic field (IMF). The solar wind varies--in density, velocity, temperature, and magnetic field properties--with the solar cycle, heliographic latitude, heliocentric distance, and rotational period. It also varies in response to shocks, waves, and turbulence that perturb the interplanetary flow. Average values for solar wind velocity, density, and magnetic field strength at the orbit of the Earth are 468 km per second; density, 8.7 protons per cubic centimeter, and 6.6 nT, respectively.

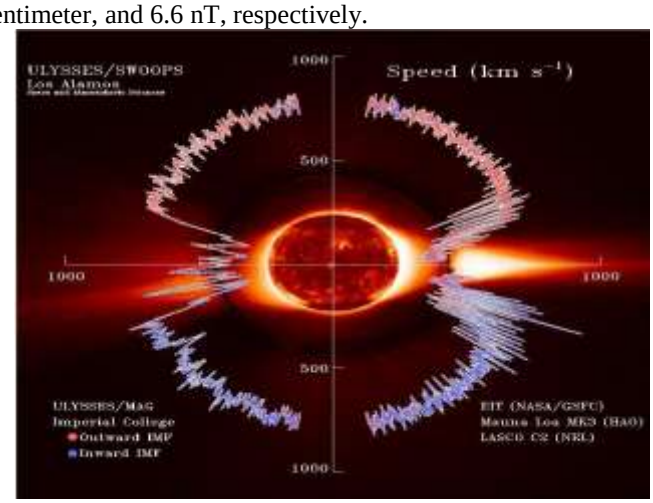

Fig 1: Solar wind Speed interplanetary magnetic field
Source: http://solarscience.msfc.nasa.gov/SolarWind.shtml

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In previous work, Mishra, Shrivastava and agrawal 1990 reported the two source of high speed solar wind streams on their different effects on cosmic ray intensity. Several works in this field also reported the effects of these streams on cosmic ray intensity variations (Shrivastava and Shukla,1994). High-Speed Solar wind Streams and Cosmic-Ray Intensity Variations During 1991–1996 (Shrivastava, P.K., Jaiswal, K. 2003). Cosmic ray modulation and high speed solar wind streams of different origin (Badruddin 1993). Variation of cosmic rays and solar wind properties with respect to the heliospheric current sheet (Newkirk, G., and L. A. Fisk,1985).

In this work we have studied the effects of High speed solar wind streams on cosmic ray intensity variation for the period of 1996 to 2008.

Data detection and Method Analysis –

We have taken the daily mean values of cosmic ray, chree analysis of super epoch method and oulu neutron monitor. In the present study we have adopted the chree analysis. Zero days are corresponding to arrival day of High speed solar wind streams, respectively.

Results and Discussion

To derive the effects of high speed solar wind sream we have done a chree amnalysis taking the daily values of oulu neutron monitors. Figure 2 shows the results of cree analysis for the period of 1996 to 2006,covering the solar cycle 23. Zero days are correspond to arrival of HSSW Streams, Figure 2 shows significant transient decrease in cosmic ray intensity.larger decrease is seen after one days of zero days.

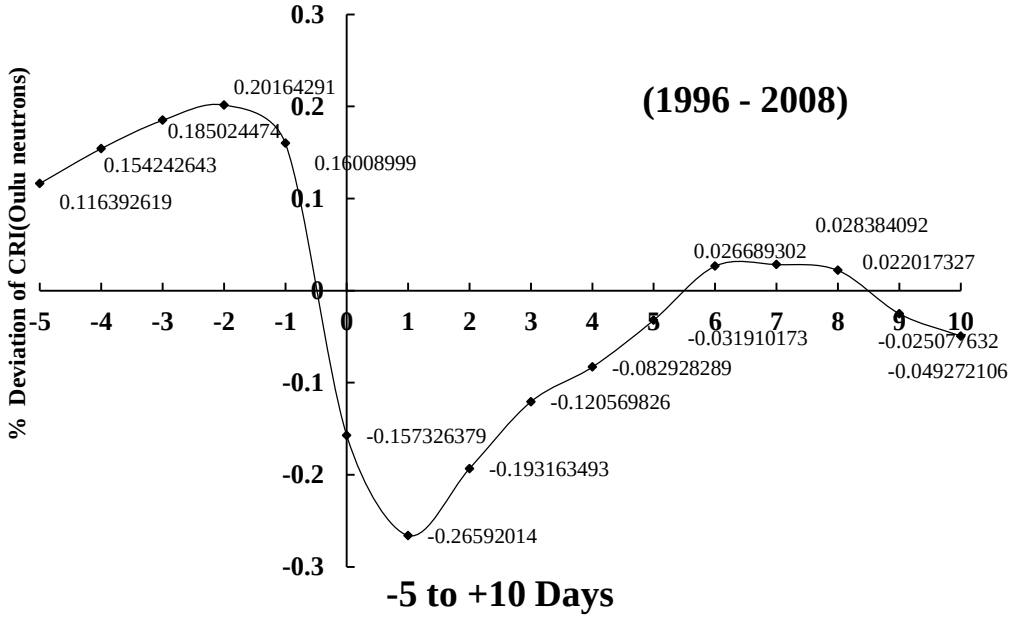

Fig.2 Shows the results of Cree analysis for -5 days to +10 days from zero epoch days .Zero epoch days are correspond to arrival day of High speed solar wind sreams. Oulu neutrons are taken in analysis.

Terms Elaboration:

- **Supersonic Outflow:**

The solar wind travels at speeds much faster than the speed of sound in the corona, making it supersonic.

- **Plasma:**
  The solar wind consists of a collection of charged particles, including electrons, protons, and a small percentage of alpha particles.
- **Heliosphere:**
  The solar wind's outward flow creates a vast region surrounding the solar system called the heliosphere, which extends far beyond the orbit of Pluto.
- **Interplanetary Space:**
  The solar wind fills the space between the Sun and the planets, influencing the interplanetary environment and interacting with planetary magnetospheres, like Earth's.
- **Coronal Holes:**
  The solar wind often originates from coronal holes, regions in the Sun's corona where the magnetic field lines are open and allow the plasma to escape.
- **Solar Activity:**
  Coronal mass ejections (CMEs) can also release large amounts of plasma into the solar wind, causing geomagnetic storms and other effects on Earth.

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Gender and Place of Living as Correlates of Internet Addiction

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Abstract

The aim of the present study was to measure and compare internet addiction of male and female students undergoing study in degree classes of rural and urban areas. The study was conducted on a sample of 200 students of age range from 17 to 20 years. The sample was drawn randomly from both rural and urban degree colleges of Chapra and Siwan Districts of Bihar. The sample comprised of 100 male (50 rural + 50 urban) and 100 female (50 rural + 50 urban) students. 'Internet Addiction Test (IAT)' constructed and standardised by Young, K. S. (1998) has been used to measure internet addiction of subjects. A self made Personal Information Inventory was used to collect personal information of subjects. Application of t' test revealed that male students are significantly higher on internet addiction than female students and urban students are significantly higher on internet addiction than rural students.

Keywords:- Gender, Place, Living, Internet, Addiction

Introduction

Technological advancement has revolutionized educational, cultural and psychological domains of the world. Internet usage has created a new culture that goes global. New advancements are on rise but age old traditions are collapsing all over the world. Internet as networks has raised the level of awareness to unknown levels. It has given to creativity, knowledge development, networking, sharing best practices etc. People enjoy using the free wave available over the internet. There is no doubt that internet communication has many side effects on the mental level as well as physical level and therefore the negative relationship has arisen much. Social media is used to describe the phenomena of exchanging ideas with other people due to an advent from internet. The impact of social networks is no doubt significant. The children are surrounded by the cell phone devices through Twitter, facebook, skype and AOL etc. However, social interaction has now become a phobia for many people living in rural and urban areas. Ironically people are now connected with a virtual world instead of a real world.

The internet is massive network of networks, a networking infrastructure. Internet provides a wide range of information interaction functions, research, including communication i.e. sending e-mails, chatting, transferring data, use social networking sites, etc., accessing information like-searching database, reading electronic books, graphics, etc, (Stallings 2004). Today, the internet can link all online computers so that people can use it to communicate throughout the world.

Internet Addiction has generally been defined as an inability to control the use of the Internet, causing psychological, social, family, school and work impairment. Internet addiction is associated with a range of psychological issues, including anxiety, depression, and loneliness (Kiraly et al., 2018). Furthermore, it can impair academic performance, disrupt social relationships, and negatively impact physical health (Young, 2017).

Several theoretical perspectives provide a foundation for understanding internet addiction.

1. Uses and Gratifications Theory (UGT) posits that individuals use the internet to satisfy various psychological and social needs, which can lead to problematic use when these needs are unmet offline (Katz et al., 1973).
2. Cognitive-Behavioural Model suggests that maladaptive thought patterns and emotional regulation difficulties contribute to compulsive internet use (Davis, 2001).

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3. Social Cognitive Theory highlights the role of observational learning and reinforcement in shaping online behaviour (Bandura, 1986).

According to Young et.al. (2000): Internet addiction is a broad term covering a wide variety of behaviours and impulse control problems. The subtypes of Internet addiction are as follows:

Cybersex addiction- This occurs in individuals who are typically engaged in viewing, downloading and trading online pornography or are involved in adult fantasy role-play chat rooms.

Cyber- relationship addiction- Addiction to social networking, chat rooms, and messaging to the point where virtual, online friends become more important than real-life relationship with family and friends.

Net Compulsions- This subtype includes a broad category of behaviours, including online gambling, shopping or stock trading.

Information Overload- The World Wide Web has created a new kind of Compulsive behaviour that involves excessive web surfing and database searches. These individuals spend a disproportionate amount of time searching for, collecting and organizing information.

Computer addiction- Most computers come equipped with pre-programmed games and people become addicted to playing them at the cost of work performance or family obligations.

Internet addiction has emerged as a significant concern in the digital age, particularly among students of all levels. Characterized by excessive and uncontrollable use of the internet, this behavioural pattern can have detrimental effects on psychological, social, and academic functioning (Kuss & Griffiths, 2017). As internet usage continues to rise globally, understanding the factors that contribute to internet addiction has become imperative.

Among the various factors influencing internet addiction, gender and place of living have garnered considerable research interest. Gender differences in internet usage patterns often stem from variations in behavioural tendencies, social expectations, and technological engagement (Andreassen et al., 2017). Additionally, the place of living, whether rural or urban, influences internet accessibility, exposure, and online behaviour (Makwana & Vyas, 2022).

This study aims to explore the roles of gender and place of living in internet addiction of college level students.

The objectives of this study are :-

1. To investigate the relationship between gender and internet addiction.
2. To examine the impact of place of living on internet addiction.

Hypotheses

a. There will be significant difference between male and female groups on internet addiction.
b. There will be significant difference between rural and urban groups on internet addiction.

Method

The study was conducted on a sample of 200 students of age range from 17 to 20 years. The sample was drawn randomly from both rural and urban degree colleges of Chapra and Siwan Districts of Bihar. The sample comprised of 100 male (50 rural + 50 urban) and 100 female (50 rural + 50 urban) students.

Tools/Instruments

'Internet Addiction Test (IAT)' constructed and standardised by Young, K. S. (1998) has been used to measure internet addiction of subjects. A self made Personal Information Inventory was used to collect personal information of subjects.

Results and Discussion

Gender variable has been found producing significant variation on internet addiction. The mean internet addiction score of male group is 45.744 while that of female group is 42.142 (Table-1). The obtained 't' ratio for testing the significance of difference between the two mean scores is 2.520 which is higher than the required value for significance at .05 level. So, the obtained 't' ratio is significant. This proves that gender bears significant relationship with internet addiction. Our findings contradict the findings of Mohammad Khani et al (2017) and Mohammadi et al (2012) who reported

that there does not exist significant difference between males and females regarding internet addiction. Our findings support the findings of Bernauy et al (2009) and Razieh et al (2012) who reported males higher on internet addiction than females.

Table – 1

Showing Means, S.Ds. and 't' ratios of Internet Addiction Scores-Male and Female Groups.

Groups	N	Means	S. D.	df	't' ratio	Level of Sign.
Male	100	45.744	10.335	198	2.520	0.05
Female	100	42.142	9.872			

Place of living (Rural or Urban) variable has been found producing significant variation on internet addiction. The mean internet addiction score of rural group is 41.672 while that of urban group is 46.214 (Table-2). The obtained 't' ratio for testing the significance of difference between the two mean scores is 3.180 which is higher than the required value for significance at .01 level. So, the obtained 't' ratio is significant. This proves that place of living bears significant relationship with internet addiction. It appears that mass media exposure and easy access to web world accompanied by higher probability of privacy and secrecy have contributed to significantly higher internet addiction of urban students in comparison to rural students. Our findings contradict the findings of Kawa and Shafi (2015) who reported rural students more internet addicted than urban students. Our findings support the findings of Shailja (2021) who reported urban students higher on internet addiction than rural students.

Table – 2

Showing Means, S.Ds. and 't' ratios of Internet Addiction Scores- Rural and Urban Groups.

Groups	N	Means	S. D.	df	't' ratio	Level of Sign.
Rural	100	41.672	9.902	198	3.180	0.01
Urban	100	46.214	10.296			

The study finally led to the following conclusions :-

Conclusions

1. Gender and place of living bring significant variations on internet addiction.
2. Male group is significantly more internet addicted than female group.
3. Urban group is significantly more internet addicted than rural group.

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Assessing Perceived Service Quality and Hospital Performance: A Case Study of Selected Hospitals in Amritsar, Punjab

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Abstract:

This study explored how service quality influences hospital performance in selected hospitals in Amritsar, Punjab, using the SERVQUAL model. All five service quality dimensions tangibles, reliability, responsiveness, assurance, and empathy were significantly linked to patient-perceived hospital performance, with assurance and reliability being the strongest predictors. These findings align with previous Indian and South Asian studies (Duggirala et al., 2008; Andaleeb, 2001), highlighting the value patients place on knowledgeable staff and dependable service. Results also support earlier work (Taner & Antony, 2006; Zineldin, 2006; Rao et al., 2006), indicating private hospitals often outperform public ones in service quality. Lower scores for responsiveness and empathy, especially in government hospitals, reveal gaps in personalized care. The study reinforces the SERVQUAL model's relevance in India and particularly in the public to invest in staff training, upgrade infrastructure, and prioritize patient feedback. Policymakers should integrate quality indicators into public health strategies and offer incentives for hospitals that show tangible service improvements, especially in underserved areas.

Keywords: Perceived Service Quality, Perceived Hospital Performance, Hospital Service Quality

Introduction

In the rapidly evolving landscape of healthcare services in India, the twin concepts of service quality and hospital performance have garnered increasing attention from scholars, policymakers, and healthcare administrators. With the healthcare sector playing a crucial role in the nation's socio-economic development, there is a growing need to evaluate how effectively hospitals deliver health care that meets patient expectations and enhances operational efficiency.

India's healthcare system is characterized by a unique dual structure comprising both public and private service providers operating across urban and rural areas. While advancements in medical technology and infrastructure have significantly improved healthcare accessibility, the quality of services rendered remains inconsistent. Factors such as overcrowding, long wait times, lack of personalized care, and variable staff responsiveness often compromise patient satisfaction and outcomes. As a result, service quality has emerged as a critical determinant of hospital performance, influencing not only patient perceptions but also institutional credibility, financial sustainability, and overall effectiveness.

In this context, Amritsar an important urban center in Punjab with a mix of government, private, and charitable hospitals offers a valuable setting to examine the interplay between service quality and hospital performance. This study seeks to assess how different dimensions of service quality (such as tangibility, reliability, responsiveness, assurance, and empathy) influence the perceived and actual performance of selected hospitals in Amritsar. The findings of the study aims to contribute to the growing body of empirical evidence guiding healthcare management practices and policy formulation in India.

Literature Review

The relationship between service quality and hospital performance has been a subject of extensive research across global and Indian contexts. The conceptual foundation of service quality in healthcare is often grounded in the SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry (1988), which evaluates quality based on five key dimensions: tangibility, reliability, responsiveness, assurance, and empathy. In the Indian healthcare context, Duggirala et al. (2008) modified the SERVQUAL scale to develop a multi-item instrument tailored to Indian hospitals, highlighting that responsiveness and empathy are especially critical in influencing patient satisfaction. Their findings showed a strong correlation between perceived service quality and hospital loyalty. Joshi and Prasad (2014) assessed hospital performance in Punjab and noted that hospitals

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offering better service quality measured through patient feedback and service outcomes also performed better in terms of revenue, staff retention, and bed occupancy rates. Together, these studies underscore a strong empirical link between service quality and hospital performance, with implications for both patient satisfaction and institutional success. However, localized research focusing on tier-2 cities like Amritsar remains limited, thereby justifying the need for this present study.

Research Design and Methodology

This study adopts a quantitative, descriptive, and cross-sectional research design to examine the relationship between service quality and hospital performance in selected hospitals of Amritsar, Punjab. The descriptive design enables the study to quantify hospital stakeholders perceptions of service quality, while the cross-sectional approach facilitates data collection at a specific point in time from a diverse group of hospital users.

Research Objectives

- To assess the level of service quality across selected hospitals in Amritsar.
- To evaluate the performance of these hospitals from the patients' perspective.
- To analyse the impact of service quality dimensions (as per SERVQUAL) on hospital performance.

Study area and Population

The study was conducted in the city of Amritsar (Punjab), a major urban centre with a combination of government, private, and charitable hospitals. The target population comprised patients who received treatment at selected hospitals during the data collection period. A random sampling technique was employed to ensure representation from different types of hospitals government, private, and charitable. Five hospitals (2 private, 2 government, and 1 charitable) were selected based on patient load and service variety.

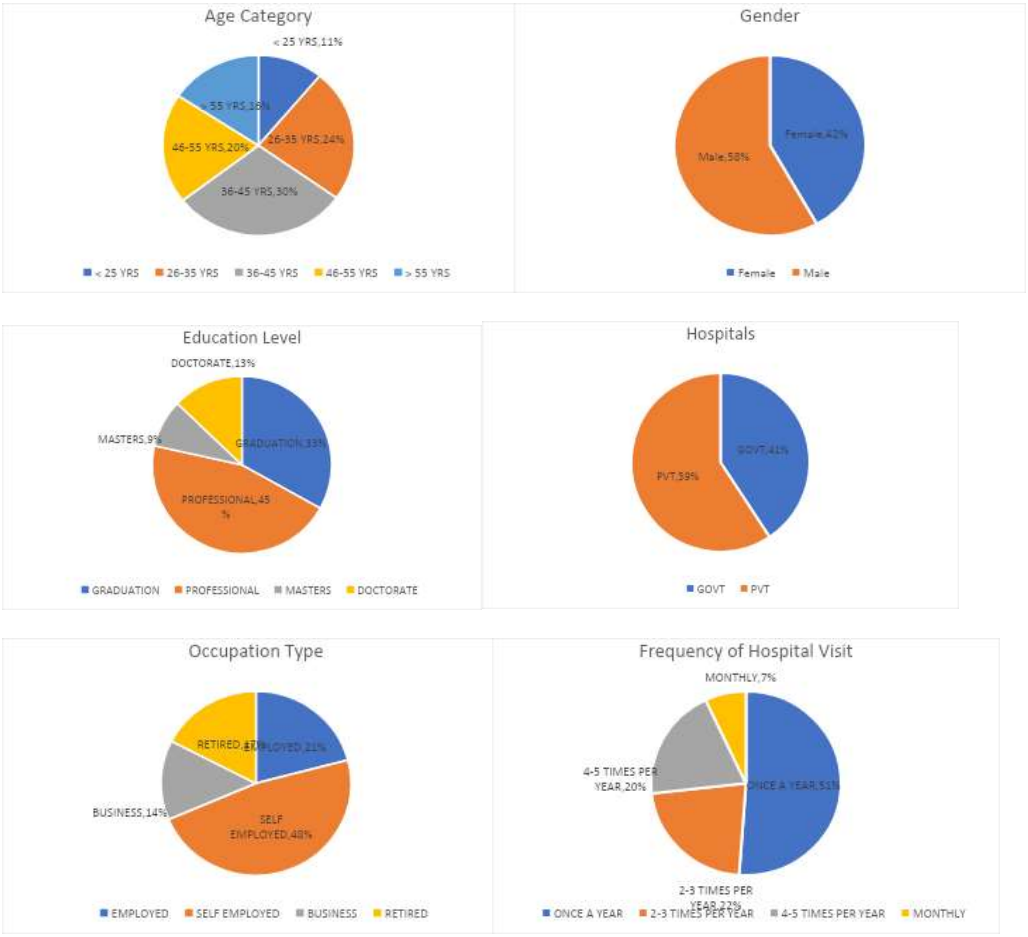
The sample size was determined using Cochran's formula for finite populations. A total of 250 questionnaires were distributed, ensuring a sufficient representation to allow generalizability within Amritsar city.Primary data was collected through a structured questionnaire adapted from the SERVQUAL instrument, which includes five service quality dimensions: Tangibles, Responsiveness, Assurance, and Empathy

Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Additional 10 items were included to assess hospital performance indicators such as Patient satisfaction, Perceived treatment outcomes, Staff behavior and Overall hospital experience. The questionnaire was pre-tested on a pilot group of 30 respondents to ensure face and content validity. Necessary revisions were made based on feedback. Cronbach's alpha was calculated for internal consistency, with all service quality dimensions showing a reliability score above 0.75, indicating high reliability.

Data analysis

Table 1 Demographic profile of respondents (n=172)

Demographics		N	%
Age Category	< 25 years	19	11.0
	26-35 years	41	23.8
	36-45 years	51	29.7
	46-55 years	34	19.8
	> 55 YRS	27	15.7
	Total	172	100.0
Gender	Female	72	41.9
	Male	100	58.1
	Total	172	100.0
Sector	Government	70	40.7
	Private	102	59.3
	Total	172	100.0
Occupation	Employed	36	20.9
	Self employed	82	47.7
	Business	24	14.0
	Retired	30	17.4
	Total	172	100.0
Frequency of visit to Hospital	Once a year	88	51.2
	2-3 times per year	38	22.1
	4-5 times per year	34	19.8
	Monthly	12	7.0
	Total	172	100.0



A total of 172 questionnaires completed in all respect were used for the analysis. The demographic characteristics of the participants are summarized in Table 1.

In terms of age distribution, the largest proportion of respondents (29.7%) were between 36–45 years, followed by 26–35 years (23.8%), and 46–55 years (19.8%). A smaller portion belonged to the under 25 years (11.0%) and above 55 years (15.7%) categories. This indicates a balanced representation across adult age groups, with a slight concentration in middle adulthood. Regarding gender, the sample consisted of 58.1% males and 41.9% females, showing a moderate male majority in the respondent group. With respect to the sector of hospital utilization, 59.3% of participants reported visiting private hospitals, whereas 40.7% attended government hospitals, reflecting a greater reliance on private healthcare facilities among the study population.

In terms of educational qualifications, the majority held professional degrees (45.3%), followed by graduates (33.1%), doctorates (12.8%), and those with a master's degree (8.7%). This indicates a relatively well-educated respondent base, potentially influencing their awareness and perception of healthcare services.

As for occupation, 47.7% of respondents identified as self-employed, followed by employed individuals (20.9%), retired individuals (17.4%), and business owners (14.0%). This distribution suggests diverse professional backgrounds, which may provide a broad perspective on hospital service experiences.

Finally, in terms of frequency of hospital visits, 51.2% of respondents visited a hospital once a year, 22.1% reported visiting 2–3 times per year, 19.8% visited 4–5 times per year, and 7.0% reported monthly visits. These frequencies reflect both routine and occasional healthcare usage patterns, offering a comprehensive basis for evaluating perceived service quality.

These demographic insights establish the contextual foundation for interpreting the participants' responses on hospital service quality and performance in the subsequent sections of the study.

Table 2 Descriptive statistics of Service Quality of Hospitals among respondents

Variables	Mean	SD
Tangibility	3.79	0.569
Reliability	3.92	0.705
Responsiveness	3.81	0.438
Assurance	3.80	0.513
Empathy	3.79	0.453
Perceived Service Quality	3.82	0.420
Satisfaction level	3.89	0.762
Perceived Performance	4.15	0.474

The descriptive statistics of patient responses were analysed to understand perceptions across the five SERVQUAL dimensions: Tangibility, Reliability, Responsiveness, Assurance, and Empathy. Each dimension was measured through multiple items rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with corresponding mean (M) and standard deviation (SD) values presented in Table 2. Respondents perceived the hospitals' tangible infrastructure and physical appearance positively, with a mean dimension score of M = 3.79, SD = 0.57. Reliability emerged as the most highly rated dimension overall (M = 3.92, SD = 0.71), indicating strong trust in the accuracy and consistency of hospital services. For Responsiveness, the overall mean was M = 3.81, SD = 0.44, showing positive perceptions of the hospital staff's willingness to assist and respond. The Assurance dimension recorded an overall mean of M = 3.80, SD = 0.51, suggesting that both medical and non-medical staff are perceived as courteous, respectful, and able to instil trust. The Empathy dimension had a mean of M = 3.79, SD = 0.45, indicating that hospital staff were generally perceived as compassionate and considerate. . The perceived service quality had a mean of M = 3.82, SD = 0.42, indicating that overall the respondents agree with services of provie by the hospital.

These findings indicate that while core medical services and communication practices are appreciated, areas such as emergency handling and infrastructure support can be further improved to enhance hospital performance and patient experience. The overall mean score for perceived hospital performance was M = 4.15, SD = 0.47, indicating a generally high level of satisfaction with hospital functioning among the respondents. The result reflect a favourable perception of hospital performance among respondents, with particularly strong confidence in patient safety, clinical care, coordination, and infrastructure.

Table 3 Pearson Correlation Analysis between Service quality and Perceived Performance

Variables	Perceived Performance of hospital
Tangibility	.618**
Reliability	.515**
Responsiveness	.598**
Assurance	.425**
Empathy	.653**
Satisfaction level	.328**
Perceived Service Quality	.548**
**. Correlation is significant at the 0.01 level (2-tailed).	

To examine the strength and direction of relationships between perceived hospital performance and key service quality dimensions, a Pearson correlation analysis was conducted. Table 3 presents the correlation coefficients between perceived performance and seven variables: Tangibility, Reliability, Responsiveness, Assurance, Empathy, Satisfaction, and Perceived Service Quality. All variables were significantly and positively correlated with perceived performance at the 0.01 level (2-tailed), suggesting that as service quality and satisfaction increase, so does the perceived performance of hospitals. Among the five SERVQUAL dimensions, the strongest correlation was observed between Empathy and perceived performance ($r = .653$, $p < .01$), indicating that patients' perceptions of compassionate and personalized

care are highly predictive of their overall assessment of hospital effectiveness. This was followed by Tangibility (r = .618, p < .01) and Responsiveness (r = .598, p < .01), highlighting the importance of modern infrastructure, clean facilities, and timely attention in shaping performance perceptions. Reliability (r = .515, p < .01) and Assurance (r = .425, p < .01) also demonstrated significant positive relationships, although with slightly weaker strength, indicating that consistency in service delivery and trust in staff competence remain important but less dominant predictors. In addition, Satisfaction showed a moderate but significant correlation with perceived performance (r = .328, p < .01), affirming that general patient satisfaction is associated with higher performance evaluations. Perceived Service Quality also had a strong positive association with performance (r = .548, p < .01), further validating the conceptual link between quality perceptions and overall hospital effectiveness. All seven variables, including five SERVQUAL dimensions, satisfaction, and perceived service quality, were significantly positively correlated with perceived hospital performance (p < .01). Empathy (r = .653) was the strongest predictor, followed by Tangibility (r = .618) and Responsiveness (r = .598), indicating that emotional support, physical environment, and timeliness are central to favorable performance evaluations. Reliability and Assurance, though significant, had comparatively lower correlation values, suggesting that consistency and confidence in staff matter but are secondary to interpersonal and environmental factors. Overall satisfaction and perceived service quality were also positively related to performance but to a moderate extent, reinforcing the multidimensional nature of performance perception.

Table 4 T-Test for Mean Difference in Service Quality and Perceived Performance of Hospital between males and females' respondents

Variable	Gender	N	Mean	Sd	T Value	P Value
Perceived Service Quality	Males	72	3.68	0.466	3.937	**0.000***
	Females	100	3.92	0.351		
Satisfaction	Males	72	3.77	0.866	-1.767	0.079
	Females	100	3.98	0.668		
Perceived Performance	Males	72	4.02	0.465	-3.247	**0.001***
	Females	100	4.25	0.459		

An independent samples t-test was conducted to determine whether there were significant gender-based differences in Perceived Service Quality, Satisfaction, and Perceived Performance of Hospitals. For Perceived Service Quality, the results revealed a statistically significant difference between male and female respondents, t(170) = 3.94, p < .001. Female respondents reported significantly higher perceived service quality (M = 3.92, SD = 0.35) than males (M = 3.68, SD = 0.47). This suggests that women were more satisfied with the quality of services provided by hospitals than men. For Satisfaction, the difference between males (M = 3.77, SD = 0.87) and females (M = 3.98, SD = 0.67) was not statistically significant at the .05 level, t(170) = -1.77, p = .079, though the mean scores indicate a trend toward higher satisfaction among females. A significant gender difference was observed in Perceived Performance, t(170) = -3.25, p = .001. Female respondents perceived hospital performance more positively (M = 4.25, SD = 0.46) compared to males (M = 4.02, SD = 0.47), highlighting that women rated hospitals higher on efficiency, safety, coordination, and overall functioning. Female respondents rated both service quality and hospital performance significantly higher than male respondents (p < .01). No significant difference was found in overall satisfaction by gender (p > .05), although the trend favored females. The findings suggest potential gender-based differences in expectations, experiences, or perceptions of healthcare services, with women expressing more favorable views overall. The findings suggest that enhancing responsiveness, empathy, and communication may help bridge perception gaps and further elevate patient satisfaction across all demographics.

Table 5 T-Test for Mean Difference in Service Quality and Perceived Performance of Hospital between government and private hospital respondents

Variable	Gender	N	Mean	Sd	T Value	PValue
Perceived Service Quality	Govt	70	3.68	0.466	**3.855**	**0.000***
	Pvt	102	3.92	0.355		
Satisfaction level	Govt	70	3.73	0.835	**-2.382**	**0.018***
	Pvt	102	4.01	0.689		
Perceived Performance	Govt	70	4.02	0.450	**-3.097**	**0.002***
	Pvt	102	4.24	0.472		

Table 5 depicts the difference in perceptions of hospital service quality between respondents from government and private hospitals. An independent samples t-test was conducted to compare perceptions of service quality, satisfaction level, and perceived hospital performance between respondents from government and private hospitals. There was a statistically significant difference in perceived service quality between the two groups, $t(170) = 3.86$, $p < .001$. Respondents from private hospitals ($M = 3.92$, $SD = 0.36$) reported higher service quality compared to those from government hospitals ($M = 3.68$, $SD = 0.47$). A significant difference was also found in satisfaction levels, $t(170) = –2.38$, $p = .018$, with private hospital respondents ($M = 4.01$, $SD = 0.69$) reporting higher satisfaction than those from government hospitals ($M = 3.73$, $SD = 0.84$). Similarly, perceived hospital performance was rated significantly higher by private hospital respondents ($M = 4.24$, $SD = 0.47$) than by government hospital respondents ($M = 4.02$, $SD = 0.45$), $t(170) = –3.10$, $p = .002$.

These findings suggest that respondents generally perceive private hospitals more favorably in terms of service quality, satisfaction, and overall performance compared to government hospitals.

Table 6 One-way Anova Test for Mean Differenced in Service quality and Perceived Performance of Hospitals between respondents with different occupation

Variable	Occupation	N	Mean	Sd	F Value	P Value
Perceived Service Quality	Employed	36	3.86	0.279	9.758	**0.000***
	Self employed	82	3.82	0.373		
	Business	24	4.12	0.280		
	Retired	30	3.55	0.583		
	Total	172	3.82	0.420		
Satisfaction level	Employed	36	3.88	0.643	1.621	0.186
	Self employed	82	3.93	0.803		
	Business	24	4.10	0.618		
	Retired	30	3.66	0.851		
	Total	172	3.89	0.762		
Perceived Performance	Employed	36	4.14	0.314	13.457	**0.000***
	Self employed	82	4.09	0.462		
	Business	24	4.65	0.250		
	Retired	30	3.95	0.551		
	Total	172	4.15	0.474		

The respondents were categorized into four groups: Employed, Self-employed, Business, and Retired. Table 6 presents the results. Significant occupational differences were observed in most dimensions of service quality. Tangibility: A statistically significant difference was observed, $F(3, 168) = 8.69$, $p < .001$. Respondents from the business category rated tangibility the highest ($M = 4.24$, $SD = 0.43$), while retired individuals rated it lowest ($M = 3.51$, $SD = 0.70$). This indicates that those in business may value advanced infrastructure and appearance more strongly than other groups. Reliability: Although the F value was 2.63, the result was not statistically significant at the 0.05 level ($p = .052$), suggesting marginal occupational differences in perceptions of service consistency and dependability. Responsiveness: A highly significant difference was found, $F(3, 168) = 10.26$, $p < .001$. Business professionals again rated this dimension the highest ($M = 4.11$, $SD = 0.31$), whereas retired respondents rated it the lowest ($M = 3.52$, $SD = 0.52$), reflecting varying expectations and experiences in service interaction. Assurance: Assurance levels varied significantly across occupations, $F(3, 168) = 3.28$, $p = .022$. The business group rated it highest ($M = 3.92$), while retired participants showed lower confidence in staff behavior and professionalism ($M = 3.55$). Empathy: A significant occupational difference was seen in empathy perceptions, $F(3, 168) = 11.10$, $p < .001$. Again, the business group recorded the highest score ($M = 4.14$, $SD = 0.40$), while the retired group recorded the lowest ($M = 3.49$, $SD = 0.58$), indicating that emotional and individualized care was perceived differently by occupation. Satisfaction: No statistically significant difference was found in overall satisfaction across occupations, $F(3, 168) = 1.62$, $p = .186$. While the business group reported the highest satisfaction ($M = 4.10$), the variation was not large enough to reach statistical significance. Perceived Performance: A highly significant difference was observed, $F(3, 168) = 13.46$, $p < .001$. Business respondents perceived hospital performance most positively ($M = 4.65$, $SD =$

0.25), followed by employed individuals (M = 4.14), while retired individuals reported the lowest performance perception (M = 3.95).

These findings suggest that hospitals should adopt differentiated engagement and communication strategies tailored to occupational profiles to improve service satisfaction and perceived performance.

Table 7 One-way Anova Test for Mean Differenced in Service quality and Perceived Performance of Hospitals between respondents with frequency of visit to hospitals

Variable	Frequency of Visits	N	Mean	Sd	F Value	P Value
Perceived Service Quality	Once a year	88	3.71	0.458	4.248	**0.006***
	2-3 times per year	38	3.91	0.358		
	4-5 times per year	34	3.97	0.316		
	Monthly	12	3.89	0.395		
	Total	172	3.82	0.420		
Satisfaction level	Once a year	88	3.83	0.837	0.944	0.421
	2-3 times per year	38	4.01	0.682		
	4-5 times per year	34	4.00	0.706		
	Monthly	12	3.72	0.529		
	Total	172	3.89	0.762		
Perceived Performance	Once a year	88	4.00	0.455	7.299	**0.000***
	2-3 times per year	38	4.36	0.431		
	4-5 times per year	34	4.25	0.440		
	Monthly	12	4.36	0.502		
	Total	172	4.15	0.474		

Respondents were grouped into four categories based on their visit frequency, the analysis revealed a statistically significant difference in perceived service quality across visit frequency groups, F(3, 168) = 4.25, p = .006. Post hoc comparisons (not shown here) would help determine which specific groups differed, but the mean scores suggest that participants visiting 4–5 times per year (M = 3.97, SD = 0.32) and 2–3 times per year (M = 3.91, SD = 0.36) reported higher service quality than those visiting once a year (M = 3.71, SD = 0.46). There was no significant difference in satisfaction levels across visit frequencies, F(3, 168) = 0.94, p = .421, suggesting that satisfaction with hospital services remained relatively consistent regardless of how often respondents visited. A significant difference was observed in perceived hospital performance based on visit frequency, F(3, 168) = 7.30, p < .001. Respondents who visited hospitals 2–3 times per year (M = 4.36, SD = 0.43) and monthly (M = 4.36, SD = 0.50) perceived better hospital performance compared to those visiting once a year (M = 4.00, SD = 0.46). These findings indicate that more frequent hospital visitors tend to report higher levels of service quality and perceived performance, while satisfaction level does not significantly vary with visit frequency.

Table 8 Multiple Regression Analysis- Impact of Service Quality on Performance of Hospital

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.609	2	9.805	87.828	.000[b]
	Residual	18.866	169	0.112		
	Total	38.476	171			

a. Dependent Variable: Perceived Performance

b. Predictors: (Constant), Perceived Service Quality, Satisfaction level

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.093	0.234		4.669	0.000
	Satisfaction level	-0.054	0.040	-0.087	-1.346	0.180
	Perceived Service Quality	0.856	0.073	0.758	11.769	0.000

a. Dependent Variable: Perceived Performance

$R^2 = 0.714$, Adjusted $R^2 = 0.510$, F =87.828, $p < 0.000$

A multiple regression analysis was conducted to examine the impact of Perceived Service Quality and Satisfaction level on the Perceived Performance of hospitals. The overall model was statistically significant, F(2, 169) = 87.83, p < .001, indicating that the predictors collectively explained a significant

portion of the variance in hospital performance. The model accounted for approximately 71.4% of the variance in perceived performance **(**$R^2 = .714$**,** Adjusted $R^2 = .510$**).** Among the two predictors, Perceived Service Quality significantly predicted perceived performance **(**$\beta = .758$**,** $t = 11.77$**,** $p < .001$**),** suggesting that higher service quality is strongly associated with better perceived performance. In contrast, Satisfaction level did not significantly predict performance **(**$\beta = –.087$**,** $t = –1.35$**,** $p = .180$**),** indicating that satisfaction alone may not independently contribute to how hospital performance is perceived when service quality is accounted for. The results highlight the central role of service quality in shaping perceptions of hospital performance, even more so than general satisfaction levels. Correlation analysis confirmed that empathy, tangibility, and responsiveness are the strongest predictors of perceived performance. Women rated hospitals more positively, and education level significantly influenced service perceptions, highlighting the need for tailored communication. Additionally, business professionals reported the highest satisfaction, while retired individuals perceived hospital performance less favorably.

Conclusion

This study examined the relationship between service quality and hospital performance in selected hospitals of Amritsar, Punjab, using the SERVQUAL framework. The analysis confirmed that all five dimensions of service quality; tangibles, reliability, responsiveness, assurance, and empathy are significantly associated with perceived hospital performance. Among these, assurance and reliability emerged as the most influential predictors, echoing findings from earlier studies in Indian and South Asian healthcare contexts (Duggirala et al., 2008; Andaleeb, 2001). The findings support the conclusions of Taner and Antony (2006) and Zineldin (2006), who emphasized that improved service quality enhances operational outcomes such as patient satisfaction, trust, and loyalty. Similarly, Rao et al. (2006) noted that private hospitals, due to better resource management, tend to outperform government institutions on service quality metrics an observation that aligns with this study's t-test results.

Implications of the Study: This study contributes to the growing body of literature validating the SERVQUAL model in the Indian healthcare context. It reaffirms that service quality significantly impacts hospital performance, supporting the work of Narang (2011) and Kumar et al. (2018). The study also offers a city-level empirical analysis that helps localize global healthcare quality frameworks. Hospital administrators especially in government should invest in staff training to enhance assurance and empathy. Improve infrastructure and service delivery systems to increase reliability and responsiveness. Regularly monitor patient feedback as part of a quality assurance program. The study highlights the importance of integrating quality-of-care indicators into public health policies. Healthcare regulators may consider developing performance-based incentives for hospitals that demonstrate measurable improvements in service quality, especially in underserved areas.

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Study of Bio-diversity of Earthworms in Sant Kabir Nagar District, of Eastern Uttar Pradesh, India

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Abstracts

Earthworm diversity shirt in different habitats of Sant Kabir Nagar District of Uttar Pradesh India,There observed 6 species of earthworm *Lampitomarutii, Metaphire posthuma, Eutyphoeus nicholsoni, Eutyphoeus incommodus, Eutyphoeus sp. Perionyx sp.* Was observed at different localities in Sant Kabir Nagar District. The Species *Lampitomarutii , Metaphire posthuma* are most common species. The density of non- cultivated field as grassland and garden observed high density than cultivated fields. Maximum density was found in **Shankarpur** village in **Dhanghata** tehsil. The physical chemical parameter as temperature, moisture, pH, total organic organic carbon, total phosphorus, potassium of soil also observed at 30 sample site different localities of SanKabir Nagar district , eastern Uttar Pradesh, India.

Keywords: Earthworms, Sant Kabir Nagar, Eastern Uttar Pradesh, Bio-diversity, Phyco-chemical, Ecology

Introduction

Earthworms plays important role in various biological process of soil and affect ecosystem Service, soil health, water regulation, climate regulation, productivity and restoration of degraded lands.

Philips et al. [1] develop global map of distribution of earthworm diversity abundance in Biomass there are takes diversity in abundance in the mid latitude regions and peak of biomass in the tropics. Wei, Huang et al. [2] describe data of earthworm abundance in functional group diversity regulate plant litter decay and soil organic carbon level in Terrestrial ecosystem. Shashank k. and R. Mahadevanswami [3] observed earthworm species within particular Taluk, located in Mandya district, Karnataka, India at several areas as industrial, agriculture and residential.

Soil structure and fertility maintained by earthworms [4]. Soil structure affected by use of large scale of chemical Fertilizer and pesticide [5,6] earthworms play important role improving soil fertility. [7] Density in size of earthworms increase soil biodata of biomass. [8] The diversity of earthworm different parts of world was reported [9-13] earthworms Ecology are different are different temperature region [14]. Heavy rainfall soil texture and soil content organic matter [15]. Earthworm changes properties of soil [16]. Earthworms also affected soil biological community ground plant company and soil and soil nutrients [17-20]. Climate organic content and different type of land different soil also affected by density of earthworm Uttar Pradesh [21]. More than 4,400 species of earth for reported in worldwide [22] in India Julka [23] having reported 59 species and 67 Genda of earthworm [24]. The use of advance method in agriculture adversity affected on earthworm density [25].

Earthworms are ecosystem engineers that modify soil texture [26, 27]. Earthworms increase unification and decomposition of soil rate [28-30]. Hale et al. reported [31- 32]. Biomass decrease in the thickness of "O" Horizon increase "A" Horizon for different earthworms the physical and organic factor of the soil are also affected as one distribution [33].Tthe different soil factors as pH, C/N ratio in organic contents are most important for species of earthworms that related file factors [34].

Method and material

In Sant Kabir Nagar district Uttar Pradesh India was selected for study diversity of earthworm samples where taken from several habitats as garden, grassyland, forest cultivated and non-cultivated fields there are 3 subdivision (Tehseel) of Sant Kabir Nagar District 1. Mehdawal 2. Khalilabad 3. Dhanghata 10 villages was chosen in every district subdivision tehsil and 30 (3 x 10) samples ware

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prepared for study of diversity of earthworm in Sant Kabir Nagar District located Eastern Uttar Pradesh samples were collected from the morning 10 o'clock in month of October and number 2024 .Geographical locations also recorded as each sample area soil sample were also collected from each sample area and their Physico chemical parameters is moisture pH total organic carbon total nitrogen Phosphorus and potassium were determined

Collection of samples

The samples were collected from many habitats his Garden, forest cultivated and non- cultivated fieldsin each village for quadrate of 1 meter square area was selected for collection of earthworm then aqueoussolution of potassium permanganate KMnO4 and formalin and water Sprinkle on the soil are maximum expression of earthworms. After sometimes as one hour interval soil dug by hoe up to 1 meter cube in field in earthworms then anaesthezing in 10% alcohol 40 -50 second then washed with water and counted and identified . The description diagram provide bye Stephen 1923[35], Bhati 1962 [36] and identification confirmed by General non-Chordata section zoological Survey of India, Kolkata

The physical properties like PH measured by ph- meter in moisture measured by hydrometer and Nelson and Sommers [37] method was used to determine total organic carbon and Burma in mulbay [38] , used to determine to kjeldahl nitrogen calorimetric method with molebednum in sulphuric acid Garg et.al [39] 2006 was used to determine total Phosphorus and total potassium was determined by flame photo-meter after digesting the sample in acidic mixture .One way two way Innova analysis where used to determined the effect of physico-chemical parameter of soil, density and size of earthworm and variation in the earthworms population density occurs in different sample site different.

Product moment correlation coefficient (r) calculated to determine relationship between earthworm density and physico -chemical parameters.

Result and discussion

The result shows that the diversity of earthworms occurs in Sant Kabir Nagar District at subdivision level (Tahsil). Physico-chemical parameters are also responsible for earthworm diversity in Sant Kabir Nagar District as shown in table 1. And Physico-chemical parameter in table 2.

The diversity of Earthworms in Sant kabir Nagar district, Eastern Uttar Pradesh, India

S. No.	District Sub-division (Tahaseel)	Village Name	Distance from Sant Kabir Nagar In KM.	Geographical Location(Latitude and Longitude) in degrees(^{0})	Habitas	Species	Family
1	**Mehdawal**	Tulsipur	22	26.9761N-83.1085E	Grassyland	Lampitomauritii	Megascolecidae
2		Bola Kala	30	27.0031N-83.0824E	Rice fi eld	Lampitomauritii	Megascolecidae
3		Mahua	21	26.9396N-83.0563E	Garden	Euttyphoeus Nicholsoni	Octochaetidae
4		Kasaya	55	27.0741N-83.0985E	Grassyland	Lampitomauritii	Megascolecidae
5		Singaha	35	27.0485N-83.1283E	Garden	Metaphire posthuma	Megascolecidae
6		Parsa Mafi	37	27.0361N-83.0623E	Paddy fi eld	Metaphire posthuma	Megascolecidae
7		Gulela	16	26.0868N-83.0516E	Grassyland	Eutyphoeus sp.	Octochaetidae
8		Dhuriya dheeh	24	26.9836N-83.1180E	Sugercane fi eld	Perinyx sp.	Megascolecidae
9		Achhia	30	26.9593N-83.0851E	Garden	Lampitomauritii	Megascolecidae
10		Bhagwat Pur	15	28.1098N-77.5193E	Garden	Lampitomauritii	Megascolecidae
11	**Khalilabad**	Deegha	1	26.7774N-83.0656E	Grassyland	Lampitomauritii	Megascolecidae
12		Barahata	9	26.8124N-83.0321E	Garden	Metaphire posthuma	Megascolecidae
13		Jangal kala	5	26.8243N-83.0657E	Garden	Metaphire posthuma	Megascolecidae
14		Tilja	30	26.8749N-82.9327E	Paddy fi eld	Metaphire posthuma	Megascolecidae
15		Nimawan	12	26.7949N-82.9894E	Rice fi eld	Lampitomauritii	Megascolecidae
16		Raja pur Sarriya	23	26.8305N-82.9528E	Grassyland	Lampitomauritii	Megascolecidae
17		Amawan	13	26.7987N-82.9918E	Rice fi eld	Lampitomauritii	Megascolecidae

18		Bhawanigara	14	26.8503N-83.0805E	Garden	Lampitomauritii	Megascolecidae
19		Wasin	30	26.7658N-83.0834E	Mustuerd fi eld	Metaphire posthuma	Megascolecidae
20		Singarpur	20	26.7658N-83.0834E	Garden	Euttyphoeus incommondus.	Octochaetidae
21	**Dhanghata**	Khirwa	30	26.6431N-83.1073E	Paddy fi eld	Metaphire posthuma	Megascolecidae
22		Chikani	22	26.6126N-83.0301E	Rice fi eld	Lampitomauritii	Megascolecidae
23		Ghorhat	22	26.6503N-82.9542E	Grassyland	Lampitomauritii	Megascolecidae
24		Shankarpur	38	26.5713N-82.9004E	Garden	Eutyphoeus sp.	Octochaetidae
25		Parsa	40	26.6565N-83.0378E	Mustuerd fi eld	Perinyx sp.	Megascolecidae
26		Katya	19	26.5969N-83.41007E	Garden	Metaphire posthuma	Megascolecidae
27		Achhti	29	26.6155N-82.9031E	Grassyland	Euttyphoeus incommondus.	Octochaetidae
28		Tighra	49	26.8719N-83.0817E	Garden	Lampitomauritii	Megascolecidae
29		Madar	31	26.5060N-83.0026N	Grassyland	Eutyphoeus sp.	Octochaetidae
30		Belhara	26	26.0539N-83.7662E	Garden	Metaphire posthuma	Megascolecidae

Table(1)

S.No.	District sub Div.	Village	Soil Type	*Density	Tempar	Moisture	pH	Toc	TP	TKN	TK	Size
	(Tahseel)				In ^{0}C	In %		In %	gm/kg	In %	gm/kg	In mm.
1	**Mehdawal**	Tuls ipur	Loamy	60	20.3	40.3	7.3	0.79	6.3	0.18	6.2	139
2		Bola Kala	Clay	77	24	37.8	7.1	0.85	8.2	0.28	7.8	131
3		Mahua	clay	65	22.3	41.3	7.4	0.8	6.4	0.212	6.5	138
4		Kas aya	Clay	72	21.2	35.3	7.3	0.83	7.3	0.23	7.2	132
5		Singaha	Clay	62	21.1	42.5	7.5	0.78	6.2	0.2	6.3	142
6		Pars a Mafi	Loamy	70	20.4	40.4	7.2	0.82	7.1	0.25	6.9	135
7		Gulela	Loamy	75	23.7	38.4	7.4	0.84	8.1	0.271	7.4	141
8		Dhuriya dheeh	Sandy Loamy	58	22.4	34.3	7.4	0.76	6.3	0.15	6.3	142
9		Achhia	Clay	65	23.6	39	7	0.81	6.5	0.19	6.4	140
10		Bhagwat Pur	Clay	76	22.3	40.6	7.3	0.84	8.4	0.298	7.5	134
11	**Khalilabad**	Deegha	Loamy	63	20.3	40.3	7.3	0.79	6.3	0.18	6.2	149
12		Ba rahata	Clay	62	21.1	42.5	7.5	0.78	6.2	0.2	6.3	141
13		Jangal kala	clay	65	22.3	41.3	7.4	0.8	6.4	0.212	6.5	136
14		Tilja	Loamy	70	20.4	40.4	7.2	0.82	7.1	0.25	6.9	135
15		Nimawa n	Clay	72	21.2	35.3	7.3	0.83	7.3	0.23	7.2	132
16		Ra ja pur Sarriya	Loamy	75	23.7	38.4	7.4	0.84	8.1	0.271	7.4	141
17		Amawan	Clay	77	24	37.8	7.1	0.85	8.2	0.28	7.8	137
18		Bhawanigara	Clay	76	22.3	40.6	7.3	0.84	8.4	0.298	7.5	134
19		Was in	Loamy	58	22.4	34.3	7.4	0.76	6.3	0.15	6.3	142
20		Singarpur	Clay	65	23.6	39	7	0.81	6.5	0.19	6.4	140
21	**Dhanghata**	Khirwa	Loamy	80	20.4	40.4	7.2	0.82	7.3	0.185	6.9	158
22		Chikani	Clay	85	24	37.8	7.1	0.85	8.3	0.25	7.8	161
23		Ghorhat	Clay	77	21.2	35.3	7.3	0.77	7.5	0.23	7.2	154
24		Shankarpur	Clay	89	23.6	44	7.1	0.81	8.8	0.297	6.4	140
25		Pars a	Sandy Loamy	77	22.4	42.3	7.2	0.86	8.7	0.225	6.3	142
26		Katya	Clay	68	21.1	37.5	7.4	0.78	6.2	0.183	6.3	148
27		Achhti	Loamy	66	20.3	40.3	7.4	0.79	6.3	0.158	6.2	160
28		Tighra	Clay	73	22.3	40.6	7.1	0.84	8.4	0.238	7.5	150
29		Madar	Loamy	74	23.7	38.4	7.2	0.84	8.4	0.271	7.4	141
30		Belhara	clay	65	22.3	41.3	7.5	0.8	6.4	0.202	6.5	128

*Density(Each value is 4 replicate) Table (2)

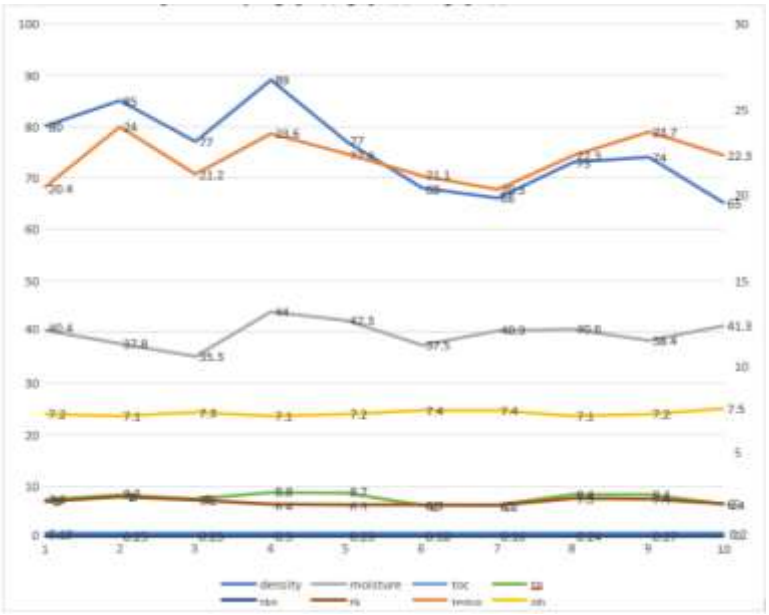
There was 6 species earthworm *Lampitomarutii, Metaphire posthuma, Eutyphoeus nicholsoni, Eutyphoeus incommodus, Eutyphoeus sp. Perionyx sp.* was detected that belongs to 4 genera and two family,order *Haplotaxida* class *Oligochaeta* at different localities. 30 sample ware taken from 3 district subdivision (Tahsil) that is **Mehdawal**, **Khalilabad** and **Dhanghata** and 10 villages each district subdivision (Tehseel). At different localities in the district Sant Kabir Nagar, two species of earthworms *Lampitomarutii , Metaphire posthuman* are commonly detected in several samples location specially belong to *Megascolecidae* family, the *species Perinyx SP*. that also belongs to *Megascolecidae* family was detected sandy loamy clay in sugarcane field village **Dhuria Deeh** of **Mehdawal** district subdivision (Tehseel) at 26.983656 N-83.118016 E geographical location 24 km. distance from district headquarter of Sant Kabir Nagar, and in loamy soil, mustard field in **Parsa** village in **Dhanghta** district subdivision (Tahsil) at 26.656573 N-83.037814 E geographical location 40 km. from distance headquarter Sant Kabir Nagar.

The species *Eutyphoeus sp.* belongs to family *Octochaetidae* was detected in 3 sample site one of **Mehdawal** district subdivision (Tehseel) in village **Gulela** at. 26.868391N-83.051627 E geographical location in grassyland loamy soil field 16 km. from Sant Kabir Nagar district headquarter, and two of **Dhanghta** district subdivision (Tehseel) village **Shankarpur** at 26.571383 N- 82.900428 E geographical location in the garden field clay soil 38 km. from Sant Kabir Nagar district headquarter, and in the village **Madar** at 26.506045E- 83.002687E geographical location in the grassyland field, loamy soil 31 km. from Sant Kabir Nagar district headquarter. The species *Euttyphoeus Incommondus* that belongs to family *Octochaetidae* was find in grassyland field in loamy soil in village **Achhti** 29 km from Sant Kabir Nagar District headquarter in **Dhanaghata** tehseel. The species *Euttyphoeus Nicholsoni* that also belongs to *Octochaetidae* family was observed clay soil Garden field in **Mahua** village located at 26.939648 N- 83.056322 E geographical location in **Mehdawal** Tahsil 21 km. from Sant Kabir Nagar district headquarter.

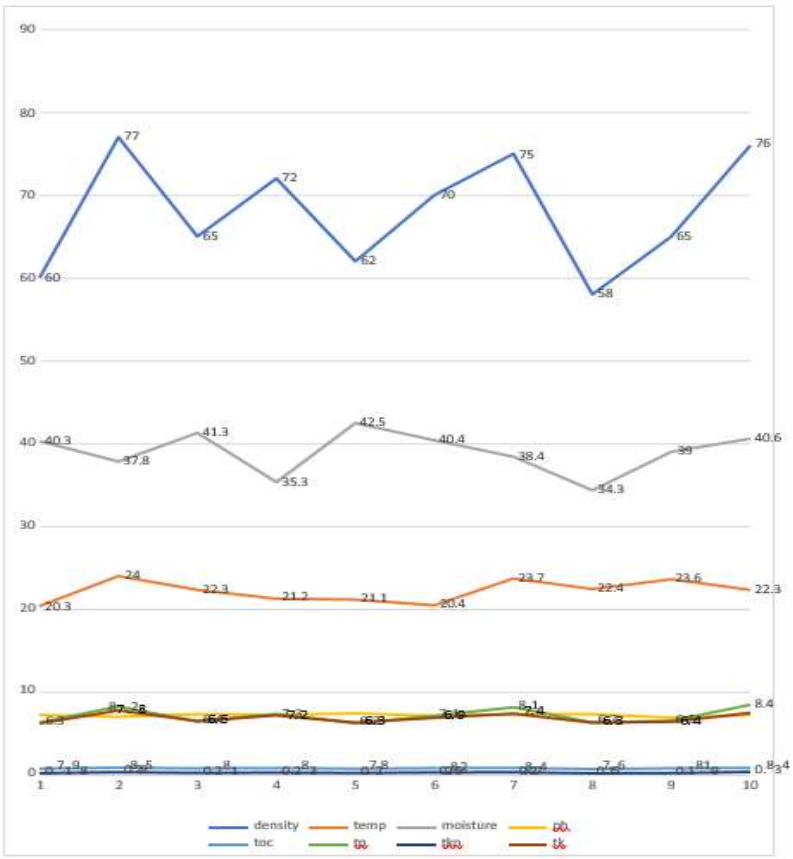
The maximum density of earthworms 85(each value is mean of 4 replicate) finds the garden field clay soil in **Shankarpur** village **Dhanghata** Tahsil that belongs to *Eutyphoeus sp.* species of *Octochaetidae* family.

There is different soil occurs in Sant Kabir Nagar District at many places that observed mainly loamy and clay soil observed when sample collected from different location Which shown in table (2). The soil temperature differs slightly to different locations, the soil pH of different locations was *neutral to slightly basic*, the maximum level of *total organic carbon (toc) 0.86* gram/kg observed in **Parsa village** in **Dhanghta** tehseel the maximum level of *total kjeldahl nitrogen* was *0.298%* in **Bhagwatpur** village in **Mehdawal** Tahsil, the *maximum Phosphorus* was observed *8.8* gram/kg,and *total potassium 0.297* g/kg. also observed in **Shankarpur** village in **Dhanghata tehseel**.

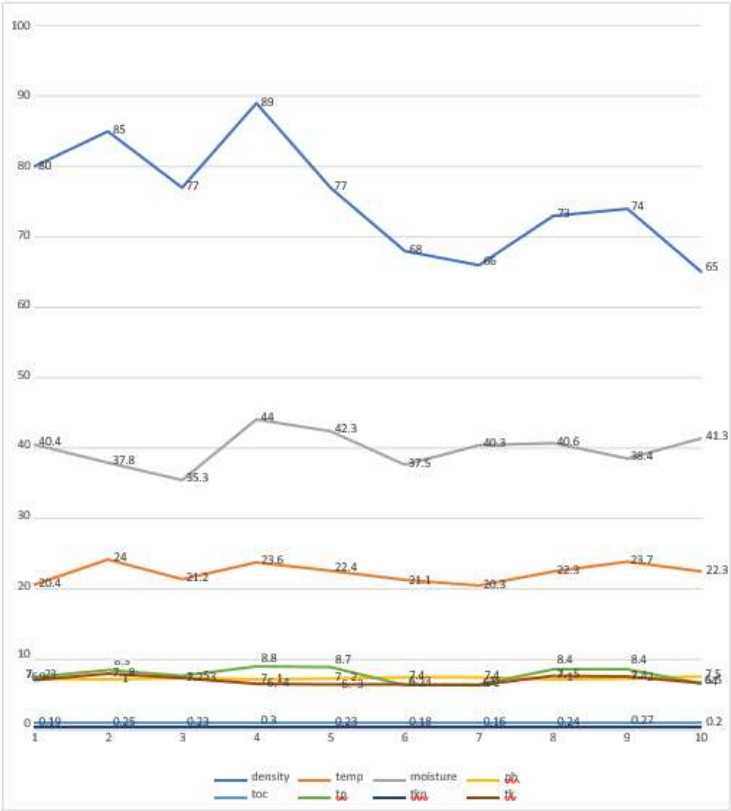
The different Physio- chemical parameters and environment like soil, total organic carbon affects [40] the biodiversity of earthworms also observed, Gafoor et al. [41]. The pH value observed slightly basic but in the range for distribution of earthworm [42]. The Temperature and moisturizer affect the biodiversity of earthworms [43- 45]. The result also seen in present study in graph (1), graph (2) and graph (3)



Graph (1)



Graph(2)



Graph(3)

The pH and organic matter affect biodiversity of earthworms [46-48] the result also seen in graph1, 2 and 3. Kretzschmar and Bruchous reported [49] that moisture effect that density of earthworms that also seen present study (graph 1,2 and 3).

Suarez et al. [50] observed the Phosphorus affect the earthworms in increase associate with Phosphorus increase. Reddy and Pasha [51] observed that high potassium value effect earthworms that also find present in study. shown in the graph (1,2 and 3)

The graph showed that density of Earthworms associated with total carbonic content, Phosphorus potassium contents while pH natural have more density but when slightly increased to basic density of earthworms decrease. The graphs (1,2 and 3) also shows that effect of temperature when temperature increase 20 ^{0}C to 24 ^{0}C the density of earthworm increase.

Conclusion

The earthworm are component of animal Biomass in soil and also known as ecosystem engineer thecontribution of earthworms more to maintain ecosystem through pedogenesis development of soil structure, climate regulation, water regulation, etc. There are several research has been done related to earthworm diversity and the factor that are responsible for, but there are need to aware people mainly formers about earthworm diversity of species and physico-chemical parameters at every district level and districts sub division (Tehseel) level and also the farmers and scientist should communicate each other at the local level at district level, Tehsil level to increase density of earthworms. The aim of present study was observed diversity and soil Physio chemical parameter determination **Mehdawal, Khalilabad** and **Dhanghata** district sub-division of Sant Kabir Nagar District, Eastern Uttar Pradesh, India

There were 6 species of earthworm were detected *Lampitomarutii, Metaphire posthuma, Eutyphoeus Nicholsoni, Eutyphoeus incommodus, Eutyphoeus sp. Perionyx sp.* Was observed at different localities in Sant Kabir Nagar district. The Species *Lampitomarutii, Metaphire posthuma* were observed at

different localities commonly.

Earthworm density was observed different at different physical parameters and also different localities. The pH of soil neutral has high density of earthworms but decrease when soil pH increases lightly neutral to basic. The temperature increases 22 ^{o}C to 24 ^{o}C , the density of earthworms increased. High potassium, high phosphorus and high organic carbon content localities have high density of earthworms, was ovserved.

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Bharati Mukherjee`s Wife: A Feminist Study

Dr. Nripendra Singh*

Bharati Mukherjee's second novel and a finalist for Governor General's Award, Wife (1975) takes up a more complex dimension of the theme of immigrant experience. Il centres round the life of middle class married Bengali woman who migrates from Calcutta to New York. After a ten year sojourn in Canada, Mukherjee returned to her native country in 1973 and encountered an India which she had never anticipated: a world far less innocent than the one she remembered. During her visit to Calcutta, she got the material for this novel as she recalls, "quite by an accident, I heard the question that shaped my second novel —'what do Bengali girls do between the ages of eighteen and twenty one.

Mukherjee opens her novel in a true Indian tradition of story-

The simple opening line — 'I Dimple Dasgupta had set her telling. Heart on marrying a neurosurgeon" is quite telling and at once sets scene that anticipates something unnatural. For Dimple the Dasgupta, neuro-surgeon is a very strange choice. Mukherjee's choice of the name of the heroine as Dimple is a deliberate one and her intentions are quite explicit from the cover page of the novel where she quotes the OED definition of "Dimple" as —"any slight surface depression". From the very beginning, we feel that Dimple is far from normal girls. Dimple has nothing to do except thinking about marriage because she thinks that marriage is blessing in disguise. It will bring her freedom, fortune and perfect happiness.

Dimple is twenty but she bewails for wasted years. Nothing pleases her more than the Imagination about marrying a fellow who provides her all comforts. She is supposed to be studving for university examinations but books irritate her.

At last, Mr. Dasgupta finds a suitable match for Dimple. Amit a Consultant Engineer, is the match for Dimple. He has already applied for immigration to Canada and U.S. and his job application is also pending in Kenya. Dimple is all ecstatic about her marriage expressing yourself" (p. 2). Dimple finds that marriage has robbed her of all romantic yearnings so tastefully nourished,

One morning Amit takes her to Kwality's by taxi and orders chili chicken, chicken fried rice and chicken Spring rolls. She feels uneasy handling the chicken pieces with fork and knife and thinks that it would have been better if Amit had taken her to Trinca's instead:

> He should have taken her to Trinca's on Park Street, where she could have listened to a Goan band play American music, to prepare her for the trip of New York or Toronto. Or to discotheque in the Park Hotel, to teach her to dance and wriggle. (p. 21)

Amit was not the man Dimple had imagined for her husband. When he is out of the house she starts creating the man of her dream. With the passing of time the excitement of marriage diminishes and she becomes pregnant a state known for vomiting tendency. However, her nauseating proneness is abnormal because she deliberately vomits and never leaves any opportunity of doing so at all hours of the day and night. She feels a strange sensation:

> The vomit fascinated her. It was hers; she was locked in the bathroom expelling brownish liquid from her body. She took pride in brownish blossoms. ... (p. 30)

Bharati Mukherjee's part and questions her understanding of Indian culture. In a review of Wife, she comments:

> For an Indian wife, childlessness is a disaster, pregnancy the achievement that seals her status. To overturn such ingrained values would involve a

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> major emotional upheaval; yet Dimple acts on the vaguest and most undefined impulses, and thinks no more about it.

Symbolically, by revoking her motherhood, Dimple liberates herself from the traditional role of a Hindu wife by becoming a mother of a child. Like the Western feminists she asserts her will but her abortive act is kind of "moral and cultural suicide."

One day Dimple goes to the market with Meena Sen and relishes to buy a cheese cake. She is afraid to go to the shop alone but When Meena encourages her, she goes there. She is laden with fear and notices one by one inside the glass cake pickles, salads, hanging salamis, pink roost beef, roost duck and turkey etc. At last she reaches the shop and asks for cheese cake and the shopkeeper starts looking at her with great embarrassment. Everywhere there is stench of blood which is intolerable for her nostrils to bear especially the sånk of beef. Instantly, she fails to understand the shopkeeper and repeats her sentence. He asks whether she does not know the law and starts searching for something in his drawer. Dimple is so afraid, she thinks that the man is taking out his gun and she is left with no Option but to be killed without crying. Here she realises the difference between Calcutta and New York.

Indian society is patriarchal which does not permit a woman to talk in terms of liberation and equality. Here male members decide the fate of their female counterpart. Time and again, the Sens have cautioned Amit to keep Dimple out of touch with Ina, otherwise she will get corrupted by the latter's crazy ideas. It is this caution which prompts Amit to restrain her from accepting Ina's drink: "She does not like alcoholic beverages," Amit said, "she does not even like coke" (p. 77). It really astonishes the Western feminists who expect a straight answer from Dimple. It is at this party that Dimple and Amit meet Marsha Mookerji and Prodosh Mookerji— their future benefactors. For Dimple Milt Glasser, brother of Marsha is like a riddle. She is instantly attracted towards his tall and lanky personality and his courteous manners though "Dimple could not follow the way he talked, the things he talked about and the amazing leaps between his conversations" (p. 83). Later in the novel, we see how Milt plays a pivotal role.

With the passage of time, Dimple starts breaking after the realisation that she is deceived in marriage and a good-for-nothing husband like Amit will not cater to her dream world. She cannot tolerate his snores any more and insomania becomes her accustomed habit. She suddenly realizes that "she hated the Sens' apartment, sofa-bed, the wall to wall rug" (p. 88). Now she gets disturbed at those habits of Amit which she ignored at Calcutta:

> In Calcutta she had trained herself not to see his hand (always the left) as it stopped carefully at each button, then slid up and down a few times before hanging limply at his side. But in New York these little gestures had to irritate her. (p, 88)

Amit`s unemployment was the root cause of all troubles.

> She wanted Amit to be infallible, intractable, godlike but with boyish charm; wanted him to find a job that after a number Of years he could take his eavinp, and retire with to a three-storey house in Ballygunge Park. (p. 89)

She thinks that her marriage to Amit is a failure of her dreams:

> She was bitter that marriage had betrayed her, had not provided all the glittery things she had imagined, had not brought her cocktails under canopied skies and three A.M. drives to dinzy restaurants where they sold divine Kababs rolled in roti. (p. 102)

The third and final movement is the climax marked by intense dramatic scene punctuated with Dimple's growing abnormality. She had always dreamt of a splendid apartment fully furnished and accomplished with all sorts of appliances. Marsha's flat is like a dream come true to her, However, the burden of responsibilities in terms of watering the plants and cleaning the kitchen, etc. is to her greatly annoying. Amit feels lonely and wishes if they could have shifted near the Sens. Quite often

Dimple feels irritated even overterrified. One day while Amit is reading something she complains of exhaustion which he attributes to her meagre diet. She loses her temper at this instance:

> I feel sort of dead inside and you can do is read the paper and talk to me about food. You never listen; you have never listened to me. You hate me. Don't deny it; I know you do. You hate me because I'm not fat and fair. (p. 110)

Dimple's bracketing of her husband with the electronic appliances evidences that Amit is just a robot and not an actual human being for her. It reflects that America has become a mechanical and technical country where human beings appear like machines.

Dimple's disgust with American English and American system gets accentuated even by small things. She is afraid of operating the self-service elevators.

She does not tell him about these imaginary beginnings. She didn't tell him about her immoderate day time sleeping either. They were unspeakable feelings. She thought at them as deformities— sinister, ugly, wicked. (p. 115)

At times when loneliness becomes unbearable Dimple contemplates as many as seven ways of committing suicide. It seems as if she is in love with whatever is dark, evil, sinister, gruesome like murder, suicide, mugging which have become all fascinating words for her. Even her ways of getting rid of life are fanciful like a television advertisement. She cannot trust anybody but only media. Even "her own body seemed curiously alive to her, filled with hate, malice, an insane desire to hurt, yet weightless almost airborne" (p.117). Linda Sandler accounts such feeling of 'emptiness' as follows:

> She is uprooted from her family and her familiar world, and projected into a social vacuum where the media becomes her surrogate community, her global village. New York intensifies her frustrations and unhooks her further from reality….

As the novel advances to its end, we notice Dimple anxious to settle her scores with America. Her spirit rebels, she starts going out with Ina and Milt, wears Marsha's pant etc. and enjoys all the prohibited freedom. She seduces Kilt and keeps it a secret from Amit. When she goes out she puts on Marsha's tinted sunglasses because 'The purple-tinted sunglasses are perhaps the most typical index of American culture. For Dimple, they are a disguise, borrowed from the West, just like Marsha's clothes and the apartment in which she is living."21 This outing leaves her all the more confused. She turns neurotic and fails to differentiate between what she sees on T.V. and what she experiences herself in real life. She is now an alienated being undergoing the supposed after effects of alienation.
Dimple's gloom deepens with every passing day. She starts realizing. "Her life was slow, full of miscalculation" (p. 178). Amit could only visualise the external changes in Dimple and he explains it as a case of "Culture-shock". He even promises to take her to Calcutta. This does not prove helpful. Dimple starts contemplating the murder of her husband. The violence outside turns inside. She now fails to differentiate between what she sees on television and what she thinks. The idea of slaughtering her husband fascinates her

> The novel raises an important question: was the Indian wife happier in India with her limited freedom and greater docility. Or does she achieve happiness in her painful search for more individual freedom and in the process of maturing.

Bharati Mukherjee concentrates on the individual eccentricities of her woman protagonists. While Tara Banerjee is more of an Indian girl, Dimple's character betrays an impatient and reckless trait. The end of A Tiger's Daughter leaves the reader guessing as to what might happen to Tara's fate, but in Wife, Dimple's mental abnormality leads her to kill her husband. We sympathise her and feel about Tara's state of mind. But Dimple's actions right from her self-abortion to the murder of Amit fail to arouse our sympathy as an Indian turned American wife. But it reflects her mind of divided aims, inner conflicts and immeasurable pains.

Thus, we can find that characters are harvesting the granaries of pains, miseries, loneliness, rootlessness and boredom who have gone to America in order to fulfil their dreams, freedoms, happiness on the basis of money. But money cannot purchase happiness and it disconnects the bond of human love and pleasure that Bharati Mukherjee's characters are lacking. They appear like an immigrant miserable creatures.

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Physio-Chemical Characteristic of Stored Coconut (Cocos nucifera. L) with respect to their Germinability

Nitu Kumari*
Dr. Ramesh Kumar**

Abstract

*Coconut plant (**Cocos nucifera**) is a free of Arecaceae family. It is indigenous and cultivated nearly all tropical countries and referred as a "Nuts of India". It is essentially a crop of small and marginal farmers. It sustains the live hood security of the dependent Families in states where the cultivation is concentrated. The four southern states of Kerala, Karnataka, Tamilnadu and Andhra Pradesh together account for more than 90% of the total area production in the country. Mature coconuts were stored under controlled conditions for varying durations (3. 6 months) and periodic analyses were conducted to evaluate changes in moisture content, oil content, carbohydrate levels, pH and electrical conductivity. Coconut is one of the major and richest source of Vegetable oil which entire parts uses both for edible and non-edible form. The crops also supplies raw materials for animals or important industries such as coir manufacture Copra processing and oil milling etc.*

Key-Points: Coir, Copra, Processing, sustain, Security, edible, Moisture.

Introduction

The coconut palm (*Cocos nucifera*) with its tall Slender and uniformly massive crown with large number of leaves is the most beneficial and useful tree in the world. Although coconut trees are grown in many parts of world but it is mainly concentrated in Asia oceanic region.

Coconut can tolerate and grow well in saline soil. A humid atmosphere and moderate temperature are conductive for coconut cultivation. The economic life of the coconut trees usually ranges between 50-60 years . The coconut palm yields many useful products to mankind than any other tree. Its importance is not limited to the production of oil. There are many non traditional byproducts derived from coconut which have export potential and enhance the household employment and income. The economic importance of coconut also lies at higher degree with nutritional values of different coconut products. So in its context it is worth while to study the coconut economy and production scenario with regard to expansion rate of change in area, production, productivity and causative factors.

Material and Method

The coconut fruits used in this study were obtained from coconut market at Madhepura. Ninety(90) healthy husked coconut fruits were divided into three groups of thirty(30) each prior to storage.

Microbiological analysis: In order to access the microbiological quality of the fruits Czapekdox agar containing 50mg/ml streptomycin was used for the isolation of fungi from spoil fruits. The identification of the fungal isolates was based on the cultural and microscopic features.

Growth studies on Isolates:

Effect of different carbon sources on the growth of isolates in a culture medium. The medium consist of 2gm Sodium Nitrate, 1mg sodium dihydrogen phosphate, 0.5 gm potassium chloride, 0.5gm MgSo4.7H2O, 0.01gm Fe(So4)2.7H2O /litre.

Result

After analysis moulds isolated were identified as ***Aspergillus niger*** and ***Aspergillus flavus.*** The study was design to investigate the effect of storage, temperature, on the aproximate and

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nutritional composition of the endosperm of the fresh healthy coconut fruits stored at 10°c & 30°c at moisture content 46.82% .

Isolation of Seed Born Storage Fungi

Altogether 32 species of storage fungi were isolated from Coconut fruit. Among isolated fungi change Mycobacterium, *Rhizopus arrhizus* and Rhizopus oligosporus belong to Zygomycotina, *Aspergillus ridulans* etc belong to Ascomycotina and other rest belong to Deuteronycotina. The Frequency of the noted fungi varied from 05 to 92% fairly high frequency was observed of Aspergillus species. Based on the frequency of the storage fungi, *Aspergillus flavus* (92%) *Aspergillus niger* (84%) and Fusarium (69%) were selected to see their effect on the characteristics of coconut fruit.

Physio-Chemical Characteristics of Coconut Fruits

Physio-chemical characteristics of coconut fruits also depend on the condition of storage including RH, Temperature, storage region, microbial Pest in Festation and numbers of other factors.The RH and Temperature are two factors that distinctly influence the physical and chemical properties physiology of the fruits.

Discussion

High RH and Temperature above the room are considered adverse condition of storage of seeds/fruits. When the fruits are fested with storage Fungi the rate of deterioration is very fast shattering the seed physiology to the extent.

Conclusion

During research we found that the healthy, unbroken and unhusked coconuts fruits stored at 10°C and 30°C kept best, because they show neotany evidence of microbial spoilage.

The germinability of the fruit coconut is lost considerably on storage with fungi. This values magnified many fold due to increase in RH level of storage and extention of storage period.

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Attitude towards Artificial Intelligence and Different Factor of Personality: A Correlational Study among Working Youths

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Abstract

We looked at how people's personalities connect to different views towards artificial intelligence (AI). Attitudes were classified into two dimensions: affective components (positive and negative feelings) and cognitive components (sociality and functioning). This study aims to explore the relationship between attitudes towards artificial intelligence (AI) and different personality factors, seeking to uncover patterns that contribute to a deeper understanding of individuals' reactions to AI. The study will involve 120 working youth and will utilize a correlational design used to investigate the relationship between different factors of personality with positive and negative attitudes towards AI. A product moment correlation will be applied to analyze the data. The results indicate a significant relationship exists between different personality factors and attitude towards artificial intelligence of working youths. The review concludes with a summary of the major research findings, along with considerations for future directions and implications for practice and policy.

Keywords: Personality factors, Attitudes towards Artificial Intelligence and Working Youths

Introduction:

Firstly, the Indian government has been actively promoting digitalization across various sectors. Initiatives like Digital India, which aims to ensure government services are available to citizens electronically, have already laid a strong foundation. By 2024, these efforts are likely to have matured, resulting in more streamlined, efficient, and accessible public services, thus promoting broader digital adoption across the country. Secondly, India has become a hotbed for foreign investment in the technology sector. Companies like Google and Facebook have already made significant investments in Indian tech startups. This trend is expected to continue, fueling innovation and technological advancement. The influx of capital not only boosts the tech industry but also encourages a culture of entrepreneurship and innovation. As AI becomes increasingly embedded in the daily life, it is essential to explore how individuals perceive and react to these technological changes, particularly considering the diverse socio-cultural landscape of the country.

India is characterised by its rich cultural diversity with its with its numerous languages, traditions, and belief systems which adds another layer of complexity to the study of AI anxiety. Cultural beliefs and values may influence how individuals perceive AI and its impact on society.

Attitudes towards AI plays a pivotal role in shaping how individuals interact with and respond to AI technologies. Positive attitudes may lead to better integration and collaboration, while negative attitudes could impede progress. Researching the factors influencing attitudes towards AI in the Indian context is crucial for fostering a positive and inclusive AI ecosystem.

According to psychological research, personality serves as a systematic lens through which people view their surroundings as well as the people, objects, and events in them (Porter et al., 2017). It also provides an effective framework for understanding why and how one thinks, feels, and behaves in a particular way across different situations (Kenrick & Funder, 1988; Moskowitz, 1994). Because personality factors represent differences in susceptibility to certain stimuli, they are essential

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elements in determining attitudes (Grey, 1973). Different personality characteristics correspond to different motivational sensitivity and salience levels to certain stimuli (Grey, 1973).

Personality Factor:

The personality of the individual is crucial in this regard. Personality refers to the enduring styles of thinking and behaving when interacting with the world. It relates to unique and relatively stable qualities that characterize behaviour and thought. Any person's personality is what makes them stand out from the crowd. The term "personality" refers to special, enduring traits that through time shape how a person behaves in a variety of contexts. The study of human behaviour would be lacking without consideration of personality because it is such an essential component of human behaviour.

By examining the various approaches to the study and assessment of personality, the researcher came to the conclusion that the Big Five Model is one of the most comprehensive, empirical models. During the course of three or four decades of research, hundreds of personality measures and various phrases used to define personality were factor analysed in order to identify the essential, underlying components of personality. The findings showed five characteristics.The "Five Factor Model" is another name for these Big Five features (Costa and Mc Crae, 1992). Openness, Consciousness, Extraversion, Agreeableness, and Neuroticism are the Big Five Factors (OCEAN). As a result, operational parameters investigated to evaluate personality were in line with NEO-FFI.

1. **Openness:** is a general appreciation for art, adventure, unusual ideas, and imagination. People who are open to experience are intellectually curious, appreciative of art, witty and sensitive to beauty. People with low scores on openness tend to have more conventional, traditional interests.
2. **Conscientiousness**: is a tendency to show self-discipline, act dutifully and aim for achievement. It includes the factor known as Need for Achievement. People high on this trait are generally achievement oriented, organised, responsible and dependable. On the negative side, they can be perfectionists or workaholic.
3. **Extraversion**: is characterized by positive emotions and the tendency to seek the company of others. Extroverts enjoy being with people and are energetic, dominant, assertive, outgoing, talking, fun-loving. Introverts, on the other hand, are quiet, less involved in external world and prefer to be alone.
4. **Agreeableness**: is a tendency to be compassionate and cooperative. Individuals high on this trait are considerate, friendly, generous, helpful, trustworthy, caring, warm and willing to compromise their interests with others. They hold an optimistic view of human nature. People who score low are suspicious, unfriendly, and uncooperative and place self interest above getting along with others.
5. **Neuroticism:** is the tendency to experience negative emotions, such as anger, anxiety, fear etc. Those who score high on neuroticism are vulnerable to stress, more likely to interpret ordinary situations as threatening, emotionally unstable, anxious, worried, distressed, irritable and hypertensive. On the other hand, individuals who score low are emotionally stable, calm and free from persistent negative feelings.

This model represents a significant advancement in personality. In comprehending the profile across cultures, it has been shown to be helpful. The usefulness of the five dimensions in populations of the old and young, educated and illiterate, is further supported by cross-cultural researches. (Mc Crae and John, 1992).

Attitudes Towards AI:

The concept of attitudes towards artificial intelligence is multifaceted, including the analysis of several dimensions, including emotive, cognitive, and behavioural components (Breckler, 1984). Breckler (1984) noted that although the three primary components of attitudes are connected, they each individually contribute to a general attitude towards an item. A favourable or unfavourable assessment of a certain thing is one possible attitude towards it (Eagly & Chaiken, 2007).

AI attitudes encompass emotional, cognitive, and behavioural assessments. These attitudes are formed by prevailing knowledge or depictions of AI, which are influenced by dispositions to some

extent. As a result, we selected a number of attitudinal variables that address behavioural, cognitive, and emotional attitudes about AI. The term "affective evaluation" describes how someone feels about an object, whether it be positively or negatively (Breckler, 1984). According to Ajzen and Fishbein (2000), affective assessment encompasses both specific emotions (such as pleasure and fear) and generalised mood states like positive and negative effect. Affective appraisal is built by both cognitive and non-cognitive processes, originating from prior experiences that form a mental residue (Breckler, 1984; Eagly & Chaiken, 2007). Initial perceptions of a new agent or technology are greatly influenced by affective attitudes, especially unfavourable ones, and they are frequently costly. One barrier to learning about and accepting AI, for instance, may be societal and personal anxiety that has been cultivated through media (Liang & Lee, 2017). It's true that humans frequently feel scared and threatened, and that engaging with an autonomous agent makes them feel even more afraid and makes them less likely to adopt and use AI in the future (Liang & Lee, 2017).

However, using and engaging with AI can also bring to good feelings like happiness and pleasure (Shank et al., 2019). People are amazed and happy by AI's apparent novelty and usefulness (Oh et al., 2018). favourable views about AI are shaped by favourable interactions with the technology (Oh et al., 2018). According to Watson and Clark (1992), people's emotional experiences are greatly influenced by their person-ability.

Significant of the study:

This research aims to delve into the interconnectedness realms of AI anxiety, personality traits, and attitudes towards artificial intelligence, seeking to uncover patterns that contribute to a deeper understanding of individual's reactions to AI and how individual differences in personality contribute to attitude towards artificial intelligence. While AI holds tremendous potential, apprehensions and anxieties have surfaced and it also sparks a myriad of psychological responses among individuals. Many studies have examined personality traits, and attitude towards artificial intelligence separately and with other dimensions but there is a notable gap in understanding how these aspects interact specifically in the Indian context.

Hypothesis: There would be a significant relationship between attitudes toward artificial intelligence and different factors of personality of working youths.

Sample:

Present study attempted to study the interplay of personality factors, artificial intelligence anxiety and attitude towards artificial intelligence among working adults. In total 150 working adults were taken as participants for study. The working adults participants were taken from different public and private organization of Bihar. Out of 150 participants, 75 were males working adults and remaining 75were females working adults. A purposive sampling technique was used for the selection of participants in this study.

Design:

In the present study a correlational research design was used. Present study was to examine the relationship between different personality factors and attitudes toward artificial intelligence working youths.

Tools

Personality Inventory (NEO – FFI):

Paul T. Costa and Robert Mc Crae's Personality Inventory (NEO – FFI), published in 1992, was used to evaluate personality traits. The Revised NEO Personality Inventory is also known as the NEO – FFI. The five personality traits that are evaluated by this test are neuroticism, extraversion, openness, agreeableness, and conscientiousness. There are 60 items in the inventory, 12 of which evaluate each personality characteristic. Five points are assigned to each item, ranging from strongly disagree to strongly agree. The internal consistency reliability coefficient of Form- S ranging from .56 - .81. For domains the reliability is .86 - .92 ($p < .001$). The convergent discriminate validity ranging from .29 - .55. The scale has been translated into various languages.

The General Attitudes towards Artificial Intelligence Scale (GAAIS):

The General Attitudes towards Artificial Intelligence Scale (GAAIS) developed by Astrid Schepman and Paul Rodway (2020) will be employed to measure attitudes towards AI. GAAIS (2020) includes 20 items within two factors, positive general attitudes with 12 items and negative general attitudes with eight. A five-point Likert-type rating scale is used to rate the items. The Cronbach alpha values for the two factors were 0.88 for positive and 0.82 for negative general attitudes in validation research while they were calculated as 0.84 for positive and 0.80 for negative subscales, both of which represented good internal consistency.

Results and Discussion:

Table: Correlation between the attitude towards artificial intelligence and five factor of personality:

	PATIA	NATIA
O	.086	-.209**
E	.046	-.199**
A	.060	.018
C	-.157*	.147**
N	-.198**	.178**

**significant at 0.01 probability level and *significant at 0.05 probability level

An inspection of the inter-correlation matrix (Table-6), The correlation between the measures of attitude toward artificial intelligence and different factors of personality ranged between -.199 to .14. Out of ten correlations, six are significant at and above the .05 probability level. Positive attitude towards artificial intelligence is found to be correlated positively with conscientiousness ($r = -.157$, $p < .05$) and neuroticism ($r = -.198$, $p < .01$). The relationship between the measures suggests that participants who have conscientiousness and neuroticism traits have a positive attitude toward artificial intelligence. Negative attitude towards artificial intelligence negatively correlated with openness ($r = -.209$, $p < .01$) and extrovert ($r = -.199$, $p < .01$). The relationship between the measures suggests that participants who have openness and extrovert traits have a low negative attitude toward artificial intelligence. Whereas, negative attitude towards artificial intelligence positively correlated with conscientiousness ($r = .147$, $p < .01$) and neuroticism ($r = .178$, $p < .01$). The relationship between the measures suggests that participants who have conscientiousness and neuroticism traits have a high negative attitude towards artificial intelligence. The findings of the present study are in support of the hypotheses and most of the earlier findings. The present study reveals that there is no association between openness and positive attitude toward artificial intelligence whereas, a negative relation exists between openness and negative attitude toward artificial intelligence. Openness describes individuals who like to try new things and are open to new ideas, experiences, and discussions. This is the most consistent association found in the studies related to Park & Woo, (2022) reveled that a positive association between openness and innovativeness. Hence the hypothesis presumed relationship between attitude towards artificial intelligence and different factors of personality was partially confirmed here.

Conclusion:

The finding of the study was revealed mixed results, the different factors of the personality are correlated differently with positive and negative attitude towards artificial intelligence of working youths.

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A Study on the Aspiration Levels among Three Groups of University Students from Different Castes

Dr. Hena Hussain*

Abstract

The current study was carried out with the intention of determining the disparity in aspiration levels among three caste groups of rural college students. Analogously, there existed dissimilarities in the aspiration levels of three distinct caste groups of urban college students, and it was also possible to discern dissimilarities in the aspirational levels of a total number of students individually. In this study, 300 college students were taken as participants in the study. The participants were taken from three different castes (forward, backward, and Dalit), which belong to rural and urban areas of Bihar. Out of which, 100 were forward-caste students, 1oo were backward-caste students, and 100 were Dalit-caste students included in the present study. The age of the participants ranged from 19 to 30 years. All the participants were selected on the basis of inclusion and exclusion criteria. In the present study the purposive sample technique was used to obtain seven categories of sample of college students. The following outcomes were attained: The ANOVA among means level of aspiration scores of the three groups was found statistically significant. The finding revealed that forward students had significantly greater amount of level of aspiration than two other groups (Backward and Dalit) college students.

Keywords: Level of Aspiration, Forward, Backward and Dalit University Students etc.

Introduction:

Caste is commonly referred to using three words. Caste, Jati, and Varna are these. According to Fowler (1997), Varna, which literally translates as "colour," was a system of social stratification that was initially used in Vedic Indian life. Texts from ancient India make numerous references to it. The four groups of people were the Shudras (the labouring classes), the Vaishyas (artists, merchants, businessmen, and farmers), the Brahmins (priests), and the Kshatriyas (also known as Rajanyas, who were rulers, administrators, and warriors) (Fowler, 1997). Untouchables and tribal people were among the groups considered to be completely outside the purview of the varna classification, which was implied to include a fifth element (Bayley, 2oo1).

The common belief that a traditional culture and a contemporary party are mutually exclusive is being challenged by the growing significance of caste in Indian politics nowadays. Actually, because of the interaction of isolated institutions like caste, our Westminster pattern “which is extremely contemporary and democratic” has experienced distortions. It is married to the ideal of democracy and social fairness. As a matter of fact, caste influences people's political conduct under the Parliamentary democracy system. The country's socioeconomic structure is impacted by caste in addition to its political landscape. The issue of upper and lower castes has a current impact on national politics. Everywhere there is a well-established institution facing a serious challenge, everyone is feigning iconoclasm. The debate around the reserving of positions in public employment on the basis of caste has brought up difficult problems with broad national implications. It is pulling apart social and national structure, endangering the basic foundation of the state. Constitutionally, caste-based job reservation has devolved into a paralogistic endeavour. I want to talk about "caste politics in India" because of the current national debates and conversations

India enacted a new constitution in 195o after gaining independence, doing away with the caste system and granting the so-called Scheduled Castes reservations in government and higher education. But prejudice against people from lower castes and the social and economic hierarchy of

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the caste system still exist, particularly in rural India. Overall inequality in consumption level is still rooted in intercaste disparity, even in Kerala, the most egalitarian state in India. In rural North India it is quite common to find Dalit castes living in the outskirt of villages. They remain standing and not allowed to sit if they visit the high – caste houses. Thus the Indian society traditionally remained divided into five main caste groups – the priestly 'Brahmins', the warrior 'Kshatriyas' the merchant and traders 'Vaishyas' the labourer Sudras and Segragated 'Dalits'.

However, the classification changed from time to time in history and it is mythical that the four Varna societies ever existed for any extended period of time. There was always occupational changes assigned to the Varnas and later caste names were assigned as per the occupation performed. However these caste classifications later became so rigid that there was no scope for change of one caste to the other. Caste became hereditary without any regard to occupation. Therefore now there are a number of castes which exist in India as well as in Bihar. However the caste in different parts of the country is not uniform. It changes from one state to another. Therefore what the caste structure exists in Bihar is different from other states.

Level of Aspiration:

As with other psychological phenomena, Aspiration Level motivation variables play a significant role in guiding an individual consciously and motivating him to try for certain activities in order to reach a specific goal. In order to achieve a certain level of excellence in four performances, each person establishes a desire for distinction with an internal structure called as the "Level of Aspiration" (LOA). It describes the evaluation of a person's own performance level or degree of accomplishment of predetermined objectives. Hence, it requires a goal that a person chooses for themselves. Goals might be set too high, too low, or in the middle between these two extremes. Goal discrepancy score (GDS) is typically used to measure aspiration level. When GDS is extremely high or low, it can be argued that an individual is merely imaginative, fantastic, unrealistic, or above or below his self-esteem; conversely, when an individual's actual performance and expectations are roughly equal, it can be argued that the individual is realistic and practical in life. Setting an aspirational goal can therefore inspire someone to strive for their highest potential, yet there are situations where it can also be just as beneficial to recognise how well someone has already achieved.

In terms of an experimental paradigm, level of ambition refers to the self-imposed and internalised performance level that a participant communicates to the researcher about a known activity that they must now complete to a certain level of expertise.

According to Drever, the best way to describe the phrase "level of aspiration" is as a framework including self-esteem or, conversely, as a standard by which a person experiences, i.e., feels successful or unsuccessful. "Level of Aspiration" (LOA) was described by Hoppe (1930) as an individual's expectations, ambitions, or assertions for his own future accomplishment in a certain work. Hoppe's experimental studies have revealed that an individual's performance is closely tied to their sense of failure when it falls beneath their Level of Aspiration (LOA) and their sense of success when it surpasses it. This has led Hoppe to conclude that the LOA has a qualitative nature.

Rational of the study:

Form the study and analysis of related literature the present researcher observed that most of the studies focused in connection of socio economic status and student‟s fulfillment as well as student‟s execution. Some few research works are conducted on academic aspiration related with traditional caste system and aspiration level of the students. But any one of these delving works was not conducted on traditional caste system and level of aspiration of the university students. Not only that all of the related literature was not focused on these three important aspect of the students as the also none of the inquest study was not conducted to investigate socio economic status and levels of aspiration belong to the traditional caste system.

So it is very important and noteworthy study on the traditional caste system, and levels of aspiration of university students belong to three different caste communities. In this context, the

present researcher wants to investigate the traditional caste system and level of aspiration of university students for fulfillment of the above mentioned research gap.

1. The three caste groups will differ significantly in respect of level of aspiration of university students.

Sample:

In total, 300 college students were taken as participants in the study. The participants were taken from three different castes (forward, backward, and Dalit), which belong to rural and urban areas of Bihar. Out of which, 100 were forward-caste students, 1oo were backward-caste students, and 100 were Dalit-caste students included in the present study. The age of the participants ranged from 19 to 30 years. All the participants were selected on the basis of inclusion and exclusion criteria. In the present study the purposive sample technique was used to obtain seven categories of sample of college students.

Research design:

The current study employed a multi-group design. The purpose of the current study was to compare the aspiration levels of three different caste groups students belonging to different caste groups Similar to this, there existed disparities in the aspiration levels of three distinct caste groups of urban college students, as well as differences in the aspiration levels of the entire student body. Thus, in this study, a multi-group design was employed.

Tools for data collection:

Personal data sheet:

A self made semi structured personal data sheet especially designed for the study to collect information regarding college student's age, sex, education, area of residence, religion, caste, family income, family type, birth-order etc.

Student's level of Aspiration Scale (SLA):

S.K. Ojha and N.P. Yadav (2015) constructed the scale. In all, there are 15 items on the scale—5 for each of the three categories—economic, educational, and vocational. There are five different ways to answer each item in each section. It is available in both Hindi and English formats. The scoring process is really easy to understand. In the Hindi system, "क" receives a score of 1, "ख" receives a score of 2, "ग" receives a score of 3, "घ" receives a score of 4, and "ङ" receives a score of 5. These are represented as a, b, c, d, and e in English. By employing the split-half approach and the S-B formula, the scale's internal consistency was found to be 0.75. By using the test-retest correlation approach, the temporal stability was found to be 0.70. Its content, construct and predictive validities have been found to be quite sound and satisfactory.

Results and Discussion:

The collected data were examined using a variety of statistical techniques using SPSS 20. The results are displayed in the table below, and this chapter will analyze and explain them. In light of the goals, the data were examined and arranged.

Table no. 1: Mean and SDs of forward, backward and dalit on level of aspiration.

	Caste	N	Mean	SD
Level of Aspiration	**Forward**	100	68.29	2.483
	Backward	100	61.22	2.953
	Dalit	100	53.04	4.065

A look at table 1 reveals that the mean levels of aspiration scores for forward, backward, and Dalit were 68.29, 61.22, and 53.04, respectively, and their respective SDs were 2.483, 2.953, and 4.065. The table shows that there seems to be a difference among the mean levels of aspiration of forward, backward, and Dalit college students but these differences may be due to chance factors, hence, to see whether the differences are real or due to chance factors, an ANOVA was applied. The results are shown in the following table:

Table no. 2: showing ANOVA on level of aspiration score among the three different groups of caste.

		Sum of Squares	df	Mean Square	F	Sig.
Level of Aspiration	**Between Groups**	11648.660	2	5824.330	556.287	.001
	Within Groups	3109.590	297	10.470		
	Total	14758.250	299			

Table no. 3: Showing the difference between the possible pairs of groups.

	(I) symbol	(J) symbol	Mean Difference (I-J)	Std. Error	Sig.
Level of aspiration	Forward caste	Backward caste	7.070*	.458	.001
		Dalit	15.250*	.458	.001
	Dalit	Backward caste	-8.180*	.458	.001

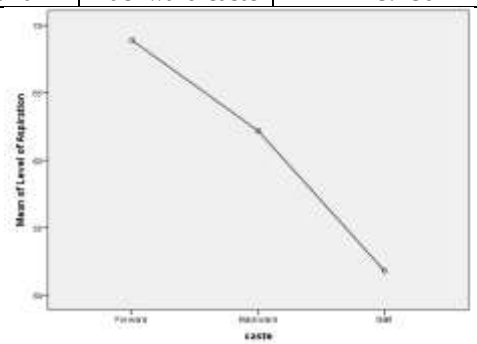

Figure 5.1: Graphic representation of the mean level of aspiration score among students of three different groups of caste.

The results given in the above table 2 and figure 1 clearly indicate that ANOVA for the difference among three different caste groups of college student on their levels of aspiration score was found statistically significant. The ANOVA among three means came to be F=556.287 which was significant beyond .o1 level. Tukey test was used for post hoc analyses and the results were given in table 3. the table showed that difference between mean of forward group and backward was 7.070. Which was found statistically significant (P=.001< .001). Similarly, differences between mean of forward group and dalit group was obtained 15.250. Which was found significant (p=.oo1<0.01) , and the difference between mean of dalit and backward group was 8.180 obtained and it was also found significant (p=.001<0.01). These findings suggest that college students with different caste have different levels of levels of aspiration. Finding revealed that forward caste group students had significantly greater amount of levels of aspiration than two other groups (Backward and Dalit) students. Hence, the hypothesis-1 which states that "the three caste groups will differ significantly in respect of level of aspiration of university students." was proved true by the findings of the study. Moreover the above groups depicts then the difference between possible means clearly.

In the state of Bihar there exists three main categorization of Hindu castes viz., Forward, Backward and Scheduled (or Dalit) castes. Forward castes have been traditionally privileged and Backward castes are treated as relatively deprived in comparison to Forward Castes, But Scheduled Castes are the most deprived. Therefore the main task of the research project is to see the extent to which deprivation suffered due to caste has any influence on levels of aspiration.

It is well known that high caste people view caste identity as a more solid construct, with this identity inherited at birth. They tend to essentialize their identity, which is mostly related to sentiments of connection with prior generations of one's caste group. The essentialization of their

caste identity also gives high-caste persons sentiments of temporal continuity, positive individuality, and heightened self-esteem (Jaspal, 2011). It is widely held that high caste people possess attributes like as wisdom, intellect, honesty, austerity, and morality, whereas low caste people exhibit dullness, stupidity, immorality, impurity, and other undesirable characteristics (Deshpande, 2010).

Conclusion:

The current study was carried out with the intention of determining the disparity in aspiration levels among three caste groups of rural college students. Analogously, there existed dissimilarities in the aspirational levels of three distinct caste groups of urban college students, and it was also possible to discern dissimilarities in the aspirational levels of a total number of students individually. The following outcomes were attained: The ANOVA among means level of aspiration scores of the three groups was found statistically significant. The finding revealed that forward students had significantly greater amount of level of aspiration than two other groups (Backward and Dalit) college students.

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Awareness of Consequences and Energy Conservation Behavior: A Correlational Study among Adolescents

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Abstract

The current study was explore the relationships between energy conservation behavior, awareness of consequences among adolescents. A correlational research design was used to measure the relationships between these variables, as there is no control over them. Data were collected on a total of 200 adolescents from different rural and urban school of Bihar. Two tools were be used for data collection in this research. The following results were obtained: The coefficient of correlation was positive, indicating a direct relationship between the two variables. An increase in awareness of consequences will lead to a corresponding increase in energy conservation behavior. The findings indicate a positive and significant relationship between awareness of consequences and energy conservation behavior among adolescents.

Keywords: Awareness of Consequences and Energy Conservation Behavior and Adolescents etc.

Introduction:

Böhme et al. (2018) discovered in research on adolescents' Pro Environment Behaviour (PEB) that adolescents seem to be possibly persuaded, in this instance by mindfulness, to actively participate in sustainable consumption. Young people inspire one another to act in an environmentally conscious manner, according to Collado et al. (2019). According to Žukauskienė et al. (2021), adolescents have the potential to play a significant role in encouraging their families and communities to embrace pro-environmental behaviors and attitudes. Teens are participating in Greta Thunberg's "Fridays for the Future" program in large numbers, which suggests that they are becoming more conscious of environmental concerns.

Furthermore, adolescents' environmental views and behaviors have been shown to differ, with their worries not necessarily being reflected in their actions (Huoponen, 2023; Thomaes et al., 2023). Therefore, rather than being a statement of personal responsibility, it is unclear if teenage participation in environmental concerns is a sincere commitment to environmental conservation or whether it is a demand for governmental action (Wray-Lake et al., 2010). In light of these contradictory findings, further research is necessary to improve our understanding of the variables influencing teenagers' PEB.

Awareness of Consequences (AC)

According to Stern et al. (1995), Awareness of Consequences (AC) is a gauge of overall attitudes about the effects on the environment. A crucial component of the VBN theory is the idea that some beliefs—like those about the degree to which objects or people are impacted by their surroundings—serve as a bridge between values and environmentalism (AC). Stern et al. (1995) build on Schwartz et al. (1977) by arguing that adverse consequences (AC) include not just other people but also "non-human species" and the self. Thus, the revised definition of AC proposed by Stern et al. (1995) was defined as those who feel an environmental state has negative effects for other people, other animals, or the biosphere. Put differently, those who recognize the detrimental effects of behaving in an unprosocial manner. Because both natural and man-made catastrophes have an impact on the well-being of those impacted, Zhang et al. (2016) believe that awareness of environmental implications has wider applicability in the area of environmentalism than AC (Stern, 1999).

Additionally, Stern et al. (1993) claimed that accepting responsibility would follow knowledge of negative outcomes. People who have a high awareness of consequences are assumed to be more

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conscious of the broad and particular effects of potential actions, and they are also more inclined to consider the viewpoint of others who may be impacted while making choices (Schwartz, 1972). Therefore, this research hypothesizes that individuals are more inclined to assign blame for environmental issues (ascription of responsibility) if they are aware of the negative effects of not engaging in environmentally beneficial conduct.

Pro-Environment Behaviour:

As stated by Krajhanzl (2010), Pro-Environmental Behaviour is behavior that is typically seen as a way to protect the environment or show respect for a healthy environment, based on the understanding of environmental science and societal norms.

Pro-environmental behaviors, or PEBs, are everyday acts that are generally beneficial for the environment. Examples of PEBs include recycling and energy conservation. These activities are carried out by people using a few strategies that have been tried and proven successful. Ten different categories of approaches were found as a result, and they may be divided into four groups: social-psychological techniques, information, convenience, and monitoring techniques, in that order (Science for Environment Policy, 2012).

Pro-environmental behaviors are those that fall under the broad category of individual actions that support environmental sustainability. These actions may be either private or public (composting, forgoing the use of the air conditioner on a hot day, joining in a protest for environmental causes, etc.). Individuals who practice healthy environmental habits in their daily lives do so voluntarily and with initiative. While pro-environmental behaviors might be aided or hindered by social institutions, such as the existence of a recycling program or public transit system in a community, behaving in an environmentally friendly manner is ultimately a matter of personal preference. Ones, Dilchert, Wiernik, and Klein (2015).

Significant of the study:

This study examines the mobilization of values, beliefs, norms, and environmental behavior, drawing on the framework established by Stern et al. (1999) in their Value Belief Norm theory. The theory initially identifies an individual's values regarding the environment, which subsequently shapes beliefs about necessary actions. This, in turn, affects a set of norms and the capacity to act. This proposed theory is utilized to evaluate adolescents' comprehension of environmental issues. Therefore, a study has been designed to systematically examine the relationship of values, beliefs & norms in determining energy conservation behavior among adolescents.

Hypothesis: There would be significant relationship between awareness of consequences and energy conservation behavior.

Sample:

Two hundred adolescents from various rural and urban schools in Bihar were the subjects of the data collection. Of these, 100 were adolescents from rural areas and 100 were from metropolitan areas. Additionally, the participants' ages ranged from 12 to about 18. Purposive sampling was used in the selection of the study's respondents.

Research design:

In the current research, a correlational design was used. In this research, the relationships between ‘energy conservation behavior and awareness’ of consequences. Because it provides a measure of the connection between variables and allows for no control over them, a correlational study design was used.

Tool used for data collection:

1. **Demographic Information Sheet (DIS) -** A demographic profile (age, gender, education and family type etc.) was used in the present study, along with Consent form and four scales to measure different variables.
2. **Scale for Awareness of Consequences (Ibtissem, 2010) -** Seven items designed to measure AC based upon Stern, Dietz and Black (1986) scale of personal normative belief and

modified for the energy conservation behavior. This scale has an alpha of 0.829. All items are required to be rated on a 4 point scale.

3. **Pro-environmental behavior scale (Markle, 2013):** This scale was developed by Markle, 2013 to assess pro-environmental behavior. 7 items of this scale (conservation sub scale) has been selected for this study to assess energy conservation behavior. Out of 7 items, 6 items are required to be rated on five point scale and one item is required to be rated on 3 point scale. Reliability of the present subscale was found to be 0.74.

Results and Discussion:

Hypothesis: There would be significant relationship between awareness of consequences and energy conservation behavior.

Table- Results of Correlation between energy conservation behavior and awareness of consequences of adolescences.

Variables	Correlation	Significance level
Energy conservation behavior	.430	**<.01**
Awareness of Consequences		

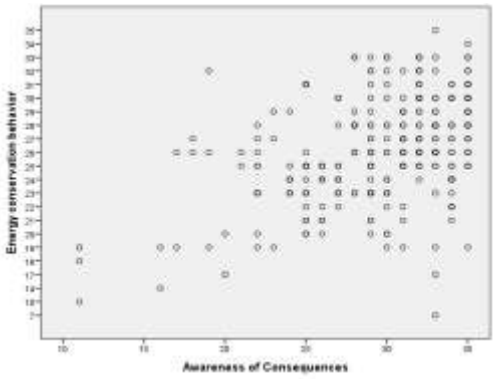

Figure: Graphic representation of correlation between energy conservation behavior and awareness of consequences of adolescences.

From the table- revealed that coefficient of correlation between energy conservation behavior and awareness of consequences scores of adolescences was found as .430 which was significant at .01 level of significance. But, the value of coefficient of correlation was positive meaning thereby that the two variables are directly related to each other. It means energy conservation behavior and awareness of consequences vary in the same direction. These finding suggest presuming relationship between awareness of consequences and energy conservation behavior of adolescences were found positive and significantly related to each other. Hence, the hypothesis-) that says that "there would be significant relationship between awareness of consequences and energy conservation behavior" was accepted.

According to Kiatkawsin and Han (2017), the new environmental paradigm is a psychological condition that makes individuals more conscious of the reckless use of world resources. As we become aware of the need to alter our way of life and minimise the unnecessary use of natural resources, it also inspires us to take remedial action (Dhir et al., 2021). The present investigation validates that the new environmental paradigm is consistent with the results of Fornara et al. (2016) and predicts knowledge of the implications of reduced power usage.

Conclusion:

The current study was explore the relationships between energy conservation behavior, awareness of consequences among adolescents. A correlational research design was used to measure the relationships between these variables, as there is no control over them. Two tools were be used for data collection in this research. The following results were obtained: The coefficient of correlation

was positive, indicating a direct relationship between the two variables. An increase in awareness of consequences will lead to a corresponding increase in energy conservation behavior. The findings indicate a positive and significant relationship between awareness of consequences and energy conservation behavior among adolescents.

The results were discussed in the lights of socio-cultural conditions rearing practices and environments prevailing in the school. Significantly greater energy conservation behavior of adolescences was discussed in the light of socio demographic details, rich social consciousness and expectation of the society, environments of school and college similarly.

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Impact of Stress on Marital Adjustment and Mental Health of Working Women

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Abstract

The present study mainly focuses on mental health, marital adjustment and stress of working women. For this, purpose 150 working women of Bihar were purposively selected and they were administered Mental Health Questionnaire and Perceived Stress Scale (PSS) and marital adjustment scale. t- Test was applied to analyze the data. The results as follows: A significant difference between mean mental health scores of high stress working women and low stress working women was obtained. A significant difference between mean marital adjustment scores of high stress working women and low stress working women was obtained. The study aims in making the women and their family members to aware of the various stressors and the different coping strategies that can help them deal with the stressors in a better way, and thus maintaining their mental health and marital life. The review concludes with a summary of major research findings, as well as a consideration of future directions and implications for practice and policy.

Keyword: Mental health, Stress, marital adjustment and working women

Introduction:

Women are playing a vital role in the economic and social development of the nations all over the world. Working women have whole set problems involving both family and professional lives. Women have to play their role as a wife, a mother and an earner. They have to manage their career while maintaining traditional roles. That means for working women it is two sets of overlapping responsibilities. Therefore, in addition to their traditional roles, professional roles seem to be one of the major sources of stress that working women have to face. Stress is a part of modern life, with increasing complexity of life, stress is likely to increase. Stress is built in the concept of role, which is conceived as the position a person occupies in a system. Women in modern global world have to play a dual role as housewife and career builder. 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. The present investigation will be conducted to examine the stress and mental health among the working and non-working women and their comparison.

Stress:

Stress as a word means "draw tight" and has been used to describe hardship, affliction, force, pressure, strain, or strong effect. Stress is of various types' existential stress, achievement stress, family stress, academic stress etc. These stressors are result of many situations and unfulfilled In psychological view, the word stress is used in at least three different ways: 1. State of psychological upset in disequilibria: stress is state of psychological upset or disequilibrium in human beings caused by frustration, conflicts and other internal as well as external strain and pressure. What to do and what not to do? How to do? These kinds of questions arise in mind. 2. Stimuli causing disturbance: In the second, stress is regarded as a class of stimuli that threatens in an individual in some critical situation and thus cause disturbance in his behavior. 3. Popular meaning: Stress as a word means

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"draw tight" and has been used to describe hardship, affliction, force, pressure, strain, or strong effect. Stress is of various types' existential stress, achievement stress, family stress, academic stress etc. These stressors are result of many situations and unfulfilled.

Stress is a common phenomenon in everyday life. All of us experience stress to some degree in one or another form throughout the life. One must admit that these days, there is hardly any section of society that has escaped the slaughter of depression. Widening gulf between unending aspirations and diminishing hopes of fulfillment have lead to frustration, unhappiness, sadness, and self-dejection among everyone. Life, in the present time, is full of competitions, tensions, burdens, hatred and struggle. Under such conditions success totally depends upon one's own mental health.

Marital Adjustment:

Marriage is among the greatest important bonds that a man or a woman may form. Individuals married for a variety of motives, included joy, pleasure, friendship, the wish to have kids, or physically appeal, among others (Bernard J., 1984). Marital realignment occurs whenever a husband or wife have delight and happiness with one another (Hassan, Khurshid, and Hashmi, 2007). Marriage breakdown due to sexual inadequacy, conflicts, or intellectual, physical, or emotional disorders (Delissoovay, 1973). The material, emotional, intellectual, or behavioral responses to situations perceived as harmful or difficult, such as anxiety. The mental or bodily reaction to events that upset the body's equilibrium is referred to as stress (Lazarus & Forkman, 1984). Stress occurs if there is an inadequate fit among what a person requires & whatever a person is competent of, in addition to what one's surroundings provides or requires (Levi, 1996). Life satisfaction is the greatest goal that we humans aim for during our existence. People could be pleased with many elements of their lives yet be dissatisfied generally as a result of the impact of a certain area (Diener, 1984). A good attitude toward one's life is defined as life satisfaction (Jan M. & Masood T; 2008). Individuals are much better pleased whenever people feel that criteria have been met, and far less happy when they perceive they really haven't (Diener, Suh, Lucas, & Smith, 1999).

Marriage is a loving & responsible relationship made for the purpose of serenity, joy, as well as the formation of healthy parental relationships. Socially acceptable sexual union begins with a public proclamation and has certain ideals of permanency; it has a more or less detailed marital contract that stipulates the mutual privileges & obligations of spouses & future prospective children offspring. Marital adjustment requires maturity in accepting and understanding the spouse's growth and development. Death in a marriage relationship is unavoidable if this progress and fulfilled. A couple's connection is not immediate but instead takes time to develop. "It's like an unnoticed illness that kills quietly and sweetly." According to a survey of 581 couples, 25% of them acknowledged that they discussed finding at some point during the adjustment process, and 18% had considered it (Margolin, 1980). Research on marriage and marital adjustment in the United States identifies social activities and leisure, child training and discipline, religions, in-law engagement, economic issues, physical connection, communications, equal understanding, & camaraderie marital adjustment areas (Smith, 1961).Hungry individuals, for example, are driven to seek food by their physiological condition.

Mental Health:

Mental health refers to our cognitive, behavioral, and emotional wellbeing - it is all about how we think, feel, and behave. The term 'mental health' is sometimes used to mean an absence of a mental disorder. Mental health can affect daily life, relationships, and even physical health. Mental health also includes a person's ability to enjoy life - to attain a balance between life activities and efforts to achieve psychological resilience.

The concepts of mental health which can be precise for one individual might not be appropriate for another who's reared up in distinct surroundings or possesses one-of-a-kind traits. The principles or mental fitness can't be taken to be fixed for all. In their utility, the sort of the individual will have to be considered and consequently they'll work out otherwise for distinctive people.

The World Health Organization describes mental health as a state of complete physical, mental, and social well-being and not purely the absence of disease (WHO, 1948). It means that mental health is necessary to overall health and should be identified in all older persons. The concept of mental health consists of an inner feeling of calmness, self-efficiency, self-dependence and competitiveness.

Mental health as a social phenomenon. Unlike the medical and psychological emphasis on intra psychic functioning, whether conceived of as systematic or as discrete dimensions, the social approach focuses primarily on overt behavior. One order of assessment of mental health according to social criteria is provided by measures of performance in social roles. These consist of estimates of the extent to which individuals follow and respond to the community's normative prescriptions and expectations of appropriate behavior in roles related to occupation and work, social participation, use of leisure and family relations. Since social prescriptions and expectations most directly enter into 11 defamations of the abnormal or deviant mental health is thus viewed in its most relative terms and with the least concern for psychodynamic processes.

Significant of the Study:

The focus of the present research is conducted on "impact of stress on marital adjustment and mental health of working women". It is important to role that working women have double sources of stress coming from family and work place spheres. Hence, in the present study working women will be taken from different private and public sectors of Bihar to find out the significant difference between mental health and marital adjustment of high and low stress working women. That is why the present study will endeavor to examine the marital adjustment, mental health and stress of working women. This can help the household maintain its standard of living. As a result of this process, they will have to make modifications to their roles in their loved ones and careers, along with their relationships with one another. To ensure that this adjustment is successful, their level of stress along with their mental health have now been influenced, and the amount to which they're satisfied inside their marriage can be determined by these many factors. By taking a look at the information, this study wants to discover what effect certain connections have.

Hypotheses:

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

1. There would be significant difference between marital adjustment of high stress working women and low stress working women.
2. There would be significant difference between mental health of high stress working women and low stress working women.

Sample:

200 working women were first applied to the perceived stress scale and categorized into high—and low-level stress groups. After screening, the researcher administered the other two scales. Out of which 50 were high stress working women and 50 low stress working women were taken from different location of Bihar. Further the age group of the students were 25 to 40 years of age. An availability sampling technique was used to select the respondents of the study.

Research Design:

In the present study a two groups design (High stress working women and Low stress working women) was used. Present study will be to examine the difference between mental health, and marital adjustment of high and low stress working women. Therefore, two group research design is best suitable in this research.

Tools Used for Data Collection:

The following tools were used for data collection.

Marital Adjustment Questionnaire:

The Marital Adjustment Questionnaire was developed and distributed by Parmod Kumar, M.Phil., and Kanchan Rohatgi, Ph.D. (1976). One hundred and twenty married couples living in the city of Jodhpur were asked to fill out the marital adjustment questionnaire. It was underlined that

there is nothing correct or incorrect about these things, and that none of these items should be left out. The preliminary questionnaire had a total of 25 different questions. A "1" or a "0" was assigned as a score to each of these elements Yes or No, based on which way they were facing. The sexual dimension has 4 (9,20,23,25) things, the social dimension has 9 (3,4,5,6,12,14,15,18,19) items, and the emotional dimension has 12 (1,2,7,8,10,11,13,16,17,21,22,24) items. The reliability of the test is.84, but its validity is only.71.

Mental Health Questionnaire

The original form of the Hindi version of Mental Health questionnaire is developed by O.N Srivastava and V.K Bhatt (1973). The original Hindi version was prepared by translating the original 48 items of the M.H.Q. into Hindi. The MHQ developed by Srivastava and Bhatt (1973) was employed for the assessment of the extent of mental ill-health of the employees. There are total six sub scales in this questionnaire namely free floating anxiety, obsession compulsion, phobia, and somatic complaints, depression and hysteria. The 8 items of each subscale have been put into 2 clusters of 4 items each. The first cluster of 4 items from each of the subscales follows in a sequence and then second cluster of each of the subscales follows in the next sequences. The first half of the whole test thus contains the first halves of all the subtests. The order in which clusters are appearing is FFA, OBS, PHO, SOM, DEP and HYS. The MHQ comprised of 48 items. Some of the items were to be rated on 3-points scale & the rest were to be responded on 2 point scale. Low score on the questionnaire indicates normal mental health and high score is the indicative of mental ill-health. Reliability of the whole test is calculated by split half method was 0.70 and reliability coefficient for each of the subscales is FFA (0.88), OBS (0.76), PHO (0.52), SOM (0.68), DEP (0.74) and HYS (0.66). The validity of the whole test was measured by administered to anxiety, neurotic, depressive and hysteric patients.

(2). Perceived Stress Scale (PSS) (Sheldon Cohen ,1988):

It is the most widely used tool to measure the perception of stress. It has been developed by Sheldon Cohen (1988). This tool contains 10 statements on a 4 point rating scale. A total score ranging from 0 to 40 is computed by reverse scoring the four positively worded items and then summing all the scale items. Higher score indicate greater levels of perceived stress, Subscale scores were computed by summing the six negatively worded items (items 1, 2, 3, 6, 9 and 10) for factor 1 (Negative) and the four positively worded items (items 4, 5,7 and 8) for factor 2 (Positive) with higher score indicating greater negative distress/stress feelings and greater positive stress feelings and coping abilities, respectively. PSS-4 is based on psychometric principles and is considered to be sound. However, the limited four-item abridged scale suffers in internal reliability (r=.60). It provides a less adequate approximation of perceived stress levels than the larger scales. Test-Retest reliability and predictive validity is strongest for shorter time periods. The 10 and 14 item self-report instruments have established reliability and validity (r=0.85).

Results and Discussion:

Obtained data were analysed with the help of SPSS 20 using different statistical technique and the result are given in the following table along with their interpretation and discussion in this chapter. The data were analyzed and tabled in the light of objectives.

Table no. 5.1: Mean and SDs of working women and non-working women on mental health and stress.

Variables	Group	N	Mean	SD
Mental Health	High Stress Working women	50	42.62	3.817
	Low Stress working women	50	30.14	4.941
Marital Adjustment	High Stress Working women	50	61.26	14.420
	Low Stress working women	50	52.82	12.820

A look at table 1 reveals that mean mental health of high stress group of working women and low stress group of working women were 42.62 and 30.14 respectively and their respective sds were

3.817 and 4.941. the same table depicts that mean marital adjustment scores of high stress group of working women and low stress group of working women were 61.26 and 52.82 respectively and their respective SDs were 14.420 and 12.820. the table shows that there seems a difference between mean mental health scores high stress group of working women and low stress group of working women and mean marital adjustment scores of high stress group of working women and low stress group of working women but these differences may be due to chance factors, hence to see that whether the differences are real or due to the chance factors, t- test was applied. the results are shown in the following table:

Hypothesis-1: There would be significant difference between marital adjustment of high stress working women and low stress working women.

Table no. 2: Means, SDs, and SED and results of t-ratio between mean marital adjustment of high and low stress group of working women.

Variables	Group	N	Mean	SD	SED	t	P
Marital Adjustment	High Stress Working women	50	61.26	14.420	1.791	5.133	<.001
	Low Stress working women	50	52.82	12.820			

From the results given in the above table 2 it appears that the mean marital adjustment scores of high stress group of working women and low stress group of working women were found to be 61.26 and 52.82 respectively. It means that high stress group of working women have obtained more mean marital adjustment problem than low stress group of working women. The standard deviations for high stress group of working women and low stress group of working women were 14.420and 12.820 respectively. The t-ratio between the two means came to be 5.133 which was significant beyond .01 level. These finding suggest that high stress group of working women had significantly greater amount of marital adjustment problem than low stress group of working women. Hence, the hypothesis-1 which states that "there would be significant difference between marital adjustment of high stress working women and low stress working women" was proved true by the finding of the study.

The results indicated an inverse relationship between marital adjustment and psychological stressors. This can be attributed to the high stressors and burdens assigned to working women and the intersection of the roles they perform in and outside the home which may affect the marital relationship and lead to a decrease in marital adjustment. The preoccupation with work, managing the house, and following up the children decrease the time allocated to marital life, which contributes to the lack of adjustment. This findings agree with (Al-Ibrahimi, 2015) whose results, were the more psychological stressors increases, the less marital adjustment.

Hypothesis-2: There would be significant difference between mental health of high and low stress group of working women.

Table no. 3: Means, SDs, and SED and results of t-ratio between mean mental health of high and low stress group of working women.

Variables	Group	N	Mean	SD	SED	t	P
Mental Health	High Stress Working women	50	42.62	3.817	0.882	14.135	<.001
	Low Stress working women	50	30.14	4.941			

From the results given in the above table 3 it appears that the mean mental health scores of high stress group of working women and low stress group of working women were found to be 42.62 and 30.14 respectively. It means that high stress group of working women have obtained more mean mental health illness than low stress group of working women. The standard deviations for high stress group of working women and low stress group of working women were 3.817 and 4.941 respectively. The t-ratio between the two means came to be 14.135 which was significant beyond .01 level. These finding suggest that high stress group of working women had significantly greater amount of mental health illness than low stress group of working women. Hence, the

hypothesis-2 which states that "there would be significant difference between mental health of high and low stress group of working women" was proved true by the finding of the study.

Since the t-ratio came to be significant it can be said that high stress group of working women are significantly more mental health illness than low stress group of working women. It is true that the two types (high stress working and low stress working) of women belong to our society and family. High stress group of working women have not better health than low stress group of working women who stay at home full-time. As globalization and industrialization progressed, women were encouraged to enhance their education and choose occupations that matched their interests. Despite the fact that this was a great development for women in terms of gaining social respect, women continue to face a range of challenges as a result of this. They experienced difficulties adjusting their relationships with members of their family, children, and co-workers at their place of employment. Because they played so many different parts, they had to put up with a great deal of pressure. Therefore, working women are not more conscious about their psychological health and physical health than non-working women because of they have not much time for maintained their proper diet and healthy exercise and not sleep proper at night.

According to the findings of certain studies, the risk of mental health-related problem for working women is significantly higher than the non working women. According to Mankani & Yenagi (2012) in their work "comparative study of mental health of working and non-working women" conducted a primary survey to access the mental health of working women". The results revealed that the working women had not better mental health as compared to non-working women. Housewives in rural areas had better mental health as compared to farm women. The demographic factors have a positive and significant relationship with the mental health of working women. This implies that when mental health illness increases, the level of stress increases too and vice versa. As per the study, within the mental health illness role of an employee, there are various factors, with varying degrees of impact, which have been identified as the root cause of mental health illness and job stress.

Conclusion:

The present study was conducted with the objectives to investigate the difference between high and low working women on mental health and marital adjustment. t-test was used to find out the difference between high and low group of working women on mental health and marital adjustment was applied separately. The following results were obtained:

1. The results of t- test reveal that high stress group of working women achieved significant by greater mean score than low stress group of working women on mental health.
2. High stress group of working women obtained significantly greater mean score on marital adjustment problem than low stress group of working women meaning thereby that High stress working women had significantly greater marital adjustment problem than low stress group of working women.

The results were discussed in the lights of socio-cultural conditions rearing practices and environments prevailing in the companies. Significantly greater mental health illness in working women than non-working women was discussed in the light of rich social consciousness and expectation of the society, environments of companies similarly, significantly greater stress in high stress group of working women than low stress group working was also discussed in the light of socio-cultural conditions favouring more to working women than non-working women. Discrimination in the private and government sectors and socially negative attitude and prejudice against females put them at disadvantageous position in psychological documents.

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A Study of Level of Aspiration among Rural and Urban College Students from Different Castes

Dr. Shikha Kumari*

Abstract

The current study was carried out with the intention of determining the disparity in aspiration levels between each caste group's rural and urban college students as well as between the three caste groups of rural college students. Analogously, there existed dissimilarities in the aspirational levels of three distinct caste groups of urban college students, and it was also possible to discern dissimilarities in the aspirational levels of a total number of students individually. In this study total, 300 college students were taken as participants in the study. The participants were taken from three different castes (forward, backward, and Dalit), which belong to rural and urban areas of Bihar. Out of which, 100 were forward-caste students, 1oo were backward-caste students, and 100 were Dalit-caste students included in the present study. The age of the participants ranged from 19 to 30 years. In the present study the purposive sample technique was used to obtain seven categories of sample of college students. The following outcomes were attained. The t- ratios between means level of aspiration scores of the two groups was found statistically significant. These finding suggest that urban forward caste students had significantly greater amount of level of aspiration than forward caste college students.

Keywords: Level of Aspiration, Rural and Urban College Students From Forward, Backward and Dalit caste etc.

Introduction:

Caste relations have loosened up in recent years. At local restaurants, where there is a higher propensity for food sharing among castes, caste divisions are less prevalent. Men's career aspirations (and those of women later on) were one of the largest shifts in India (Sekhon, 2000). In the past, most men pursued jobs in caste-related fields like blacksmithing and pottery. Since then, many have moved to more contemporary careers that have nothing to do with their caste, such as teaching, machine repair, retail and services, government employment, and retail. Landownership has changed, and caste is no longer directly associated with money and power in the village (Sekhon, 2000). The idea that dirty living conditions and pollution are the fault of the lower castes has also substantially diminished. Caste-related purification practices are still carried out in private and on ceremonial occasions, although their public prominence has barely diminished. Endogamy is still enforced by families, although not to the same degree as in the past. Although women's position is still closely linked to men's status, education and knowledge of women's equality have expanded tremendously across India (Sekhon, 2000). The lower castes still have a tough time leaving caste-specific jobs and gaining access to resources in rural regions, although caste is becoming less important in day-to-day life in metropolitan areas. Even though caste-based discrimination is illegal in India, caste has developed into a tool used by people to compete for power and resources in contemporary India, including better job possibilities, educational opportunities, and life chances (Sekhon, 2000). The execution of India's preferential policies and their impact are linked to this trend.

Although the preferential policies have been implemented extremely unevenly among arguments and conflicts surrounding them, they have still had a profound effect on many lower caste and class groups (Sekhon, 2000). OBCs, SCs, and STs now make up a larger percentage of the electorate and have significant support from the community. They went on to build powerful political parties in different regions and have grown to be a significant factor in electoral politics. According

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to Sekhon (2000), members of these marginalized groups have primarily succeeded in gaining employment in the public sector and at all educational levels.

Level of Aspiration:

The concept of "level of aspiration" has been a topic of interest for psychologists for many years. It was first defined by Frank (1935), a pioneer in this field, as the level of performance that an individual seeks to achieve in a familiar task, based on their knowledge of their past performance in that task. This definition has been widely accepted and continues to be relevant today. By understanding our level of aspiration, we can set realistic goals for ourselves and strive to achieve them. This can lead to personal growth and an increased sense of achievement.

Many researchers have thought that aspirations are a good way to approximate the "action goal." Dembo initially developed the aspiration level during an experiment with fury. As a consequence of Dembo's research, it was found that when a necessary objective is too challenging, the subject would establish a simpler intermediate goal. This intermediate goal, which is a step towards the required goal, is referred to as the subject's transient degree of ambition.

Guilford (1988) stated that "Achievement is related to matter what to one man's success is to another man's failure." When presented with a new assignment and urged to engage in it, all relies on one's educational aspirations. The individuals compare their intended performance level to that of others who are comparable to them or to their own performance on similar tasks. His grades are set at a level that allows him to maintain his self-worth while yet encouraging the student to make an effort and adjust his expectations. When subjects succeed, their desire to further their education increases; if not, it starts to fall. An individual's educational aspirations are adjusted based on how well or poorly they believe they have performed in a particular activity.

Significant of the study:

Rural forward group college students have been found to be more level of aspiration oriented than two groups (Backward and Dalit). Similarly, urban forward group college students have found also more level of aspiration than other two groups. It is a fact that having higher aspirations is beneficial. Historically, Forward Castes have had more privileges than Backward Castes, while Scheduled Castes have been the most disadvantaged. Therefore, it is important to implement programs and strategies to improve the level of aspirations among college students from backward and Dalit communities in Bihar. The study is relevant to educational institutions and other organizations, as it can make them aware of the importance of improving level of aspiration and reducing caste prejudices and harassments. The above mentioned implication seems to be important and to be tackled on priority basis.

Hypothesis: There would be a significant difference between rural and urban college students of each caste groups with regard to level of aspiration.

Sample:

In total, 300 college students were taken as participants in the study. The participants were taken from three different castes (forward, backward, and Dalit), which belong to rural and urban areas of Bihar. Out of which, 100 were forward-caste students, 1oo were backward-caste students, and 100 were Dalit-caste students included in the present study. The age of the participants ranged from 19 to 30 years. In the present study the purposive sample technique was used to obtain seven categories of sample of college students.

Research design:

The current study employed a multi-group design. The purpose of the current study was to compare the aspirational levels of rural and urban college students belonging to different caste groups and to ascertain the differences in ambition amongst the three caste groups of rural college students. Thus, in this study, a multi-group design was employed.

Tools:

Personal data sheet:

A self made semi structured personal data sheet especially designed for the study to collect information regarding college student's age, sex, education, area of residence, religion, caste, family income, family type, birth-order etc.

Student's level of Aspiration Scale (SLA):

S.K. Ojha and N.P. Yadav (2015) constructed the scale. In all, there are 15 items on the scale—5 for each of the three categories—economic, educational, and vocational. There are five different ways to answer each item in each section. It is available in both Hindi and English formats. The scoring process is really easy to understand. In the Hindi system, "क" receives a score of 1, "ख" receives a score of 2, "ग" receives a score of 3, "घ" receives a score of 4, and "ङ" receives a score of 5. These are represented as a, b, c, d, and e in English. By employing the split-half approach and the S-B formula, the scale's internal consistency was found to be 0.75. By using the test-retest correlation approach, the temporal stability was found to be 0.70. Its content, construct and predictive validities have been found to be quite sound and satisfactory.

Results and Discussion:

Hypothesis: There would be a significant difference between rural and urban college students of each caste groups with regard to level of aspiration.

Table no. 1: Means, SDs, and SED and results of t-ratio between mean level of aspiration of urban group and rural group of forward college students

Variables	Group	N	Mean	SD	SED	t	P
Level of Aspiration	Urban	50	68.90	1.741	0.433	10.65	<..001
	Rural	50	64.28	2.524			

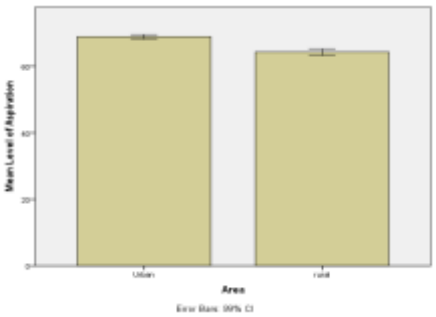

Figure 1: Graphic representation of mean score of levels of aspiration of urban group and rural group of forward college students.

Table- 1 and figure 1 shows that mean levels of aspiration score of urban and rural forward college students were 68.90 and 64.28 respectively. The SDs of levels of aspiration score of urban and rural forward college students were found 1.741 and 2.524 respectively. The t- ratios between means levels of aspiration scores of the two groups was found to be 10.65, which was statistically significant at 0.01 level of confidence. These finding suggest that forward urban students had significantly greater amount of levels of aspiration than forward rural students.

Table no. 2: Means, SDs, and SED and results of t-ratio between mean level of aspiration of urban group and rural group of backward college students.

Variables	Group	N	Mean	SD	SED	t	P
Level of Aspiration	Urban	50	62.18	3.147	0.566	3.378	<.001
	Rural	50	60.27	2.439			

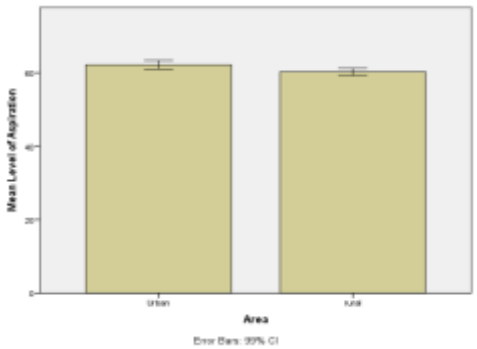

Figure 2: Graphic representation of mean score of level of aspiration of urban group and rural group of backward college students

Table- 2 and figure 2 shows that mean levels of aspiration score of urban and rural backward college students were 62.18 and 60.27 respectively. The SDs of levels of aspiration score of urban and rural backward college students were found 3.147 and 2.439 respectively. The t- ratios between means levels of aspiration scores of the two groups was found to be 3.378, which was statistically significant at o.o1 level of confidence. These finding suggest that forward urban students had significantly greater amount of levels of aspiration than backward rural students.

Table no. 3: Means, SDs, and SED and results of t-ratio between mean level of aspiration of urban group and rural group of dalit college students.

Variables	Group	N	Mean	SD	SED	t	P
Level of Aspiration	**Urban**	50	51.80	3.534	0.880	2.074	<.05
	Rural	50	53.63	5.153			

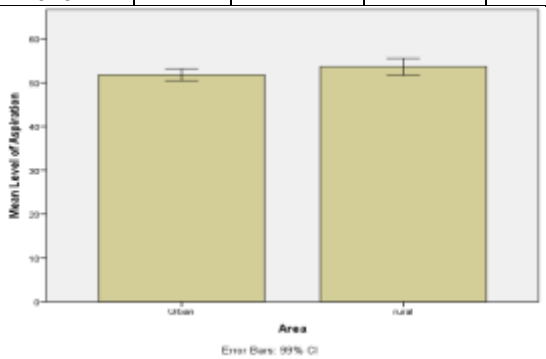

Figure 3: Graphic representation of mean score of level of aspiration of urban group and rural group of dalit college students

Table- 3 and figure 3 shows that mean levels of aspiration score of urban and rural dalit college students were 51.80 and 53.63 respectively. The SDs of levels of aspiration score of urban and rural dalit college students were found 3.534 and 5.153 respectively. The t- ratios between means levels of aspiration scores of the two groups was found to be 3.378, which was statistically significant at 0.05 level of confidence. These finding suggest that dalit rural students had significantly greater amount of levels of aspiration than dalit urban students.

These finding suggest that dalit rural students had significantly greater amount of levels of aspiration than dalit urban students. These finding suggest that urban students of each caste group had significantly greater amount of level of aspiration than rural students. Hence, the hypothesis-2

which states that "there will be significant difference between rural and urban college students of each caste groups with regard to level of aspiration" was accepted by the finding of the study.

The outcome might be explained by the fact that children's aspirations are influenced by their parents' aspirations. Urban parents are more educated than their rural counterparts and consistently have higher expectations for their kids. Furthermore, one significant contributing aspect in this respect is the educational environment. Higher aspirations are prompted by superior educational facilities, such as top-notch coaching centres, well-stocked libraries backed by cutting-edge technology, and capable instructors. Our finding is in line with the previous study result, which was conducted by Santosh Bhandari (2014). According to him, a significant difference was found in the level of aspiration of rural and urban adolescents.

Conclusion:

The current study was carried out with the intention of determining the disparity in aspiration levels between each caste group's rural and urban college students as well as between the three caste groups of rural college students. Analogously, there existed dissimilarities in the aspirational levels of three distinct caste groups of urban college students, and it was also possible to discern dissimilarities in the aspirational levels of a total number of students individually. The following outcomes were attained. The t- ratios between means level of aspiration scores of the two groups was found statistically significant. These finding suggest that urban forward caste students had significantly greater amount of level of aspiration than forward caste college students.

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India as a Reckonable Economic and Military Power

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Abstract

India's emergence on the global stage as both an economic and military power is no longer a distant aspiration but a reality taking shape through sustained efforts across multiple domains. This paper explores the diverse factors contributing to India's growing influence—from its strategic geographic position and rich resource base to its youthful population, democratic framework, and expanding industrial and defence capabilities. With a focus on qualitative analysis, the study draws on national and international sources to evaluate India's progress and preparedness in asserting itself as a significant force in the changing global order. While challenges remain, India's ability to adapt, innovate, and assert its interests points toward a future where it plays a central role in regional and international affairs.

Keywords: Reckonable, Strategic Power, Economic and Military Power, Military Modernisation, Demographic Dividend, National Security, and Foreign Policy.

I. Introduction

The The 21st century is witnessing a profound shift in the global power matrix, where traditional military might is increasingly supplemented—and sometimes superseded—by economic clout. The dissolution of the Soviet Union, the ideological decline of communism, and the strategic repositioning of Europe have all contributed to reshaping global dynamics (Zakaria, 2008). A gradual transformation from a geopolitically driven to a geo-economically dominated world order has emerged. Amidst this global transformation, India has demonstrated a strong resolve to redefine its strategic and economic identity, aspiring to become a "reckonable" force.

India's aspirations are not unfounded. With its vast natural and human resources, strong democratic framework, rapidly advancing economy, and growing military capabilities, India is increasingly being recognized as a formidable force in international politics (Cohen, 2001). This paper delves into the multi-faceted drivers of India's emergence as an economic and military power, examining its geopolitical setting, resource base, governance, economic trajectory, and strategic posture.

II. Objectives

1. Analyze India's emergence as a significant economic and military power in the evolving global context.
2. Examine India's strategic geopolitical location and how it enhances regional influence.
3. Assess India's economic growth, resource base, and technological advancements.
4. Evaluate India's military capabilities and strategic preparedness.
5. Explore the interplay between democracy, governance, and power projection.

III. Related Work

Numerous scholars have assessed India's potential rise as a global power. Mohan (2003) emphasizes the importance for maritime power projection to secure India's strategic interests. Cohen (2001) described India as an "emerging power" with potential global influence, contingent on structural reforms and coherent policy strategies. Zakaria (2008) highlighted India's democratic resilience and expanding middle class as foundations for global prominence.

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Strategic assessments by think tanks such as SIPRI and IISS indicate a consistent increase in India's defence budget and capacity, including indigenization trends in military procurement (SIPRI, 2024; IISS, 2023). Government documents, such as India's National Security Strategy and Defence White Papers, articulate a long-term vision of strategic autonomy and regional leadership (Ministry of Defence, 2023).

IV. Methodology

This research employs a qualitative methodology, synthesizing existing academic literature, government policy documents, international think tank reports, and economic indicators. It applies a thematic analysis across key pillars—geopolitics, natural and human resources, economic capability, science and technology, political structure, and military strength—to develop a comprehensive understanding of India's power trajectory. Data and insights are drawn from credible sources including the World Bank, SIPRI, IMF, Ministry of Defence (India), and NITI Aayog reports.

V. Data Analysis

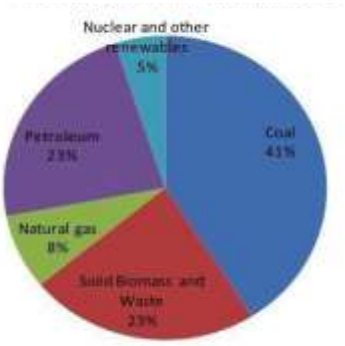
1. Geostrategic Advantage

- India's location gives it leverage over critical sea lanes and trade routes in the Indian Ocean, through which 80% of global oil trade passes (IISS, 2023). Island bases like the Andaman and Nicobar enhance India's power projection in the Indo-Pacific, reinforcing its status as a net security provider (Mohan, 2003).

2. Natural Resources and Self-Reliance

- India's resource base is one of the most diverse globally. It ranks third in coal production and has significant reserves of iron ore (10% of global reserves), bauxite, thorium, and manganese (Ministry of Mines, 2023).
- Agricultural productivity benefits from varied soil types—from alluvial plains in the north to black soil in the Deccan. India is also self-sufficient in food grain production, significantly reducing vulnerability to global supply shocks. While oil imports remain high, increased exploration and strategic petroleum reserves have improved energy security.

TOTAL ENERGY CONSUMPTION IN INDIA 2011



INDIA CRUDE OIL IMPORTS BY SOURCE 2012

3. Human Capital and Demographic Dividend

- India surpassed 1.4 billion people in 2023, with over 65% below the age of 35 (UN DESA, 2023). With 1.5 million engineers graduating annually and rising investments in skilling through "Skill India" and the National Education Policy 2020, India is preparing a robust labour force (NITI Aayog, 2022).

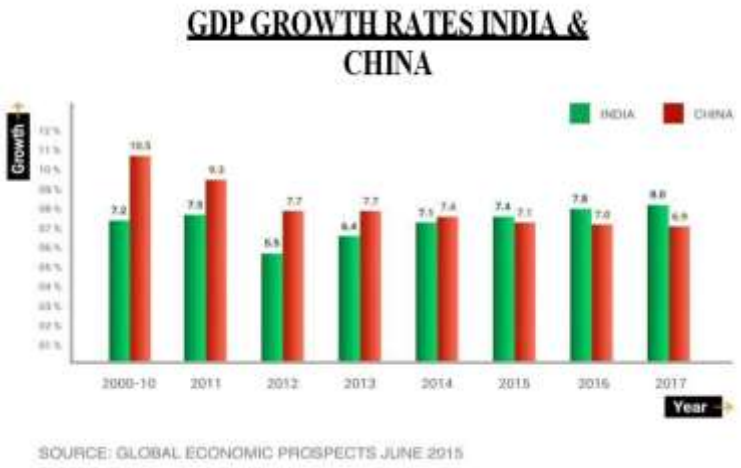
4. Economic Growth and Industrial Base

- Since the 1991 liberalization reforms, India has gradually integrated into the global economy. The country's GDP has risen from $275 billion in 1991 to over $3.7 trillion in

2024, making it the fifth-largest economy globally (IMF, 2024). India is also among the fastest-growing major economies, with a projected growth rate of 6.8% in 2025.

- Sectors such as pharmaceuticals, automobile manufacturing, renewable energy, and information technology have witnessed exponential growth. Initiatives like "Make in India" and "Atmanirbhar Bharat" aim to boost domestic manufacturing and reduce import dependency (NITI Aayog, 2022).

5. Science, Technology, and Innovation



- India's scientific achievements have been noteworthy. The Indian Space Research Organisation (ISRO) has launched successful lunar and Mars missions at a fraction of global costs. India's cost-effective space missions, such as Mangalyaan and Chandrayaan-3, have received global praise (ISRO, 2023).
- India's defence R&D has also seen advancement, with indigenously developed missiles like Agni and Prithvi, DRDO Programs and fighter aircraft like the HAL Tejas (Ministry of Defence, 2023). Private sector involvement in aerospace, semiconductors, and AI is on the rise.

6. Political Resilience and Democratic Strength

- India has held regular elections since 1952, with a vibrant civil society and active judiciary (Election Commission of India, 2021). Reforms such as the RTI Act and anti-corruption drives have improved governance. India balances non-alignment with strategic partnerships through initiatives like QUAD and bilateral defence cooperation (Mohan, 2003).

7. Military Strength and Strategic Posture

- India's military, with 1.4 million active personnel, is the fourth largest globally. The defence budget reached $73.6 billion in 2024 (SIPRI, 2024). India's nuclear triad, indigenous missile systems like Agni-V, and aircraft carriers (INS Vikrant, INS Vikramaditya) reflect growing deterrence and blue-water capabilities. Participation in multilateral exercises (e.g., Malabar) underscores its interoperability and strategic reach (Ministry of Defence, 2023).

VI. Conclusion

India stands at a historical crossroads. Its economic trajectory, demographic dividend, military modernization, and strategic geographic positioning combine to make it a "reckonable" power on the global stage. However, challenges remain—ranging from infrastructure gaps and regional disparities to climate change and external security threats.

Sustained reforms, investments in innovation and human capital, and a firm yet flexible foreign policy will be crucial for India to fully realize its potential. In an era where power is increasingly defined by economic influence, technological capability, and strategic autonomy, India is well-positioned to be a decisive player in shaping the 21st-century world order.

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Towards a Plethora of Feminist Interventions in the Digital Humanities, Feminist Digital Humanities and Feminist Intersectional Digital Humanities

Meena Shanker*

Feminist Digital Humanities, a more topical advanced arena of study in Digital Humanities was born partly because of topical censure of the proclivity of digital Humanities to further patriarchal or hegemonic academic discourses as women were hastily dominating social media to echo the advancements and trends of technological and digital advancement in the rapid growth of Feminist Digital Humanities. The post-feminism era of the 1980s to 1990s on text technology was vibrant in the arena of digital humanities. Feminist Digital Humanities reconnoitered women's sense of writing to depict women's contributions in the digital archive to highpoint not only feminism, and cyber feminism in technology but to point out the elimination of women from histories of technology. The need to indorse feminist scholarship through Feminist Digital Humanities and deliberate on diversity, gender, sexual issues and contemporary feminist awareness endorsed a collaboration based on women's knowledge and interpretation. Feminist Digital Humanities Collection conserve the feminists' works to represent histories and engage with the past works of feminists to comprehend women's work of writings.

Digital humanities fashioned a precise, detailed and explicit podium for women's works and feminism. In "Whence Feminism? Assessing Feminist Interventions in Digital Literary Archives", Jacqueline Wernimont shaped replication on the potency of a feminist analysis of digital literary archives and the cross-disciplinary apparatuses, where she expounded the Women Writers Project (WWO) and The Orlando Project. Digital literary scholarship unfolded the prime source of the feminist digital humanities movement. The new electronic approach assuaged the marginality of women who shared that "the electronic archive appeared to be the ideal theoretical successor to the physical archive, since it assured to curb the issues of inaccessibility and dearth which had rendered women's literary works invisible for so long".

The feminist literary scholars and co-founders of Orlando, Susan Brown, Patricia Clements, and Isobel Grundy aimed to recover women's work to visible archives as one of their long-time ambitions, due to the unsettling loss of early digital literary projects. Earhart's apprehensions that these blueprints demonstrate a primal touch where digital literary scholarship acted as a mechanism that might be implemented to fulfill the theoretical demands of academic literature that reinstated "women, people of colour, queers into the canon" to read positive responses on the existing abundance of works of women. Digital archives is a tenaciously productive and procedure that satisfy feminist's preference by establishing storage for an inclusive and diversity of women writers. This movement retrieves the work of neglected to be create the works as significant resource.

Intersectional Feminism in Digital Humanities has been a boon to mankind. Intersectionality, coined by Kimberlé Crenshaw to revision the dearth of enunciation between feminists and critical antiracist practices, were addressed with gender or race was pragmatic to perceive race, class, and gender as beyond separate structures and to evaluate the additional facets of the difference including sexuality and capability. Intersectionality was progressively incorporated into the field of digital humanities as a viewpoint for scholarship in digital humanities. Intersectionality advocates complex analysis and highlights differences while resisting binary logic to merge, feminism, digitality, technology and media studies an academic discourse that ought not to be dominated by apolitical white heterosexual male dominance. Intersectionality generates an innocuous and insightful space for intersectional investigation. The developed visualizations in new media

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fetched consideration to the concepts, thoughts and philosophies made by feminists, queers, and academic intellectuals of critical race theory to interrogate the connect between digital media and various categories of identity. This was done with a view to instantaneously vary the imagined and vicarious linkage between digital media, networks, and individuality. Feminism was essential to comprehend the identity and methodologies of digital humanities so that intersectional feminism could be projected.

Intersectional feminism focuses on the dynamics that stimulated the biased notions about equal rights and propositioned an optimistic milieu for women, men, and all genders. It dismantled the rigidity of a gender binary society for the advantage of the society and its individuals. Intersectional feminism recognizes the affiliation and rapport between the power structures whether it is race, class or sexuality. It incorporates within it, digital humanities practices to safeguard the likelihood of a contest against what should be impermissible as normalized sexual annoyance, predation, and racism within organizations across the globe. It is a harbinger of positive changes and uplifts the community as a whole. Intersectional feminism offers the unsurpassed leadership in ethical procedures to digital humanities. Roopika Risam opines that it offers "a viable approach to cultural criticism in the digital humanities." Risam calls for an intersectional approach to digital humanities that invites a "greater intellectual diversity in the field" through an investigation of its antiquity. The intersectional feminist praxis in digital humanities affords a path that enable the academia and the women community to involve a diversity of the populace by equipping them with the technical digital skills and project their findings for posterity through digitalisation.

Women of colour attain a collective presence online, as they are the voice of gender and racial identifications Donna Haraway initiated specific feminist approaches to the study of digital humanities and this was preserved in the work of Fem Tech Net, "an activated network of scholars, artists, and students who work on, with, and at the borders of technology, science and feminism in arenas like STS, Media and Visual Studies, Art, Women's, Queer, and Ethnic Studies". FemTechNet collaborated on a number of projects that reflect the aims of Feminist Digital Humanities, including Wikistorming, DOCC: Distributed Open Collaborative Course, and video dialogues. Their methods connect diverse institutions, nations, and fields. Professors of Digital Humanities, Bethany Nowviskie and Miriam Posner have blogged about the narratives that have kept women from engaging in digital humanities and attempted to increase the racial representations within the field as well. These feminist digital humanities projects include #transformDH, That Camp Theory, Critical Code Studies, and Crunk Feminist Collective.

Spaces such as the liberal news sites Huffington Post, blogs such as Jezebel and Feministing to social networking media such as Facebook, Twitter and Instagram have been exploited for propagation of digital media devices in creating consciousness of the feminism digital movement. The fourth wave of feminism in America additionally proven by the propagation of the "Me Too "movement through social media in the United States ever since 2012. Sexist jokes, workplace sexism, sexual assault and victim-blaming, injustice ascribed to the victims to work on gender inequality bridged the gap between genders about the awareness of as part of the feminist movement to assert human rights and gender equality progression where it was in protest against assault and sexual harassment against women. The hashtag #MeToo introduced by an American activist, Tarana Burke in in My Space where social media users have been utilising it to draw attention to the problems related to sexual misconduct. Contentions regarding violence and sexual harassment against women were meant to be publicized on social media such as Twitter as part of the social movement to hold the powerful men accountable for their crime with the amount of audience accumulated. #MeToo movement had severe impact and common sexual harassment, abuse, and injustice towards women brought a massive awareness in them to prevent sexual harassment as well as assault happening in the country. As a platform for victims of abuse and harassment it was a 'safe space' to voice emotions without fear of being invalidated.[27] #NotBuyingIt campaign, a digital feminist movement encountered the problem and stereotype of women sexual objectification. It critiqued

women stereotypes as objects in sexist commercials with the aim of women objectification to concede to the power of female consumers. The #Him Too, being an extraction from the Me-Too movement, was one of the hashtags that was heavily circulated on social media by the feminism digital activists in October 2018.[30] The tagline, gained momentum when a mother professed her concern towards her son being falsely accused of sexual misconduct when going on a date using the hashtag.[31] Issues discussed in Feminist Digital Humanities on institutional bias strongly supported feminist digital humanities.

In intersectional digital feminism, a more diverse and inclusive approach is pragmatic to see that people of all colours, nationalities, abilities, genders, and social status is tangled. The Feminist Digital Humanities discusses in the Digital Black Feminism and rights of indigenous women. One digital humanities project called the Warrior Women Project focuses on highlighting the women as history makers of the indigenous community. Online harassment, discussed in feminist digital humanities about women's silenced voices adversely manipulates women's personal and professional lives. Feminist scholars complain of online harassment collectively in social media platforms. Misogyny and sexism are examples of online harassment that frequently happened to younger women in social media platforms especially on Twitter, Instagram and other platforms which increase the visibility of harassment available to a wider audience. Tweets tormenting women are misogynistic and related to pornography by using tags such as rape, slut and whore. The Women's Media Center (WMC) is a platform for women to share their displeasure towards the annoyance that they face every day. Sexism is contested over the internet. In 2012, Laura Bates recognized a website and set up a social with Everyday Sexism Project.

The challenges and limitations are many. Feminist Digital Humanities is a reiteration of feminist contributions and ideologies which encompass the methods and instruments that help to compile the work of feminists and propagate evidence among the members of society. Due to the increase in the dependency of the Internet through many online platforms, modern feminists are unrestrainedly embracing the Internet as a prime medium of evidence on issues pertaining to feminism. In the digital humanity sphere, there is undoubtedly gender imbalance. Women and feminists who have been a part of digital humanities since it was first called "humanities computing" have been undergoing all sorts of structural misogyny and discrimination through many intellectual engagements. The systematic discrimination, sexual harassment and most importantly, the minimization of feminist contributions towards many fields are uncommon and continue to obstruct the expansion of feminist digital humanities. For future digital humanities to succeed, intersectional feminism should be fundamental to digital humanities practices. Among the chief restrictions in the proliferation of Feminist Digital Humanities to the civic community is the issue of underfunding and insufficient institutional or peripheral support.

The Archival of Feminist Digital Humanities Projects are manifold. One goal of feminist literary scholars has been to upsurge the possibility of women's literary works in visible archives. The Orlando Project and The Women Writers Project are projects that undertook the task of filling in the gaps that occurred in literary history in the 1980s. Both efforts sought to use the electronic format to overcome the problems of inaccessibility and scarcity which had rendered women's writing invisible for so long .One critique of a content-oriented approach to combating the marginalization of women's literary works is that it's simply not enough to add content to a system that is erected upon a male-controlled patriarchal methodology. Literary scholars who depend on archival or rare book materials still confront, whether they acknowledge it or not, the legacy of an institutional form through which patriarchal power exercised the authority to determine value, classification, and access. The Orlando Project emphases on recovering feminist-related literature works, inscribed by British women, men and other women. There are about 1413 writers recognized together with their respective works and more than 30,000 events were chronicled. In addition, 25,000 sources were included in the events within the literary works. The Brown University English Department initiated the Women's Writers Project (WWP) in the late 1980s, transcribed about 200 texts in the first five years and made a draft

printout for academic purpose. The project also joins forces with Oxford University Press to experiment with publishing editors of their respected works in traditional print form. Women's Writers Online (WWO) was published in 1999, enabling WWP collection accessible online. The project has been subscribed by over 200 institutions including universities, libraries and entities. WWP also held a series of conferences on "Women in the Archives", conceding them a collaboration with The National Endowment for the Humanities (NEH) Collaborative Research Grant. The purpose of CSOV is to discourse digital violence experienced by women and other issues related to gender, race, sexuality and ability. This project intends to expand the latency of internet access without physical and psychological harm which makes access to digital resources and communities easier. Thus cyberfeminism, feminist technoscience and other digital technologies champion feminist digital technologies which create an epoch of triumph in the technological times of the day.

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ChatGPT as the 21st-Century Muse: Reimagining Creativity in the Age of AI

Arzoo*

The 21st century has undoubtedly emerged as an era of rapid technological advancement, where Artificial Intelligence (AI) is not only transforming science and technology but also revolutionizing literature, education, healthcare, and business. At the heart of this transformation stands a remarkable innovation—ChatGPT. Far more than just a question-answering tool, ChatGPT has redefined how we perceive creativity, communication, and the dissemination of knowledge. It serves not merely as a digital assistant, but also as a creative collaborator, teacher, writer, and at times, even a philosophical companion. With its ability to understand context, generate human-like responses, and adapt across languages and cultures, ChatGPT has become an integral part of modern intellectual and creative processes.

In today's world, it is helping students learn better, aiding writers in generating and refining ideas, supporting professionals in research and drafting, and even assisting in coding and data analysis. Its versatile capabilities empower users to transform raw thoughts into structured expression—be it in the form of stories, poems, academic essays, or business strategies. More importantly, it fosters curiosity, encourages critical thinking, and supports innovation by enabling real-time brainstorming and problem-solving. The question is no longer whether machines can think like humans, but rather how we, as humans, can collaborate with machines like ChatGPT to explore new creative frontiers. As a symbol of this collaboration, ChatGPT is not just a product of the AI age; it is a powerful enabler of human imagination in the 21st century.

Key Word- ChatGPt, Artificial Intelligence (AI), Education, Learning.

Introduction

In the 21st century, technological innovation is reshaping the fabric of human experience, with artificial intelligence standing at the forefront of this transformation. Among the most influential breakthroughs is ChatGPT, a conversational AI that has expanded the boundaries of what machines can do. Initially seen as a tool for generating text or answering queries, ChatGPT has rapidly evolved into a multifaceted collaborator. It is revolutionizing literature by aiding writers in crafting compelling narratives, assisting educators in creating engaging lesson plans, and helping students to understand complex concepts. In business, it's redefining customer service, streamlining communication, and even supporting strategic decision-making. Its adaptability across such a wide array of domains has made it not merely a machine, but a dynamic partner in problem-solving and creativity[1].

What sets ChatGPT apart is its ability to engage in deep, contextual conversations that simulate human-like understanding. This allows users to interact with it as they would with a colleague or mentor. It can co-write poetry, suggest philosophical insights, brainstorm startup ideas, and even provide emotional support in moments of solitude. Its role as a creative collaborator is especially transformative—by democratizing access to ideas, language, and structured thinking, ChatGPT empowers individuals to explore and express themselves in ways previously limited by skill or circumstance.[1] In doing so, it's not only assisting with tasks but also inspiring new ways of thinking. As we continue navigating the digital age, tools like ChatGPT are not just reflections of our technological progress—they are shaping the very essence of how we create, communicate, and connect.

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AI and the New Era of Creativity

AI, especially generative AI (such as GPT models), has shown that machines can not only process data but also create new ideas, songs, poems, articles and designs. Creativity has long been regarded as a distinctly human trait—rooted in emotion, experience, intuition, and the ability to make abstract connections. For centuries, literature, music, visual arts, and scientific discovery were seen as exclusive domains of human intellect. However, the emergence of artificial intelligence, particularly generative AI models such as Open AI's GPT series, has profoundly challenged this view.[2] These systems are not only capable of processing vast amounts of data but are also demonstrating an astonishing ability to generate novel content—be it poems, stories, musical compositions, visual artworks, or even innovative scientific hypotheses[1].

ChatGPT exemplifies this paradigm shift. As a language-based AI model, it is capable of holding fluid and context-rich conversations, answering questions, generating creative texts, and collaborating with humans in real time. This makes it an invaluable companion for a wide range of creative professionals and learners, including writers seeking inspiration, journalists drafting articles under tight deadlines, researchers organizing ideas, and students working on academic essays. Unlike traditional tools, ChatGPT doesn't just provide static information—it engages dynamically, offering stylistic variations, structural suggestions, and thematic input that can elevate the creative process. In doing so, it democratizes creativity by lowering barriers to expression and amplifying the imaginative potential of individuals, regardless of their background or expertise[3].

Role of ChatGPT in Education

ChatGPT has increasingly become an integral part of modern education, serving as a digital teaching assistant that enhances both teaching and learning experiences. Its ability to simplify complex topics allows students to grasp challenging subjects more easily, promoting deeper understanding and independent learning. For instance, it can break down scientific theories or mathematical problems into digestible explanations, making it easier for students to follow along at their own pace. In addition to providing clarity, ChatGPT also offers multilingual support, helping students who are non-native English speakers by translating concepts into their native language, thereby reducing language barriers in education. As discussed in *The Cambridge Handbook of Computing Education Research* (Sentance et al., 2019), the integration of intelligent systems like ChatGPT into the classroom represents a shift towards more personalized and accessible learning, where AI supports differentiated instruction and inclusive education.[4]

The significance of ChatGPT and similar tools grew rapidly in the wake of the COVID-19 pandemic, which forced schools and universities to adopt online learning almost overnight. With limited access to in-person instruction, students turned to AI-driven platforms for assistance with assignments, exam preparation, and even essay writing. This shift underscored the growing role of artificial intelligence in democratizing education, enabling learners from diverse backgrounds to access quality resources anytime and anywhere. Books such as *Teaching in a Digital Age* by A.W. (Tony) Bates (2019) highlight how digital tools not only supplement traditional pedagogy but also create new learning ecosystems that are student-centered and flexible. In this context, ChatGPT exemplifies a transformative educational technology that empowers learners to take control of their own educational journey, encouraging curiosity, autonomy, and lifelong learning.

The integration of ChatGPT into the domains of creative writing and literature marks a significant shift in how stories, poems, and scripts are conceived and developed. Writers increasingly utilize ChatGPT not just as a tool for grammar correction or stylistic polishing, but as a collaborative partner in the creative process. Whether drafting a plot for a novel, composing verses of poetry, or scripting dramatic dialogue, AI can offer fresh perspectives, suggest alternative phrasings, and help overcome writer's block. This technological involvement is particularly influential in early-stage ideation, where the generation of novel ideas and narrative possibilities can spark human creativity in unexpected ways. As noted by McGregor et al. (2022), AI tools like ChatGPT support writers by

serving as a "cognitive catalyst," helping them engage in lateral thinking and explore unconventional paths in storytelling .[5]

Despite these advantages, it is widely acknowledged that AI-generated works may lack the nuanced emotional depth and lived experience that characterize the best of human literature. A poem or story written by ChatGPT might impress with structure and coherence, but it often falls short in evoking genuine emotional resonance or capturing subtle human truths. However, this does not diminish its value; rather, it positions the AI as a valuable co-author—capable of producing a foundational text that the human writer can refine and personalize. As artificial intelligence continues to evolve, its contributions to literature will likely grow, not as a replacement for human creativity but as a companion to it.

Revolutionizing business and marketing

ChatGPT is transforming the way businesses approach marketing and communication. By offering fast, efficient solutions for tasks like developing marketing strategies, crafting brand messages, generating social media content, and writing email campaigns, it significantly reduces the time and resources traditionally required for these efforts. Its applications are broad, ranging from creative copywriting to enhancing customer service interactions. This flexibility allows companies to streamline their operations, maintain a consistent voice across platforms, and respond more effectively to market demands. As a result, ChatGPT has become an essential tool for modern marketing teams, enabling them to focus more on strategy and innovation rather than routine tasks .[6]

Ethical questions and limitations

While ChatGPT offers remarkable capabilities, its use raises significant ethical concerns, such as potential copyright infringement, the spread of misinformation, and improper assistance in educational contexts. To ensure responsible use, it's crucial that ChatGPT is employed within a clear ethical framework, where it serves as a supportive tool rather than a replacement for human judgment or creativity.[7]

Looking Ahead

The rise of ChatGPT signals the start of a new creative era, where the line between human imagination and artificial intelligence is becoming increasingly indistinct. This hybrid creativity, driven by the collaboration between humans and machines, is set to expand further, unlocking new opportunities for innovation and artistic expression in the future.

Conclusion

In conclusion, ChatGPT represents a pivotal moment in the intersection of technology and creativity. Its versatility in education, business, literature, and various creative domains demonstrates the profound impact AI can have on human expression and problem-solving. By acting as both a collaborator and a catalyst, ChatGPT not only enhances individual creativity but also democratizes access to knowledge, allowing a wider range of people to explore their ideas and talents. The way it empowers students to learn, assists writers in their creative process, and aids businesses in streamlining their operations underscores its transformative role in modern society.

However, as with any technological advancement, the rise of ChatGPT also brings ethical challenges that must be addressed. Issues such as the potential for misinformation, copyright concerns, and the responsible use of AI in education and creative processes demand careful consideration. Moving forward, it will be crucial to establish guidelines that ensure AI tools like ChatGPT are used ethically and responsibly, supporting rather than replacing human ingenuity. The future of creativity, fueled by the synergy of human and machine collaboration, holds immense promise, offering new horizons for innovation across every field.

ChatGPT is the epitome of 21st century inspiration, proving that AI can be more than just a technical tool, but also a creative companion. It not only speeds up ideas but also provides new mediums of expression. If used wisely and ethically, it can be the most powerful tool to expand the boundaries of creativity.

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Religious Dogmatism of Muslims in Relation to Some Background Factors

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Abstract

To see the role of some background factors such as age, sex and educational level in the development of religious dogmatism in Muslims and Hindus from a comparative angle 'Religious Dogmatism Scale' developed by Prasad and Rai (2002) has been used along with self made 'Personal Information Inventory were administered on a sample of 75 hindu and 75 muslims (total 150 samples). Sample was drawn from Siwan district of Bihar State. The data was analyzed by employing Mean, SD and t-ratio. Analysis of data revealed that Muslims are significantly higher on religious dogmatism than Hindus. female are significantly more religious dogmatic than male. matric pass people are significantly more religious dogmatic than Intermediate pass people and graduate+ people. But there is not a significant difference between graduate+ people and Intermediate pass people on religious dogmatism. People who belongs age group 20-40 are more religious dogmatic than other people who belongs to the age group of 40-55, and 55+. But There is not a significant difference between 55+ people and people of 40-55 age group on religious dogmatism.

Keywords:- Religious dogmatism, Hindu, Muslim, Age, Educational level.

Introduction

Religion is a fundamental set of beliefs and practices generally agreed upon by a group of people. These set of beliefs concern the cause, nature, and purpose of the universe, and involve devotional and ritual observances. It also denotes systems of faith that are based on the belief in the existence of a particular God/ Goddess. Such as the Hindu, the Islam, the Sikh, the Christian etc. represent specific religions.

Dogmatism may be defined as a tendency to lay down principles as undeniably true without consideration of evidence or the opinions of others. Dogmatism is defined by Rokeach(1954) as "a relatively closed cognitive organization of beliefs about reality focused around a central set of beliefs about absolute authority which, in turn, provides a framework for patterns of intolerance and qualified tolerance toward others". Dogmatically religious people are those who think that they're right and everyone else is wrong. For them, religion isn't about self-development or experiencing the transcendent, but about adhering to a set of rigid beliefs and following the rules laid down by religious authorities. It's about defending their beliefs against anyone who questions them, asserting their "truth" over other peoples, and spreading those beliefs to others.

There are rigidity and conservatism in religious dogmatism. We know that as time goes on, there is a flaw in everything, even if it is a religion. But because of the rigid and conservative beliefs people can't see reality , Good or bad things, or new aspect of their religion. So it functions as a barrier for the development of their societies. In addition to this, it is very dangerous for national integrity and world peace because here the feeling of 'I' prevails over the feeling of 'We'.'I am right and I can not be wrong' concept governs the entire psychological and physiological dimensions of such persons. In this situation if any religion, person or society speaks against the beliefs of that religion, it becomes unbearable for such religious persons and they feel provoked for violence and anti-social behaviours.

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In current situation of different drives of central and state governments for strengthening national integration through implementation of uniforms civil code, nationalization of all religious sects and tribes, equality of opportunity irrespective of sex, caste, religion and region it is important to trace out the barriers in the way of this drive. Religious dogmatism weakens national coherence, social tolerance and brotherhood. So it becomes very important for student of psychology to trace out the role of background factors in the development and formation of dogmatic religious attitudes.

There are rare researches in this field. There has not been carried out investigations regarding the emergence and development of religious dogmatism but there are some researches which demonstrate that religious prejudice and conservative attitudes develop under the influence of certain background factors (Natraj,1965; Wilson, 1973 ; Khan,1978; Shirali and Nijhawan, 1978; Sarkar and Hassan, 1978; Ojha and Shah, 1990; Pramanic, 1995;).

Although religious dogmatism is visible in all religions, but it is more visible in the Muslims. So the main objective of the research is to find out the role of some background factors such as age , sex and educational level in the development of religious dogmatism in Muslims and Hindus from a comparative angle .

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

1. There will be significant difference between Hindu and Muslim groups on religious dogmatism .
2. There will be significant effect of education on religious dogmatism.

Method

Sample : - A sample of 150 villagers of Goreyakothi block were selected in wich 75 villagers were Hindu and 75 villagers were Muslim by using purposive -cum- random sampling design. Samples were drawn from 10 villages. The age range of subjects was from 20-60 years.

Tests Used: - 'Religious Dogmatism Scale' developed by Prasad and Rai (2002) has been used to measure religious dogmatism of the subjects. The scale consist of 30 statements. Lower score in the scale denotes lower religious dogmatism whereas higher score in the scale denotes higher religious dogmatism.

Personal Information Inventory has been used to classify subjects on the basis of Religion, Sex, Educational level, and Age.

Statistical Analysis :- Statistical analysis of obtained data has been done. Means, S.Ds and 't' ratios have been computed to test the significance of difference between mean scores of different groups and sub- groups.

Results and Discussion

Table-1 :

Showing Means, S.Ds. and 't' Ratio of Hindu and Muslim on Religious Dogmatism.

Variable	Groups	N	Mean	SD	df	T	P
Religion	Hindu	75	102.08	16.46	148	2.85	.01
	Muslim	75	96.02	8.12			

It is clear from the table -1 that there is significant difference between Hindu and Muslim on religious dogmatism. The muslim group have higher mean scores (M= 102.08) than the mean scores (M = 96.02) of the Hindu group. The obtained 't' ratio to test the significance of difference between mean religious dogmatism score of Muslim and Hindu groups is 2.85 which is higher than the required value for significance at .01 . Mean that Muslims are more religious dogmatic than Hindus. So, it can be concluded that religion of groups significantly influence their religious dogmatism.

Table -2

Showing Means, S.Ds. and 't' Ratio of Male and Female on Religious Dogmatism.

Variable	Groups	N	Mean	S.D.	Df	t – ratio	Level of Significance
Sex	Male	85	94.46	22.66	148	5.97	.01
	Female	65	99.72	18.34			

Table -2 depicts significant gender difference in participation on the basis of religious dogmatism. The female group have higher mean scores (M=99.72) than the mean score (M=94.46)of the male group. The obtained 't' ratio to test the significance of difference between mean religious dogmatism score of Male and Female is 5.97 which is significant at .01. So, this analysis reveals that female are more religious dogmatic than male.

Table - 3

Showing Means, S.Ds. and 't' Ratios of Graduate, Intermediate and Matric pass people on Religious Dogmatism

Variable	Groups	N	Mean	SD	Df	T	P
Educational level	Graduation+	60	76.85	22.26	93	0.74	NS
	Intermediate	35	80	18.46			
	Graduation+	60	76.85	22.26	113	4.55	.01
	Matric	55	92.16	12.93			
	Intermediate	35	80	18.46	88	3.41	.01
	Matric	55	92.16	12.93			

The finding of the above table indicates that as the level of education increasing, the score of Religious Dogmatism is decreasing. The mean religious dogmatism scores of Matric pass, Intermediate pass and graduate+ people are 92.16 , 80 , and 76.85 respectively. The obtained 't' ratios for (Graduation+) × (Intermediate) × (Graduation+) × (Matric) and (Intermediate) × (Matric) people are 0.74, 4.55 and 3.41 respectively. Out of these three 't' ratios only one 't' ratio for (Graduation+) × (Intermediate) is not significant. The rest two 't' ratios are lower than required value for significance at .01 level. So, there has been found significant difference on religious dogmatism between Graduate+ people and Matric pass people, Intermediate pass people and Matric pass people. On the other hand there is not a significant difference between graduate+ people and Intermediate pass people. The result shows that matric pass people are more religious dogmatic than Intermediate pass people and graduate+ people.

Table – 4

Showing Means, S.Ds. and 't' Ratios of Age-group of (20 - 40), (40 – 55) and 55+ on Religious Dogmatism.

Variable	Groups	N	Mean	SD	df	T	P
Age	55+	45	72.92	21.84	93	1.29	NS
	40-50	50	78.06	16.25			
	55+	45	72.92	21.86	98	3.45	.01
	20-40	55	86.84	17.76			
	40-55	50	78.06	16.25	103	2.65	.01
	20-40	55	86.84	17.76			

The finding of the above table shows that Age has been found significantly influencing religious dogmatism. The mean religious dogmatism scores of Age group 20-40, 40-55 and 55+ people are 86.84 , 78.06 , and 72.92 respectively. The obtained 't' ratios for Age group of(55+) × (40-55) × (55+) × (20-40) and (40-55) x (20-40) are 1.29, 3.45 and 2.65 respectively. Out of thee three 't' ratios only one 't' ratio for age group of (55+) x (40-55) is not significant. The rest two 't' ratios are lower than required value for significance at .01 level. So, there has been found significant difference on religious dogmatism between age group of 55+ people and people of age group of 20-40, people of age group 40-55 and 20-40. On the other hand there is not a significant difference between 55+ people and people of 40-55 age group. The result shows that people who belongs age group 20-40 are more religious dogmatic than other people who belongs to the age group of 40-55, and 55+.

Conclusion

The study has finally led to the following conclusions:–

1. Muslims are significantly higher on religious dogmatism than Hindus.
2. Female are significantly more religious dogmatic than male.
3. Matric pass people are significantly more religious dogmatic than Intermediate pass people and graduate+ people.
4. There is not a significant difference between graduate+ people and Intermediate pass people on religious dogmatism.
5. The people who belongs age group of 20-40 are significantly more religious dogmatic than other people who belongs to the age group of 40-55 , and 55+ .
6. There is not a significant difference between 55+ people and people of 40-55 age group on religious dogmatism.

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Insights into Child and Maternal Nutrition among Tharus in Bihar's West Champaran District

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Abstract

Health is a state of physical, mental & social well-being & not merely an absence of disease or infirmity. Hence recognizing the importance of health in the process of economic & social development & improving the quality of life of our citizens, the Government of India has resolved to launch the National Rural Health Mission (NRHM) to carry out necessary architectural correction in the health care delivery system to achieve a positive health. This paper analyses the status of health of children and maternal nutrition of West Champaran district in the state of Bihar.

Key-words: District Initiation; Priority Areas; Specific Priority of the District

Introduction

West Champaran, one of the most backward districts of Bihar, stands at the bottom of the 90 minority concentration districts. In 2001, the population of Paschim Champaran district was 27.33 lakhs and 90 per cent of the population was living in rural areas. Scheduled castes form 15 per cent of the population of the district, which is slightly less than the State figure of 16.4 per cent.

Less than one-third of the villages of West Champaran district have PHCs within 5 km. Inaccessibility of health facilities is a major deterrent in their utilization. More than one tenth of the Hindu and less than one fifth of the Muslim households depend on home remedies. 44.92 per cent and 39.03 per cent of the Hindu and Muslim households respectively have fully immunized their children below the age of 5 years. Institutional delivery of children is only at 17 percent. More than one third of the children born have received pre and post natal care.

About 94.04 per cent of households do not have any toilet facilities in their premises and defecate in the open and of them 96.78 per cent and 90.01 per cent belong to Hindu and Muslim community respectively. The drainage system is also very poor. There is not much differential between Hindu and Muslim households regarding toilet and drainage facilities, which shows uniform lack of sanitation facilities in rural households.

District Initiation

National Rural Health Mission (NRHM) is one of the major health schemes run by Ministry of health and family welfare, Gol. The basic concept of the mission is to enhance the access of Quality health services to the poorest of the poor of the society and improve the health status of the community. It envisages to improve the health status of the rural mass through various programmes. All the health services should be provided to the pregnant women such as ANC checkups, Post Natal Care, IFA tablets for restricting the enemia cases and other reproductive child health related services. It also focuses on promotion of institutional delivery for restricting the infant and as well as maternal deaths. Immunization is also a very important component which plays a vital role in child and mother health. Family planning and control of other diseases are also other focus areas.

The National Rural Health Mission (NRHM) seeks to provide effective health care to the entire rural population in the country with special focus on 18 states, which has weak public health indicators. It aims to undertake some architectural correction of the health system to enable it to be effective in providing "Health for All". The mission envisages strategy for integrating ongoing vertical programs of health and family welfare, addressing issues related to the determinants of health

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like sanitation, nutrition and safe drinking water. The National Rural Health Mission seeks to adopt sector wide approach and aims at systemic reforms to enable efficiency on health services delivery.

A synergistic approach needs to be adopted integrating the segments of nutrition, sanitation, hygiene & safe drinking water, wafer, the mechanism to bring about the expected change includes increased public expenditure on health, rending the geographical insolence in health infrastructure, positioning of manpower, decentralization, district management of health programs, community participation & up gradation of present health systems meeting Indian Public Health Standard in each block of the district. Hence the goal of promotion of district health plan is to improve the availability of and access to qualify health care by people especially for whose residing in far off rural areas, the vulnerable sections of the society especially women & children.

Priority Areas

National Rural Health Mission encompasses a wide range of health concerns including the determinants of the good health. Though there is a significant increase in resource allocation for the NRHM, there can never be adequate resources for all the health needs and all that needs to be done for ensuring good health of all the people. It is therefore necessary to Sub-centres the areas where appropriate emphasis needs to be given.

Based on the background and the planning process following are the overall priorities of the District:

1. Improving Infrastructure has to be the taken up as there is great gap in infrastructure at all levels.
2. Improving Maternal & Child Health & ensuring complete immunization, Ante natal and Post natal cover.
3. Improving Family Planning Services.
4. Reduction of morbidity/Mortality due to Kalaazar, malaria and TB through effective disease control and surveillance.
5. Increase in the number of facilities as per the population
6. Availability of personnel and their Capacity building
7. Adverse Sex Ratio
8. Improving behaviour change communication.
9. Ensuring adequate supply of drugs particularly at primary level to poorer sections.
10. Ensuring development of effective and sustainable financing arrangements to protect the interest of marginalized sections.
11. Strengthening the HMIS and the monitoring system especially availability of correct data and its use.
12. Inter-sectoral convergence.
13. Strengthening of Civil Surgeon Office.
14. Quality services at all levels

Specific Priority of the District

1. Infrastructure: Increase in the number of SHCs, APHCS, PHCs and Urban Health centres for the slums and urbanized population. Special emphasis on making APHCs functional.
2. Maternal Health: Well managed system of institutional deliveries through Delivery huts and Emergency Obstetric Care services, JBSY extended to all poor categories of persons, Blood Storage Units at District Hospital, All PHCs to be developed as FRUS, PHCs to be developed as 24x7 facilities, good referral developed mechanisms. Ensure complete Ante natal and Post natal coverage.
3. Neo Natal and Child Health: Provision of Neonatal services at APHCs, PHCs, Training on IMNCI, addressing Anaemia and Malnutrition. Preparation of School Health Plan.
4. Family Planning: Improving the coverage for Spacing methods and NSV
5. Immunization: Total coverage for immunization

6. Adolescent Health: The focus is on provision of Adolescent Reproductive all Sexual health education through schools and also awareness building on good health practices, responsible family life, and harmful effects of Alcoholism.
7. National Disease Control Programmes: Prevention Vector borne diseases especially Kalazar which is very rampant in the district. The control on malaria & TB also remains high on the agenda.
8. Gender & Equity: Implementation of PNDT Act 1995 through regular monitoring of Ultrasound Clinics and regular meetings of advisory committee. Increase in BCC/IEC activities for awareness of PNDT Act.
9. Demand Generation, IEC/BCC: Nutrition, Health & RCH Education to Adolescents, Behaviour Change in the difficult Populations and for improving the adverse sex ratio. Health Plan for each village through Village Health Committee of the Panchyat.
10. Programme Management: Better functioning of the District Health Society and a strengthened Civil Surgeon's Office and establishing BPMU.
11. Human Resources: Filling of the vacancies as per the population based norms for the year 2010-11, increased mobility, motivational issues, provision of quarters at all facilities, Availability of well trained ASHAs for each 1000 population.
12. Capacity Building: Focussed capacity building in Emergency Obstetric Care, Continuous skill building of all personnel as per needs expressed and also the new job responsibilities under NRHM. Training and capacity building of Panchayati Raj Institutions to establish decentralized and participative planning and training of all ASHAs.
13. Procurement and Logistics: Construction of a scientific Warehouse for Drugs
14. Monitoring and Evaluation: Data validation and computerized data availability upto PHCs with district linkages
15. Intersectoral Convergence: Fixing Responsibilities of each sector for their accountability and hence better Intersectoral Coordination and ensure Inter Sectoral convergence with nutrition, Drinking water & sanitation programme to derive synergies.
16. Public-Private Partnership: Increase in the number of private facilities for accreditation with the Government for providing services

Conclusion

The NRHM has a strong realization that it is important to involve community for the improvement of health status of the community through various stake holders such as ASHA, AWWS, PRI, NGOs etc. ASHA is a link worker between the client and the health service providers. The skill of the health functionaries such as ANMs LHVs should be upgraded through proper orientation to ensure quality of care in health services. Apart from that there is a need to strengthen the infrastructure and area of human resource for getting the quality of care in health services at the health centres.

To achieve the better health status of the District, there is need to develop a District Health Action plan. There is need to conduct situational analysis by going through available data of health delivery centres, and making community interaction at grass-root level with PRI, Local power group etc.

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