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**EFFECT OF SOHAM SADHANA ON ANXIETY LEVEL**

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**Sumit Kumar<sup>1</sup> and Neetika Chaube<sup>2</sup>**<sup>1</sup>Research Scholar, School of Ancient Indian Wisdom, and Yogic Studies, Shoolini University, India,<sup>2</sup>Master's Degree in yoga**ABSTRACT**

*This is the era of research, due to this lack of awareness suffers from many emotional disturbances like mood swings, lack of confidence, anxiety disorder, lack of concentration, OCD, and many other psychotic problems. In this way, everyone hurts their self-esteem, self-awareness, self-development, and self-actualization. One who suffers all this emotional narrowness cannot get the inner peace of mind. So, this is important to study the effect of Soham sadhana that how much it is helpful and effective to deal with mental imbalances and emotional instability. Soham sadhana is not only a breathing practice but spiritual practice also. So, Soham sadhana is the path to experience meditation. The famous psychologists Carson and Butcher said that: - pathological expression of any inherited vulnerability to disease is a person's psycho-social life. The study was designed to examine whether the practice of "Soham Sadhana" has a positive effect on the "Anxiety level". The sample consists of 10 people. The main objective of the study was to see the effect of Soham sadhana on anxiety levels. A meditation training program was designed, and the subjects were exposed to it for four weeks periods. The data were analysed in terms of mean, S.D, and t-test. The result indicates that Soham sadhana is one of the most effective meditating processes, which realizes one's presence. The study has its implications for school administrators, parents, teachers, rehabilitation workers, and someone who wants to know himself.*

**Keywords:** - Soham Sadhana, Anxiety, Mental Health, Social Life, Confidence.

**INTRODUCTION**

Psychological well-being alludes to our intellectual social and passionate prosperity, it is about how we think, feel, and carry on. Emotional well-being likewise incorporates an individual's capacity to appreciate life to accomplish a harmony between life exercises and endeavours to accomplish mental versatility.

Mental issue is a typical event among individuals causing a wellbeing risk, apathy, and absence of physical and mental essentialness. Mental awfulness in rudimentary form may not be perilous however its prolongation causes stress, strain, tension, stress, and loss of enthusiasm forever.

Albeit clinical science has advanced, yet it has neglected to treat individuals experiencing mental and profound issues. Numerous individuals continually go to specialists without giving any indications of physical issue. The greater part of the specialists tries not to analyse their issues and just manage rest including drugs, which are at last destructive.

I think that medication cannot cure mental situations because a medicine cannot give purity of mind and peace of mind. We also find the opening of many gyms, religious institute, training institutions for health management. Which is also not a right approach. Until and unless we purify our minds, there can be no mental peace. We must be aware and careful of our mind state.

The method of Soham Sadhana is a basic method of training to know the genuine sound of nature and to accomplish genuine true serenity and has a cheerful existence. In this way, it is a consistent procedure of mental cleansing through perception and focus.

Soham Sadhana brings the brainwave design into an Alpha express that advances recuperating. The brain turns out to be new, sensitive, and delightful with the standard act of contemplation. This training assists with diminishing uneasiness, improves enthusiastic soundness, increment imagination, and endless satisfaction. It likewise builds up the instinct, gains lucidity, and genuine feelings of serenity. Contemplation hones the psyche by picking up the centre and extends through unwinding and an extended cognizance brings flawlessness. It is a comprehensive way that prompts a feeling of harmony and prosperity. Contemplation makes the specialist mindful of his internal identity. It incorporates the development of the right mentalities and reconditioning of the sensory system. Reflection causes the entire body to empower it to withstand more noteworthy anxiety. Reflection focuses on coordinated and amicable advancement of the considerable number of possibilities of individuals.



## REVIEW LITERATURE

A few investigations have demonstrated that the act of contemplation has an unequivocal job in the advancement of positive wellbeing, including mental health. Studies conducted by Ganguly, S.K. (2005) found significant improvement in concentration power & reduction stressful condition.

A study of Gambhir, Prakash, Sandeep, and Jyoti (2006) effect of meditation on stress and its related problems. They found significantly lowered level of stress related problems and positive effect on mental health.

Bhogal, R.S. Kulkarni D.D & Bera T.K (2002) took 10 yoga certificate students for meditation for 20 weeks. The results showed that their WBC and cholesterol level become normal.

Emotional wellness portrays a degree of mental prosperity or a nonappearance of a psychological issue. From the point of view of 'positive brain science' or 'comprehensive quality', emotional well-being may incorporate a person's capacity to appreciate life and make a harmony between life exercises and endeavours to accomplish mental versatility. Psychological well-being can likewise be characterized as an outflow of feelings, and as connoting an effective adjustment to a scope of requests. The World Health Organization (WHO) characterizes psychological well-being as "a state of well-being in which the individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community." There are various sorts of emotional wellness issues, some of which are normal, for example, sorrow and tension issues, and some not normal, for example, schizophrenia and bipolar issues.

Psychological well-being is a unique condition of interior balance that empowers a person to utilize their capacities in amicability with all-inclusive estimations of society. Essential intellectual and social aptitudes; capacity to perceive, communicate and tweak one's own feelings, just as understand others; adaptability and capacity to adapt to unfriendly life occasions and capacity in social jobs; and amicable connection among body and brain speaks to significant parts of emotional well-being which contribute, to shifting degrees, to the condition of inward harmony

Mental health incorporates a few measurements: confidence, the acknowledgment of one is likely the capacity to keep up satisfying significant connections, and mental prosperity. It is an alteration of individuals to the world and to one another with a limit of adequacy and joy. Psychological wellness is close to a portrayal of scholarly conduct that is socially versatile and permits people to adapt sufficiently to life.

### Sample

The sample comprised 10 people drawn from Dev sanskriti vishawavidyalaya. The age group of 30 purposively chose participant was 20-22 years.

### Tool

Sinha's Comprehensive Anxiety Test (SCAT) standardized & created by A.K.P Sinha, L.N.K Sinha. It was utilized for the evaluation of uneasiness levels. The scale comprises of 90 things in Hindi of five regions. The scale according to the author is highly valid. Every item has two alternative responses 'yes' and 'no', the subject must close only one alternative response. The scheme of scoring is 1 mark for 'yes', 0 marks for 'no'. The total of the whole positive or yes reaction would be the absolute tension score of the person.

### Scoring table: -

	Total score	Interpretation
1.	29-71	Extremely high anxiety
2.	26-28	High anxiety
3.	17-25	Normal anxiety
4.	14-16	Low anxiety
5.	9-13	Extremely low anxiety

### Method and Design of the study

The investigation led under the semi trial one gathering pre-test post-test structure. The structure associated with three operational stages. The primary stage included the pre-testing of subjects about their uneasiness level. The subsequent stage included the introduction of subjects to contemplation. The examiner took the assistance of a specific teacher for directing the contemplation classes for 30 days every day for 20 minutes toward the beginning of the day and 20 minutes at night. The third stage included post-testing of a similar gathering utilizing a similar instrument.



## Results

The acquired information was breaking down as far as mean, SD, and 't' is introduced in the table as follows:

GROUP	N	MEAN	S. D	SED	t-value	Level of significant
Pre test	10	49.10	10.20	2.40	4.53	P<0.01
Post test	10	23.60	6.61	2.90		

Df=58

## DISCUSSION

Results uncover that there was a noteworthy distinction in the pre-test and post-test scores. Consequently, we can say that the Directional Hypothesis is acknowledged at 0.01 level of certainty or there is a huge improvement in decreasing nervousness by rehearsing Soham Sadhana.

By the above discussion, we can say that reflection can help in expanding psychological wellness, deal with the everyday life, make a mind-blowing most utilize their vitality the correct way, the acknowledgment of their capacities, adapting to typical worries of life, they have dignity. They feel ready to manage most circumstances. They can enjoy basic, regular things, beneficial work, and commitment to their locale and society. They are not overpowered by their own feeling's apprehensions, outrage, love, envy, blame, or stresses. Contemplation is a centuries-old procedure that associates people with themselves, the universe, and the soul. Emotional well-being looking vibrations of the individual rehearsing and an outcome, individuals who looking feel invigorated, quiet, and focused.

Soham yoga is kundalini yoga, straightforward as can be. "this cosmic shakti exists in the individual bodies of all breathing creatures in the form of kundalini" (Arther Avalon, the garland of letters, p,113). Kundalini is not vitality, however, awareness. Nonetheless, when cognizance moves it shows up as vitality. The basic sound from vachak; the mantra of kundalini is SOHAM.

Soham Sadhana is one of the most effective meditating process which realises one's presence. When we know and feel our real presence, we can work on our concept and our self. After practicing Soham Sadhana we really feel positive and develop our inner self. All the negative thoughts would be reduced, and all the stress and anxiety are less than before,

The entitled of the present study is "to study the effect of Soham sadhana on Anxiety" it concludes that 'Soham Sadhana' significantly decrease the level of Anxiety. By the statistical analysis of the pre and post scores, the result out that there is positive effect on Anxiety by Soham Sadhana daily. The significant level of the study is 0.01 that conclude that research is positive additionally and the directional hypothesis is accepted.

## LIMITATIONS

The current study has certain impediments. Initially, the constrained size of the example blocks the speculation of the discoveries of the investigation. On the off chance that the scientists need to duplicate the investigation, they may choose an enormous example. Also, the current examination embraced a pre-test structure that is not holding a serious extent of acknowledgment among the scientist as it neglects to give the proportionality to the gathering and arbitrary choice of the example. In this manner, a genuine trial configuration is executed to address this issue.

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**FOOD EXPENDITURE AND THE DIGITAL SHIFT: THE ROLE OF TECHNOLOGY IN  
AURANGABAD'S HOUSEHOLD CONSUMPTION**

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*This study investigates how technology, particularly online ordering systems, influenced household food expenditure in Aurangabad during the months of March 2019, 2020, and 2021. The objective is to explore how technology facilitated consumption during the COVID-19 pandemic, enabling households to maintain food expenditure amidst mobility restrictions and economic disruptions. The analysis draws on data from the CMIE Consumer Pyramids Household Survey (CPHS), employing descriptive statistics, Chi-Square tests, and ANOVA to examine relationships between socioeconomic factors and food expenditure during these three critical periods.*

*The study reveals that Adjusted Total Income, Household Size, Education, and Occupation were key determinants of food expenditure, particularly in 2020 and 2021. These findings suggest that technology, especially online ordering systems, allowed households with higher incomes, larger family sizes, and greater educational attainment to maintain stable food consumption during the pandemic. The ability to adapt to digital solutions emerged as a crucial factor in ensuring food security and economic resilience during times of crisis.*

*Keywords: Food Expenditure, Online Ordering Systems, Technology and Consumption, Socioeconomic Factors*

**INTRODUCTION**

The role of technology in consumption has never been more evident than during the COVID-19 pandemic. With traditional means of purchasing disrupted by lockdowns and social distancing measures, online ordering systems became essential for maintaining household food consumption. This study examines the determinants of food expenditure in Aurangabad during March 2019, 2020, and 2021, with a focus on how technology enabled households to adapt and continue their consumption patterns despite significant external shocks.

Aurangabad, with its mix of urban and rural characteristics, serves as a representative case for understanding how households across different socioeconomic strata responded to the challenges of the pandemic. By leveraging data from the Consumer Pyramids Household Survey (CPHS), this study explores the role of technology, such as online food delivery and e-commerce, in sustaining consumption.

**REVIEW OF LITERATURE**

The role of technology in shaping household consumption, particularly during crises, has been explored in various studies, emphasizing how digital platforms and e-commerce can support continued spending on essential goods like food.

**Emilia et al. (2024)** examined household size and its effect on consumer spending in Slovakia, noting how larger households exhibited distinct food consumption behaviors. This study highlights the influence of socioeconomic factors on food expenditure and draws attention to the role of technology in making food consumption convenient through online platforms during crises.

**Bartendu (2020)** investigated how urbanization affects food consumption in India, concluding that income and infrastructure—rather than mere urbanization—are the primary drivers of variations in food expenditure. The study noted that access to technology and market infrastructure influences consumption diversity, making digital tools like online ordering systems a vital component in regions with better access to these resources.

**Anirban et al. (2023)** analyzed the impact of COVID-19 on household consumption in Punjab, India, using data from the CMIE Consumer Pyramids Household Survey (CPHS). They found that the pandemic led to a significant reduction in consumption, particularly in urban areas. However, households with access to digital technologies were able to maintain food spending by shifting towards online purchasing, highlighting the essential role of technology in supporting consumption during crises.

**Pandey et al. (2020)** explored how urbanization and technology influenced food consumption patterns across India, noting that factors like infrastructure and digital access were more important than demographic shifts. This study emphasizes the importance of technology in enabling access to food markets and supporting consumption in urban areas, aligning with the current study's findings on how online ordering systems maintained household consumption during the pandemic

**RESEARCH METHODOLOGY**

This research uses CPHS data to examine food expenditure patterns across three key periods: pre-pandemic (March 2019), pandemic onset (March 2020), and post-pandemic (March 2021). The study uses descriptive statistics, Chi-Square tests, and ANOVA to analyze the relationships between food expenditure and variables such as Adjusted Total Income, Household Size, Education, Occupation, and Age Group. These factors are analyzed to understand how technology, particularly online ordering systems, played a role in maintaining consumption.

**Key Variables**

- **Dependent Variable:** Consumption expenditure on food.
- **Independent Variables:** Adjusted Total Income, Age Group, Gender Group, Occupation Group, Education Group, Household Size.
- **Technology Factor:** The study assumes that access to online ordering systems for food delivery significantly impacted consumption during the pandemic.

**Results and discussions****Table no. 1**

Period	Hypotheses	Significant Predictor	Role of Technology
March 2019	<b>H0: No significant relationship between food expenditure and socioeconomic factors.</b>  <b>H1: Significant relationship exists.</b>	- Adjusted Total Income - Household Size	No significant role of technology as food purchases were primarily in-person.
March 2020	<b>H0: No significant relationship between food expenditure and socioeconomic factors.</b>  <b>H1: Significant relationship exists.</b>	-Adjusted Total Income - Household Size	Online ordering systems became crucial due to lockdowns, enabling households with higher incomes to maintain consumption.
March 2021	<b>H0: No significant relationship between food expenditure and socioeconomic factors.</b>  <b>H1: Significant relationship exists.</b>	- Adjusted Total Income - Household Size - Occupation Group - Education Group	Households with higher education and income adapted to digital platforms, sustaining consumption through online food ordering systems.

(Source: Analyses based on data from CPHs)

This table captures the hypotheses tested in each period and summarizes the results, highlighting the role of technology in influencing food expenditure during and after the pandemic.

The analysis of household food expenditure in Aurangabad across March 2019, 2020, and 2021 revealed several important insights into the determinants of consumption and the role of technology in maintaining food security.

March 2019 (Pre-Pandemic): Adjusted Total Income and Household Size were significant predictors of food expenditure ( $p < 0.05$ ), suggesting that households with higher incomes and larger sizes spent more on food. Other factors such as Education Group, Age Group, Gender Group, and Occupation Group were not significant.

During this period, technology played a minimal role, as households relied predominantly on traditional in-person shopping methods for food (Emilia & Corejova, 2024).

March 2020 (Pandemic Onset): The onset of the COVID-19 pandemic brought lockdowns and movement restrictions that drastically changed consumption behavior. Adjusted Total Income and Household Size remained significant predictors of food expenditure ( $p < 0.05$ ). However, the emergence of online ordering systems for food delivery became critical for maintaining food consumption, particularly for higher-income households, who were better equipped to use these digital tools. This aligns with findings by Anirban et al. (2023), who noted that households with better access to technology could mitigate the pandemic's adverse effects on consumption.

March 2021 (Post-Pandemic Adaptation): By March 2021, households had adapted to using online grocery platforms, showing greater resilience in their food expenditure patterns. Adjusted Total Income, Household Size, Occupation Group, and Education Group were significant predictors of food expenditure ( $p < 0.05$ ), reflecting the increased importance of education and occupation in enabling households to utilize technology and maintain food consumption. This finding is consistent with studies by Bartendu (2020) and Pandey et al. (2020), which emphasize the role of infrastructure and digital access in sustaining consumption during crises.

Summary: Across the three periods, Adjusted Total Income and Household Size consistently influenced food expenditure. By 2021, Occupation Group and Education Group also became significant predictors, highlighting the growing importance of digital literacy and economic status in maintaining food consumption post-pandemic. Households with access to online ordering systems and greater technological adaptability were better equipped to sustain food consumption during the pandemic, underscoring the crucial role of technology in household consumption decisions during economic upheaval.

## CONCLUSION

The findings from this study underscore the critical role that technology, particularly online ordering systems, played in maintaining household food consumption during the pandemic. While income and household size remained consistent predictors of food expenditure, the ability to utilize online platforms emerged as a new, unmeasured but crucial factor in 2020 and 2021. Households with higher incomes, larger family sizes, and greater educational attainment were better positioned to leverage technology, ensuring stable food consumption even during periods of crisis.

Policymakers and stakeholders should recognize the importance of digital infrastructure in supporting household consumption, especially during economic disruptions. Enhancing access to online ordering systems and improving digital literacy could help bridge gaps in food security and consumption resilience in the future.

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**DIGITAL LITERACY OF WOMEN ENTREPRENEURS IN DAHANU TALUKA**

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**ABSTRACT:**

*Information and communication technologies plays a pivotal role in empowering entrepreneurs to start, manage, and grow their businesses effectively in today's digital age. It facilitates access to information, communication, innovation, efficiency and data-driven decision-making, ultimately contributing to entrepreneurial success and competitiveness in the global market place. India is passing through the phase of Industry 4.0 which represents a transformative era characterized by rapid technological advancements and digital innovation which offers unprecedented opportunities for businesses to enhance productivity, efficiency, and competitiveness. It's being observed that women entrepreneurs have played a vital role in industrial revolutions, contributing to economic growth. But in Industry 4.0 are the rural women entrepreneurs ready to contribute in economic growth of India. This research paper is an attempt to report the findings on rural women entrepreneurship and digital literacy skills. It focuses on digital knowledge and its usage by respondents. The sample of 30 women entrepreneurs from Dahanu are being selected. The data is collected through questionnaire and analysed through descriptive analysis. The findings showed that most of the respondents have knowledge of the Internet, are moderate in digital literacy skills, and have been using the Internet via smart phones. Facebook and WhatsApp are frequently used social media. This study also suggests the methods to enhance digital literacy among rural women entrepreneurs.*

*Keywords: Rural Area, Women Entrepreneurs, Digital Literacy, Industry 4.0, Economic Growth.*

**1. INTRODUCTION****1.1 Digitalization :**

The present age is the digital age. In every field, we are observing digitalisation which facilitates work to be more easy, speedy, accurate, and efficient. The cornerstone of digitization in India is the establishment of pervasive digital infrastructure to facilitate a better quality of life. Digitalization through Information and communication technologies plays a crucial role in entrepreneurship also, impacting various aspects of business operations, management, and growth. Here are several reasons highlighting the importance of ICT in entrepreneurship:

1. **Easy access to Information:** ICT provides entrepreneurs with easy access to a large amount of information. Through the internet, entrepreneurs can conduct market research, gather industry data, and stay updated on trends in the market. This facilitates them to make wise and informed decisions about their businesses.
2. **Networking:** Information Communication Technology facilitates communication and networking which enables entrepreneurs to connect with customers, suppliers, lenders, and other stakeholders at global level. Various platforms such as email, facebook, LinkedIn, Instagram, professional websites, etc. enable entrepreneurs to reach out to a broader audience, build relationships with them, and establish the eco system through which they can grow their business effectively. The present age believes in 'Not to compete but to collaborate'. Networking helps collaborate with each other for success of business. With the advantage of E-commerce platforms and digital marketing tools, entrepreneurs can establish and expand market exposure beyond geographical boundaries. An online presence through websites, e-stores, and various social media platforms enables entrepreneurs to showcase their products and services in best possible way to a larger audience promoting sales and business growth.
3. **Operational Efficiency:** Digitalization improves operational efficiency. ICT offers various tools and software solutions to streamline business operations and enhance efficiency. Entrepreneurs can use advanced technologies such as cloud computing, project management, customer relationship management systems, MIS, and various administrative and accounting softwares to automate tasks, improve productivity, efficiency, and optimize resource utilization.
4. **Innovation and Creativity:** Digitalisation fosters innovation and creativity in entrepreneurial work by providing access to advanced technologies and tools. Entrepreneurs can leverage emerging technologies, such as artificial intelligence, blockchain, machine learning, and the Internet of Things (IoT), to create novel goods and services that disrupt existing sectors, thereby securing a competitive advantage in the market. The world has

observed innovative start-ups during the coronavirus pandemic. Digitalization gained speed, especially during corona pandemic. Digitalization has opened greater opportunities for innovative startups.

5. **Cost Control:** Digitalization enables entrepreneurs to control and reduce operational costs through search for resources at competitive prices, automation, and outsourcing services. For example, Cloud computing eliminates the need for expensive investment in infrastructure while outsourcing certain tasks such as customer support, and administrative and accounting functions reduces employee cost. It is being observed that many companies have closed their offices and have switched to 'Work from Home' concept which has resulted in reduction in office and administrative cost.

6. **Data-based Decision Making:** ICT generates vast amounts of data that entrepreneurs can process and analyze to gain insight into customer behavior, market trends, and business performance. By using various data analytical tools and techniques, entrepreneurs can better interpret the results and can make decisions (data-driven) in best possible way, optimize strategies, and improve business outcomes.

7. **Flexibility and Adaptability:** In today's dynamic business environment, adaptability is very important for entrepreneurship success. ICT provides entrepreneurs with flexibility to adapt to changing market conditions, consumer preferences, and technological advancements in a very short span of time. Cloud-based solutions, mobile applications, and digital platforms allow entrepreneurs to scale their businesses and pivot strategies accordingly.

To summarise, Digitalisation empowers entrepreneurs to start, manage, and grow their businesses effectively in today's digital age. It facilitates access to information, communication, innovation, efficiency, and data-driven decision-making, ultimately contributing to entrepreneurial success and competitiveness in the global marketplace.

### **1.2 Industry 4.0:**

India is passing through the phase of Industry 4.0 which represents a transformative era characterized by rapid technological advancements and digital innovation which offers unprecedented opportunities for businesses to enhance productivity, efficiency, and competitiveness. Driven by technological advancements, the Fourth Industrial Revolution (4IR), sometimes referred to as Industry 4.0, signifies a profound change in how we manufacture, distribute, and consume goods and services. It is distinguished by the merging of technologies that make it difficult to distinguish between the digital, biological, and physical domains. It builds on the foundation established by the earlier Industrial Revolution. India is on its way to becoming the third largest economy in the world thanks to a number of important elements of Industry 4.0, including technological integration, automation, smart manufacturing, the Internet of Things (IoT), data analytics, artificial intelligence and machine learning, digitalization and connectivity, personalization and customer-centricity, and the impact on workforce and skills.

Building a pervasive digital infrastructure to guarantee ease of life is the cornerstone of India's digital transformation. This aim has been made possible in large part by the Digital India program, which has been expanded with a total budget of around INR 14,903 Cr from 2021–2022 to 2025–2026.

### **1.3 Rural Women Entrepreneurship:**

Women entrepreneurs have played a significant role in various industrial revolutions, although their contributions have often been overlooked or marginalized. Economic Participation, Innovation and creativity, social impact, advocacy and empowerment, breaking barriers, Resilience, and Persistence are some key aspects of the role of women entrepreneurs in industrial revolutions. In the phase of Industry 4.0 also women entrepreneurs will play their role as usual. But in this digital age whether women entrepreneurs from rural areas are ready to play their role or they are facing some challenges.

This research paper is an attempt to find digital literacy of rural women entrepreneurs and accordingly find solutions to support them in enhancing digital literacy.

## **2. OBJECTIVES**

The paper aims to achieve following objectives:

To find awareness of the rural women entrepreneurs about digitalization in business.

To Find the level of digital literacy of rural women entrepreneurs

To find solutions to enhance digital literacy level of rural women entrepreneurs.



### 3. METHODOLOGY

This is descriptive research based on primary data. Primary data from rural women entrepreneurs is being collected through structured questionnaire. The sample of 30 respondents is being selected on a convenience basis from Dahanu for survey. Collected data is presented through charts and tables and analyzed through descriptive statistics and the conclusions are drawn.

### 4. LITERATURE REVIEW

Developing nations are increasingly interested in women's entrepreneurship as a means of closing the digital divide, particularly in rural regions (Razak & Pisal, 2017). However, despite the community's and government's support, women entrepreneurs—particularly those in rural areas—face obstacles like limited access to capital, a lack of business and entrepreneurship skills, a lack of market bargaining power, and a lack of diversity in key decisions pertaining to the development of entrepreneurship (Ariffin, Baqutayan, & Mahdzir, 2018). Furthermore, the challenges were more severe as a result of the innovations and inventions that were introduced to the market. The majority of enterprises were mechanized with the introduction of the Internet over twenty years ago. It goes without saying that entrepreneurs need to be proficient in the use of modern technologies in order to compete in today's globalized world. Social media marketing has emerged as a crucial strategic concern for business owners, particularly female business owners. Making ads more interactive to increase their effectiveness is one of the strategic marketing challenges in entrepreneurship. Women business owners should therefore use Facebook, Twitter, and Instagram to engage with customers about their brands, goods, and services. According to Aviram and Eshet-Alkalai (2006), digital literacy is typically understood as a combination of technical-procedural, cognitive, and emotional-social skills. Although they still encounter a number of difficulties, including financial, educational, and cultural ones, women entrepreneurs today have an easier time starting and growing their enterprises (UNCTAD, 2014). Only a small amount of research has been done on women entrepreneurs in developing nations; the majority of studies have been on male entrepreneurs (Hisrich & Brush, 1984, 1986; Bird & Brush, 2002). The findings of Fauzi, Antoni, and Suwarni's (2020) investigation of the impact of digital and financial literacy on the expansion of women-owned SMEs in Indonesia show that both had favorable and noteworthy effects on return on assets. However, the one factor that significantly and favorably impacted growth was digital literacy. The results provide more proof that women knew less about digital technology than men did. Additionally, the findings demonstrate the importance of understanding and implementing digital and financial literacy in the near future.

### 5. DATA ANALYSIS AND INTERPRETATION

To fill the literature gap, researcher conducted research on digital literacy of women entrepreneurs from a rural and tribal area i.e. Dahanu. Especially the women conducting business from home like Tailoring, Beauty Parlour, trading of Beauty and skin care products, Emission Jewellery, Catering, Handicraft items, Bakery, etc are selected for sample survey. Collected data is analysed as under:

**Table 5.1- Age-wise distribution of respondents.**

Age(Yrs.)	No of Responses	Percentage
15 to 25	4	13.33
25 to 35	12	40.00
35 to 45	4	13.33
45 to 55	10	33.33
Grand Total	30	100.00

*Source: Primary data*

Respondents are from various age groups from 15 to 55 years. But more respondents are from young age group i.e. 25 to 35 years whose responses matter more for survey. It is being observed from the data that age group of 15 to 35 is more inclined to use digitalization in their business.

**Table 5.2- Education-wise distribution of respondents**

Education	No of Responses	Percentage
SSC	6	20.00
HSC/ Diploma	8	26.67
Graduation	12	40.00
Post Graduation	4	13.33
Grand Total	30	100.00

*Source: Primary data*

Respondents are from various educational backgrounds. 40 % of respondents are graduates, very few are post-graduates. Varied educational background is covered to know digital literacy at all educational levels. It is being found that graduate entrepreneurs are making more use of digitalization in their businesses.

**Table 5.3- Awareness of digital platform**

Digital platform usage	No of Responses	Percentage
No	6	20.00
Yes	24	80.00
Grand Total	30	100.00

Source: Primary data

80% of respondents know about digital platforms but they are aware of very few platforms. They have moderate knowledge of the digital platforms that can be effectively used for enhancing business activities.

**Table 5.4- Use of Digital platform**

Row Labels	No of Responses	Percentage
Any other	2	6.67
WhatsApp	30	100.00
Facebook	20	66.67
Instagram	12	40.00
GMail	4	13.33
YouTube	2	6.67

Source: Primary data

Whatsapp and Facebook are commonly used digital platforms by women entrepreneurs in Dahanu. Other digital platforms like Instagram are also used by 40% of respondents. Use of Gmail and YouTube is limited.

**Table 5.5- Activities for which digital platforms are used**

Activities	No of Responses	Percentage
Marketing	30	100.00
Payments	17	56.67
Purchasing	8	26.67
Production	8	26.67

Source: Primary data

Almost all women entrepreneurs in dahanu are using digital platforms for marketing purposes. It is also noteworthy that more than 50% of rural women entrepreneurs from among sample are using online payment methods.

It is also being found from other data that more than 60% of respondents are using digital platforms sometimes and not very frequently due to lack of technical expertise, though all 100% of respondents have agreed on the importance of digital literacy in today's era.

Almost all respondents have observed improvements in terms of number of customers, increase in sales, and increase in income after use of digital platforms in business for various activities. However, very few respondents have observed improvements in production process. It again has a limitation in that the respondents are not well-versed in effective use of digital platforms.

**Table 5.6- Problems faced by respondents**

Problems	No of Responses	Percentage
Non-availability of smartphones	04	13.33
Costly internet facility	12	40.00
Frequent Network issues	30	100.00
Lack of technical skill	16	53.33
Lack of English language	08	26.67
Lack of awareness of digital platforms	20	66.67

Source: Primary data

Network issue is a major challenge faced by rural women entrepreneurs in Dahanu. Lack of awareness about digital platforms is the second most challenge faced by them. And lack of technical skill is third biggest problem faced by them.

## **6. FINDINGS**

- 6.1 80% of rural women entrepreneurs are aware of digitalization in business though they are not aware of maximum digital platforms
- 6.2 WhatsApp and Facebook are commonly used digital platforms
- 6.3 Digital platforms are mainly used for marketing activities and then for payments. For production and purchase activity its use is limited.
- 6.4 All 100% of respondents have agreed on the importance of digital literacy in today's era.
- 6.5 There is moderate use of digitalization in business by rural women entrepreneurs.
- 6.6 Frequent Network issue is the biggest challenge for rural women entrepreneurs. Lack of awareness on various digital platforms is second biggest problem for them. And lack of technical skill is third biggest problem faced by them.

## **7. CONCLUSION**

It has been determined that the majority of respondents are aware of digitalization and the Internet, but they are unaware of the different digital platforms and their applications. They are moderate so far as digital literacy skills are concerned.

## **8. SUGGESTIONS**

To address these challenges, a multi-faceted approach is required which involves investment in infrastructure development, digital awareness programs, provision of digital skills training and education especially to women, targeted financial support, etc.

### **Hence It is recommended that**

1. The government should focus more on digital infrastructure development in rural areas like Dahanu and digital training of especially rural women entrepreneurs so that they can grab the opportunities created by Industry 4.0
2. Higher Education Institutes can take lead in conducting digital literacy awareness and training programs for women entrepreneurs in nearby localities as a part of Community Engagement Program.
3. Women entrepreneurs can enhance their digital literacy level by taking professional training.

By overcoming these barriers, rural women entrepreneurs can unlock the transformative potential of digitalization and contribute to inclusive economic growth and empowerment in rural communities.

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**ONE NATION, ONE ELECTION: A STEP TOWARD EFFICIENCY OR A CHALLENGE TO  
FEDERALISM**

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**ABSTRACT**

*The "One Nation, One Election" ONOE initiative proposes synchronized Lok Sabha, State Legislative Assemblies, and local bodies of India to reduce costs, thereby improving governance efficiency and countering voter and political fatigue. Proponents tout it as a means to simplify governance, reduce disruption caused by frequent elections, and enhance voter participation. Critics say it would weaken federalism, regional representation, and the practical and constitutional intricacies of the exercise on a pan-Indian level. A High-Level Committee, headed by former President Shri Ram Nath Kovind, has proposed a multi-phase exercise that would call for amendments to the constitution, consolidation of electoral rolls, and augmentation of infrastructure. Historical precedents and global examples, such as Sweden and South Africa, underscore the feasibility of ONOE but also reveal challenges unique to India's scale and diversity. Success will depend on widespread political consensus, careful planning, and a commitment to preserving India's federal structure and democratic inclusivity.*

*Keywords-Election, Federalism, Security*

**INTRODUCTION**

India, the world's largest democracy, boasts an electorate of over **900 million voters, spread across 28 states and 8 Union Territories**, is characterized by its vast and diverse electorate. Over the years, the country has continuously evolved its electoral practices to meet the demands of its population. One Nation, One Election (ONOE) is a concept gaining momentum, advocating for simultaneous elections at all levels of government—Lok Sabha (the national parliament), State Legislative Assemblies, and potentially local bodies. The core idea behind ONOE is to conduct all elections at the same time, reducing the frequency of electoral cycles, saving financial and administrative resources, and enhancing governance efficiency. India follows a staggered election model, where national and state elections are held at different times. This leads to elections nearly every year, with over **17 states** holding assembly elections between **2019 and 2023** alone. While staggered elections allow regional focus, they contribute to political and governance fatigue.

**REFORM FOR SIMULTANEOUS ELECTIONS**

To explore the feasibility of ONOE, a High-Level Committee (HLC) was constituted under the chairmanship of **Shri Ram Nath Kovind**, former President of India. The committee engaged in **191 days** of consultations, gathering insights from political parties, experts, and the public. Of the **47 political parties** consulted, **32 supported the concept**, while **80% of public respondents** also favored it. Experts, including former Chief Justices, Election Commissioners, and business organizations like **CII, FICCI, and ASSOCHAM**, emphasized the potential economic benefits of ONOE, particularly in mitigating the inflationary and disruptive effects of frequent elections.

**Recommendations of the High-Level Committee**

The HLC proposed a two-step approach for implementing simultaneous elections:

1. Simultaneous elections for the Lok Sabha and State Legislative Assemblies.
2. Municipal and Panchayat elections synchronized within **100 days** of national and state elections.
3. **Single electoral roll and electoral photo identity cards (EPIC)** for all levels of government.

**One Nation One election in Indian and International Context**

India initially held simultaneous elections for the Lok Sabha and State Assemblies in 1952, 1957, 1962, and 1967. However, India transitioned to staggered elections after the premature dissolution of several state governments and the Lok Sabha in 1968-69.

Between **2019 and 2023**, India conducted elections in **14 states**, covering over **400 million voters**. This fragmented electoral schedule ensures governance continuity in individual states but places significant pressure on national resources and frequently stalls government decision-making under the MCC

Countries like **Sweden, South Africa, and Indonesia** have implemented simultaneous elections at various levels of governance. Sweden holds national and local elections every four years, resulting in governance stability and reduced electoral costs. South Africa synchronizes national and provincial elections, streamlining the electoral process. Indonesia, a decentralized democracy, also conducts national and regional elections simultaneously, which maintains governance stability while minimizing election costs.

## **ECONOMIC REFORM BY ONE NATION, ONE ELECTION**

### **1. Cost and Resource Efficiency**

Elections in India are expensive. For instance, the **2019 Lok Sabha** elections cost **₹60,000 crores**. ONOE could significantly reduce this expense by consolidating resources like polling booths, personnel, and security forces. Conducting elections once every five years would lead to substantial savings, and the money saved could be redirected toward public welfare programs and infrastructure development.

### **2. Economic and Governance Stability**

Frequent elections lead to governance disruptions due to the MCC, which halts decision-making in poll-bound regions. ONOE would allow governments to function uninterrupted for their full terms, enabling them to focus on long-term projects and economic reforms. Stability in governance would also boost investor confidence, as political uncertainty is often a deterrent for investment.

### **3. Boost to Voter Participation and Reduced Political Fatigue**

Frequent elections can overwhelm voters, leading to lower voter turnout. ONOE could consolidate voter engagement by holding a single major election every five years, potentially increasing turnout. It would also reduce political fatigue for parties and politicians, allowing them to focus more on governance.

### **4. Economic Benefits**

The economic advantages of ONOE extend beyond cost savings. Frequent elections cause delays in public projects, economic reforms, and infrastructure development. A stable political environment created by synchronized elections would allow the government to implement its economic agenda without disruptions. Additionally, the reduction in political distractions could lead to higher investor confidence, fostering long-term economic growth.

## **CHALLENGES AND CONCERNS**

### **1. Impact on Federalism**

A significant concern is ONOE's potential impact on India's federal structure. State elections often reflect regional priorities, while national elections focus on broader, country-wide concerns. Synchronising elections may shift voter focus toward national issues, marginalizing local concerns and reducing the influence of regional parties. Additionally, aligning state elections with national ones would require adjusting the terms of state legislatures, which could disrupt democratic mandates and create instability.

### **2. Logistical and Security Challenges**

Holding simultaneous elections across India would require enormous resources. The Election Commission would need millions of additional Electronic Voting Machines (EVMs) and Voter-Verified Paper Audit Trails (VVPATs). Security forces would also need to be deployed simultaneously across all **29 states and 700+ districts**, putting immense pressure on law enforcement.

### **3. Marginalization of Regional Parties**

ONOE could favor national parties like the BJP and Congress, whose campaigns often overshadow regional narratives. Critics argue that simultaneous elections may shift voter attention toward national leaders, undermining the political diversity and representation of regional parties focusing on local issues.

### **4. Constitutional and Legal Hurdles**

ONOE would require amendments to key constitutional provisions such as **Articles 83 and 172**, which govern the tenures of the Lok Sabha and state assemblies. Additionally, legal provisions under the Representation of the People Act would need revision to facilitate early or postponed elections.

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**CONCLUSION**

One Nation, One Election offers a vision of streamlined governance, reduced election costs, and enhanced voter participation. While the potential benefits are compelling, the concept faces significant challenges in preserving India's federal structure, logistical complexities, and representation of regional parties. The recommendations of the High-Level Committee emphasize that careful planning, legal amendments, and political consensus are necessary for its success.

Implementing ONOE would require widespread consultation, commitment to democratic principles, and a focus on preserving India's diversity and inclusivity. If executed well,

ONOE could strengthen India's democratic framework, create a stable political environment, and enhance governance efficiency for the nation's benefit.

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**TO STUDY THE ENGAGEMENT OF SPECIAL CELLS IN COLLEGES, INSTITUTIONS, AND COMMUNITY STAKEHOLDERS FOR BARTI'S SUSTAINABLE EDUCATION AND SKILL DEVELOPMENT PROGRAMS**

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**ABSTRACT**

*Sustainable education and skill development are essential for the empowerment of marginalized communities, particularly for Scheduled Castes (SC) by BARTI. This study explores how community involvement enhances BARTI's (Dr. Babasaheb Ambedkar Research & Training Institute) sustainable education programmes initiatives, focusing on the role of Special Cells in colleges, institutions, and community stakeholders in Maharashtra. The goal is to provide SC communities with equitable access to education and skill development opportunities which is available at BARTI programme. The study examines how Special Cells act as vital connectors between BARTI and the community, facilitating long-term skill development programs. Through strategic partnerships with educational institutions, community groups, and local enterprises, BARTI promotes skill enhancement that aligns with the region's socio-economic needs. The research also analyse the effectiveness of these collaborations, communication and highlighting their impact on local communities and students. Key findings underscore the importance of continuous stakeholder engagement for the success of such programs. By integrating Special Cells into BARTI's initiatives, institutions can play a pivotal role in supporting sustainable education and equipping underprivileged students with essential skills. The study also identifies key challenges in mobilizing community resources and provides recommendations for strengthening BARTI's engagement strategies to ensure the sustainability of its training and development programs.*

*Keywords: BARTI, Special Cells, Sustainability, Skill Development, Community Engagement, Education, Strategic Collaborations.*

**INTRODUCTION**

Education and skill development are vital pillars for empowering marginalized communities and fostering sustainable socio-economic growth. In India, Scheduled Castes (SC) faces significant socio-economic challenges due to long historical inequalities and caste system. To address these issues, the government and organizations like the Babasaheb Ambedkar Research and Training Institute, Pune (BARTI) have initiated programs aimed at promoting sustainable education and skill development specifically for SC communities. These initiatives seek to bridge educational gaps, enhance employability, and uplift marginalized groups by fostering inclusive development.

Scheduled Castes and Scheduled Tribes have been identified as the two most backward groups of Indian Society. They include all such castes, races or tribes, which have been declared as scheduled castes and scheduled tribes by the Constitution of India under the provisions of Article 341 and 342 of the Constitution of India. Scheduled Castes generally represent those communities, which have suffered from the stigma of untouchability in one form or the other. Scheduled Tribes are generally those who have been living in seclusion in hills and forests, more or less untouched by modern civilization and development.

The study especially focuses on Scheduled Caste Cells (SC Cells) as per UGC guidelines established in colleges and institutions play a crucial role in implementing and monitoring these initiatives. The study specially helps to fulfilling the objectives and functioning of the Special Cells. Because they are directly connected with students, these cells are tasked with ensuring awareness, access, and participation in programs designed to cater to SC students. However, the engagement and effectiveness of SC Cells in facilitating sustainable education and skill development remain underexplored.

This study focuses on evaluating the role of SC Cells in colleges and institution, particularly in implementing BARTI's programs. Organising program by BARTI's is directly connected with Institutions SC Cells, delivered the program information with eligible students which accurate data are available with SC Cells, Additionally, the study explores how BARTI's education and skill development programs address the specific needs of SC communities stakeholders, Committees, registered organisations, unregistered groups and village level organisations, for the promoting entrepreneurship, enhancing employability, and fostering long-term economic resilience. It also seeks to identify areas for improvement in program delivery and SC Cell engagement, with the objective of providing actionable recommendations to policymakers and stakeholders.

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**PROBLEM STATEMENT**

Government schemes and services designed for the upliftment of marginalized communities, including Scheduled Castes (SC), often fail to reach the most deprived beneficiaries due to undefined barriers in implementation. While BARTI (Dr. Babasaheb Ambedkar Research & Training Institute) plays a pivotal role in promoting sustainable education and skill development for SC communities, significant gaps exist in its outreach strategy. These challenges include the lack of established communication with educational institutions, deprived community groups, and registered or unregistered organizations in remote areas. Consequently, many candidates from rural or underdeveloped regions are excluded from the benefits of such initiatives. The absence of direct interaction mechanisms with beneficiaries in remote areas further limits the impact of BARTI's programs of sustainable development. Favours urban and institutionally established students who have better access to these schemes.

**Key Research Questions**

- a. Outreach and Accessibility
- b. Policy and Implementation
- c. Impact and Engagement
- d. Recommendations for Improvement

**REVIEW OF LITERATURE**

The engagement of SC Cells in colleges and institutions as a conduit for sustainable education and skill development is a critical area of research, particularly in the context of marginalized communities. Existing literature highlights various dimensions of the role of institutional frameworks, community stakeholders, and government initiatives in empowering Scheduled Castes (SC). This review synthesizes findings from past studies to provide a contextual foundation for the current research.

*Shah, K.R., & Shobha, V. (2024). Illuminating Caste Discrimination in the Indian Education Sector: A Case Study Analysis*

This study explores the persistent issue of caste-based discrimination in Indian educational institutions through detailed case studies. It highlights systemic barriers such as unequal access, social exclusion, and the reinforcement of stereotypes. Prominent cases, including those of Rohith Vemula and Payal Tadvi, underscore the deep-rooted nature of these challenges. The authors argue for the urgent need to improve policy enforcement, enhance representation, and establish robust support systems to create an equitable and inclusive educational environment7th August 2024 IJSEM.

*Paray, M.R. (2024). Social and Economic Conditions of Scheduled Castes in India: A Comprehensive Analysis*

This study examines the historical and contemporary socio-economic challenges faced by Scheduled Castes (SCs) in India. It highlights issues such as disparities in education, limited access to quality employment, healthcare inequities, and inadequate political representation. Despite affirmative action policies, SCs remain marginalized due to systemic discrimination and structural inequalities rooted in the caste system. The research also explores grassroots movements and community empowerment initiatives as effective tools to address these challenges. Recommendations include enhancing policy implementation, promoting inclusive development, and fostering social justice through intersectional approaches(IJIRMF202402013-min)

Research by Joshi (2020) emphasizes the potential of initiatives like those by BARTI but highlights the need for stronger institutional support to improve scalability and long-term sustainability.

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These studies underline the importance of simplifying processes, enhancing localized outreach, and fostering stronger institutional partnerships for better program implementation.

**OBJECTIVES OF THE STUDY**

1. Assess the role of Special Cells in implementing BARTI's programs for SC students.
2. Identify barriers to accessing BARTI's initiatives in rural areas.
3. Examine the impact of institutional and community collaborations on program effectiveness.
4. Suggest strategies to improve awareness, outreach, and tracking of beneficiaries.

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**RESEARCH METHODOLOGY**

This study carried by a secondary database methodology for data collection, utilizing resources such as the BARTI notice board, college and institution web portals, and social media platforms.

**DATA COLLECTION**

**Data Collection Approach: Understanding BARTI's Role in Empowerment:** This study relies on secondary data collection methods, utilizing available information from various resources such as the BARTI (Babasaheb Ambedkar Research and Training Institute) notice board, institutional websites, and social media platforms. These platforms serve as valuable sources for gathering data about programs, initiatives, and the engagement activities of colleges and Special Cells. By analysing this data, the study aims to understand how government schemes and development programs reach marginalized communities and the role institutions can play in bridging existing gaps.

**UGC Guidelines and the Role of Institutions:** Institutions and colleges governed by the University Grants Commission (UGC) are required to follow specific guidelines for running academic and administrative operations. These guidelines are essential not only for maintaining academic standards but also for ensuring the holistic development of students, especially those from marginalized communities. Among these initiatives is the creation of **Special Cells** in colleges and institutions. These cells are designed to address various societal issues and support students who face economic, social, or cultural barriers in accessing quality education and opportunities. Special Cells serve as an important link between the institutions and government programs, helping marginalized students, including those from Scheduled Castes (SC), access resources designed specifically for their upliftment. They act as a support system, ensuring that these students can benefit from government schemes aimed at education, skill development, and overall socio-economic growth.

**BARTI's Contribution to Empowerment:** BARTI, an autonomous institute under the Department of Social Justice and Welfare, plays a vital role in addressing the needs of SC communities. The institute focuses on sustainable development through training, education support programs, and community-oriented initiatives. These programs aim to empower SC students and communities by providing access to resources that enhance employability, foster entrepreneurship, and build skills relevant to the modern economy. For SC students, BARTI acts as a guiding force, offering programs that align with their specific challenges and aspirations. It provides scholarships, training modules, and resources that are tailored to help them overcome barriers in education and employment. The organization also plays a crucial role in creating awareness about the available opportunities, ensuring that no eligible individual is left behind. However, despite its best efforts, BARTI faces challenges in reaching students and beneficiaries in remote or rural areas. The lack of awareness and accessibility often means that many deserving individuals remain unaware of these schemes or are unable to participate due to logistical and informational barriers. This gap hinders the institute's ability to fully achieve its goals of equitable development and social justice.

**Addressing Gaps in Awareness and Accessibility:** One of the most significant challenges faced by government programs like those run by BARTI is ensuring that the benefits reach the most deserving individuals, especially in remote areas. There are several reasons for this gap. Firstly, there is often a lack of effective communication about these schemes in rural communities. Without adequate promotion or outreach activities, many individuals remain unaware of the programs available to them. Secondly, logistical challenges such as poor internet connectivity, limited transportation, and a lack of local facilitators make it difficult for beneficiaries in remote areas to access these resources. In some cases, even when people are aware of the programs, they may find it difficult to meet the eligibility criteria or navigate the application process due to complex bureaucratic procedures.

**Bridging the Gap through Special Cells:** Colleges and institutions have a significant role to play in addressing these challenges. By leveraging their infrastructure and outreach capabilities, they can help bridge the gap between BARTI and the beneficiaries. Most colleges, under UGC guidelines, already have Special Cells designed to address the needs of SC and other marginalized students. These cells can act as direct facilitators for BARTI's programs by ensuring that students are informed about available opportunities and guided through the application processes. For instance, Special Cells can organize workshops, seminars, and awareness campaigns to inform students about government schemes and how to access them. These activities can ensure that no eligible student misses out due to a lack of information. Additionally, by collaborating with BARTI, these cells can provide the institute with accurate data on the demographics and needs of SC students in their institutions. This data can help BARTI design and implement its programs more effectively. Special Cells can also act as a two-way communication channel. While they help students access resources, they can also provide feedback to

BARTI about the challenges faced by beneficiaries, allowing the institute to refine its strategies for better impact.

**Importance of Institutional Collaborations:** Institutional collaborations are key to ensuring the success of programs like those run by BARTI. By establishing formal partnerships with colleges and universities, BARTI can expand its reach and create a more robust support system for SC students. These collaborations can involve joint initiatives such as training programs, career counselling sessions, and skill development workshops. For example, colleges can integrate BARTI's training modules into their academic schedules, ensuring that students receive both theoretical knowledge and practical skills that enhance their employability. Institutions can also use their networks to promote BARTI's programs in local communities, ensuring that awareness extends beyond the campus to reach families and community members. Additionally, BARTI can benefit from the data collection capabilities of institutions. By maintaining updated databases of SC students enrolled in affiliated colleges, the institute can better track the outcomes of its programs and ensure that the intended beneficiaries are reached.

**Engaging Community Stakeholders:** While colleges and institutions play a critical role, community stakeholders such as registered organizations, committees, and local groups are equally important in ensuring the success of these initiatives. These stakeholders often have deep roots in the communities they serve, making them ideal partners for promoting awareness and encouraging participation in government schemes. By collaborating with these stakeholders, BARTI can organize community-level awareness programs, distribute informational materials, and address the specific concerns of marginalized groups. These efforts can ensure that even the most remote communities are informed about the opportunities available to them. Moreover, community groups can help identify eligible individuals who may not be enrolled in formal education systems but can benefit from skill development and training programs. This inclusive approach can significantly expand the reach of BARTI's initiatives and contribute to long-term socio-economic development.

**Towards Sustainable Educational Development:** The combined efforts of institutions, community stakeholders, and BARTI can create a strong framework for sustainable educational development. By addressing the gaps in awareness and accessibility, these collaborations can ensure that SC students and communities have the resources they need to thrive. When institutions actively engage with programs like those offered by BARTI, they not only fulfil their responsibilities under UGC guidelines but also contribute to a larger vision of social justice and equitable development. Similarly, when BARTI collaborates with community groups, it can create a grassroots-level impact that extends beyond individual beneficiaries to uplift entire communities. Sustainable educational development is not just about providing resources; it is about creating systems that ensure long-term impact. By empowering SC students with education and skills, these initiatives can break the cycle of poverty and discrimination, enabling marginalized communities to achieve socio-economic stability and growth.

## DATA ANALYSIS & INTERPRETATION

The data for this study was collected from secondary sources such as the BARTI notice board, institutional web portals, and social media platforms. The analysis focuses on understanding how government programs and initiatives designed for Scheduled Caste (SC) communities are implemented and accessed through Special Cells in colleges and institutions. It also highlights the gaps in awareness, outreach, and engagement, particularly in remote areas, and suggests ways to address these challenges. Below is a simplified analysis and interpretation of the collected data.

### 1. ROLE OF SPECIAL CELLS IN COLLEGES

**Analysis:** Special Cells in colleges are established under UGC guidelines to assist SC students by connecting them with government schemes and programs. These cells are responsible for identifying eligible students, creating awareness, and ensuring participation in initiatives that promote skill development and education.

**Interpretation:** Special Cells serve as an essential bridge between students and government resources. However, the effectiveness of these cells varies depending on the level of institutional engagement and awareness among staff and students. While they work well in urban areas, their impact is limited in rural colleges due to lack of proactive outreach and collaboration with organizations like BARTI.

### 2. Accessibility Challenges in Remote Areas

**Analysis:** The data shows that government schemes often fail to reach SC students in rural or remote areas. Issues include poor internet connectivity, lack of awareness campaigns, and logistical challenges in accessing training or education programs.

**Interpretation:** While BARTI offers valuable programs, students in remote areas face barriers that prevent them from benefiting. Limited promotion of schemes and the absence of localized support systems contribute to this problem. There is a need for more robust mechanisms to disseminate information and ensure accessibility in these areas.

### 3. Role of BARTI in SC Community Development

**Analysis:** BARTI, as an autonomous institute, plays a crucial role in offering programs that support SC students through skill development, training, and educational initiatives. However, gaps in outreach and coordination with institutions limit its impact, especially in rural areas.

**Interpretation:** BARTI has a well-structured framework for community development but requires stronger partnerships with colleges, institutions, and local community groups to maximize its reach. Collaboration with Special Cells and community stakeholders can enhance program delivery and ensure equitable access.

### 4. Awareness through Institutional Collaboration

**Analysis:** Colleges and institutions with active Special Cells are better positioned to inform students about government schemes. Institutions in urban settings are more likely to collaborate with BARTI and leverage their resources effectively.

**Interpretation:** Institutions can play a significant role in expanding the reach of BARTI's programs by actively collaborating with the organization. Regular workshops, awareness campaigns, and data-sharing initiatives can improve outreach and ensure that students in both urban and rural areas are aware of available opportunities.

### 5. Community Stakeholder Engagement

**Analysis:** Community stakeholders such as registered organizations, local committees, and grassroots groups can help in raising awareness and implementing government schemes at the community level.

**Interpretation:** Engaging with community stakeholders is vital for overcoming the challenges of limited reach in rural areas. These stakeholders can act as local facilitators, spreading awareness and encouraging participation in BARTI's programs. Their involvement can also address cultural and logistical barriers that prevent SC students from accessing resources.

### 6. Data Tracking and Program Implementation

**Analysis:** Institutions with Special Cells maintain databases of SC students, which can be shared with BARTI for better tracking and monitoring of beneficiaries. However, there is no standardized system for data collection and sharing across institutions.

**Interpretation:** A centralized data-sharing system between BARTI and educational institutions can improve program implementation. Accurate and updated databases can help track the progress of SC students and ensure that the right beneficiaries are targeted.

## RESULT AND FINDINGS

Special Cells are effective in urban areas but need more support and resources to address challenges in rural colleges.

Remote accessibility remains a major issue due to lack of awareness campaigns and logistical barriers.

BARTI's initiatives are impactful but require stronger institutional collaborations and localized outreach efforts.

Community stakeholders can play a critical role in bridging gaps and ensuring that government schemes reach the intended beneficiaries.

Data-sharing mechanisms between institutions and BARTI can enhance the efficiency of program delivery and tracking.

## RECOMMENDATIONS BASED ON ANALYSIS

**Enhanced Awareness Campaigns:** Organize workshops, webinars, and on-ground campaigns to inform students and communities about government schemes and BARTI's programs.

**Stronger Institutional Collaborations:** Encourage colleges and institutions to partner with BARTI and integrate its programs into their academic frameworks.

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**Leveraging Technology:** Use digital platforms and mobile apps to spread information about schemes, especially in remote areas.

**Community Partnerships:** Work with local organizations and committees to raise awareness and improve accessibility in rural regions.

**Centralized Data System:** Create a unified database to track SC student participation and program outcomes effectively.

## **REFERENCES**

### ☐ **UGC Guidelines for SC/ST Cells**

Guidelines provided by the University Grants Commission on establishing and operating SC/ST Cells in higher education institutions. UGC Official Document (PDF) <https://uit.ac.in/assets/others/sc-st-cell-guidelines.pdf>

### ☐ **BARTI Initiatives for SC Students**

Official website of the Babasaheb Ambedkar Research and Training Institute, detailing its programs and projects for skill development and education.

Visit BARTI <https://barti.in/notice-board.php>

### ☐ **Government of India Scholarships Portal**

Comprehensive portal for government scholarships for SC/ST students, offering details on schemes and their implementation.

<https://scholarships.gov.in/>

### ☐ **Role of SC/ST Cells in Promoting Equity**

Case studies and guidelines from institutions implementing UGC directives for marginalized communities.

### ☐ **Impact of Special Cells in Higher Education Institutions**

Research on the effectiveness of Special Cells in colleges in improving access and participation for SC students. Educational Journal Article

### ☐ **BARTI Skill Development Projects**

Insights into BARTI's ongoing projects aimed at SC student empowerment through education and vocational training. Project Details

### ☐ **Challenges in Reaching SC Communities**

Analysis of systemic barriers preventing effective implementation of government schemes for marginalized groups. Research Report

### ☐ **Scheduled Castes Development Programs**

Government efforts aimed at uplifting Scheduled Castes through targeted welfare programs. Department of Social Justice and Empowerment <https://socialjustice.gov.in/>

### ☐ **Educational Empowerment of Marginalized Groups**

Studies on the role of institutional collaborations in improving accessibility for disadvantaged students. Research Paper PDF

### ☐ **Barriers to Rural Accessibility of Government Schemes**

In-depth analysis of challenges faced by rural populations in accessing government welfare schemes. Journal Article <https://ruraldev.gov.in/>

### ☐ **Importance of Community Stakeholders in Government Schemes**

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**MICRONUTRIENTS POTENTIALS OF MEDICINAL PLANTS-GILOY AND PAPAYA TO OVERCOME COVID-19**

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**Shireen Mahala Tagore<sup>1\*</sup>, Dr. H. Saleem<sup>2</sup> and Dr. Kaleem Ahmed Jaleeli<sup>3</sup>**<sup>1</sup>Research Scholar, Annamalai University & Assistant Professor, LIET (A), Hyderabad<sup>2</sup>Professor, Annamalai University, Tamil Nadu<sup>3</sup>Assistant Professor, Nizam College, Hyderabad**ABSTRACT**

*COVID-19 is an acute and infectious disease characterized by pneumonia and ARDS. The disease is caused by SARS-CoV-2, which belongs to the Corona viridae family along with MERS-CoV and SARS-CoV-1. The viral genome is a positive RNA that encodes approximately 26 proteins that work together to ensure the survival, reproduction and spread of the virus in the host. The virus is transmitted by contact with aerosol droplets from infected people. The pathogenesis of COVID-19 is very complex and includes suppression of host antiviral and innate immune responses, induction of oxidative stress, followed by hyperinflammation known as "cytokine storm" leading to acute lung injury, tissue fibrosis and pneumonia. A number of vaccines and medicines are currently being evaluated for effectiveness, safety and dosage against COVID-19 and will take a long time to validate. Therefore, research on the recovery of natural compounds may offer opportunities against COVID-19. Several nutrients have been shown to have immune-enhancing, antiviral, antioxidant and anti-inflammatory effects. These include Zn, vitamin D, vitamin C, curcumin, cinnamaldehyde, probiotics, selenium, lactoferrin, quercetin, etc are found spectroscopically with the help of Nanotechnology. A group of these phytonutrients in the right combination as a supplement can help strengthen the immune system and prevent viruses spread, prevents the disease from progressing to a severe stage, and further prevents hyperinflammation, providing both prophylactic and therapeutic support against COVID-19.*

**Keywords:** SARS-CoV-2, COVID-19, pathogenesis, food supplements, immune-boosting, antioxidant, anti-inflammation.

**INTRODUCTION**

**CORONA VIRUS (SARS-COV) -2 INFECTION - SEVERE ACUTE RESPIRATORY SYNDROME** So far, the infection has spread to almost all countries in the world and WHO has declared it a pandemic. At the time of writing this review, more than 23 million confirmed cases and more than 800,000 deaths have been observed. In India, there have been more than 3 million positive cases and more than 57,000 deaths. Mortality rates of 2-16%, rapid spread of the disease, and high mortality in susceptible populations (mainly over 60 years and also in patients with underlying diseases) such as diabetes, cardiovascular disease, etc.) brought a global shutdown and life came to a standstill, causing yet another global recession since 2008.

Corona virus disease (COVID-19) was first reported in late 2019 in the Chinese city of Wuhan. The incubation period is expected to be 2 to 14 days. The mode of transmission involves surface contact with aerosol droplets from infected individuals, followed by contact with the nose, eyes, and mouth. Evidence also suggests vertical transmission to newborns, including through feces (1-3). Coronaviruses are enveloped and their genome is positive single-stranded RNA (+ssRNA). These viruses belong to the large family Corona viridae and to the subfamily Corona virinae, which infect birds and mammals. The genome size of these viruses varies between 26 and 32 kb (4). The virus binds to angiotensin-converting enzyme 2 (ACE2) receptors in cells through its spike (S) glycoprotein. The S protein has two domains, S1 and S2. S1 binds to the peptidase domain of ACE2, called the receptor-binding domain (RBD), while S2 catalyzes membrane fusion, thereby releasing genetic material into cells (5). Inside the cell, RNA is the template for structural proteins such as copyase (R1a/ab), envelope (E), spike (S), membrane (M), nucleoprotein (N) and several non-structural proteins (NSP 1) – 16), uncharacterized protein 14, protein 9b (6). Among them, nonstructural proteins are expected to participate in host-protein interactions and modulate host cell signaling pathways. The onset of clinical disease and its progression to a severe stage can vary between individuals and depend on their immune system and the presence of co-morbidities. In general, typical clinical symptoms are dry cough (67%), fever (88%), fatigue (38%), muscle pain (14.9%), shortness of breath (18.7%), other symptoms are headache, sore throat, running nose and gastrointestinal symptoms. Pneumonia is a serious manifestation of infection (2).

**PATHOGENESIS OF COVID-19**

The details of the pathogenesis of SARS-CoV-2 infection are not clearly understood. Available evidence indicates that the pathogenesis of infection can be classified into two stages. Stage 1: Asymptomatic stage with or without detectable virus. Stage 2: symptomatic stage with high viral load (4). The virus enters the respiratory

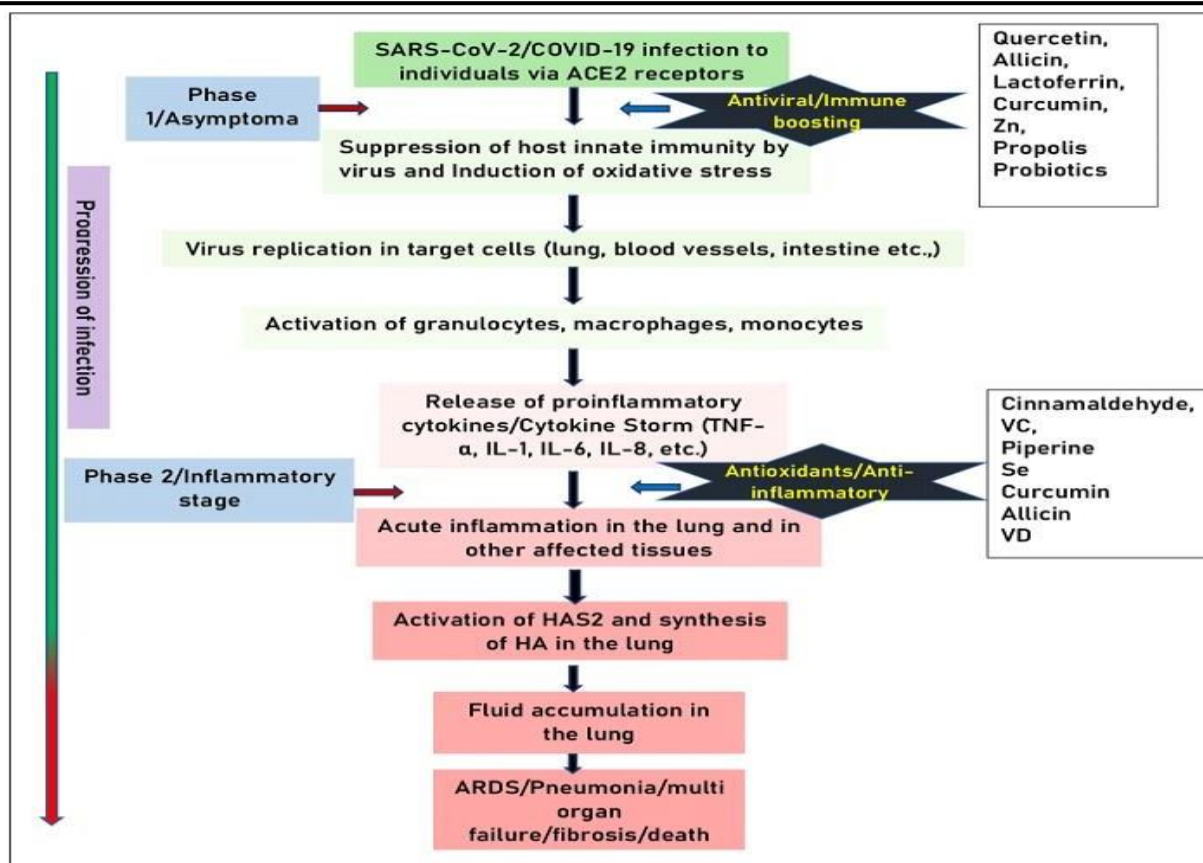


epithelium after binding to its S- protein ACE2 receptors and then through the cell's transmembrane protease serine

2 (TMPRSS2). The virus suppresses or slows down the host's innate interferon (IFN) immune response. The mechanisms by which it modulates the host IFN response are not fully understood. Available evidence from other members of the same family suggests that the virus inhibits type1 IFN production and signaling downstream of the interferon  $\alpha/\beta$  receptor (IFNAR) (7). The virus disrupts downstream signaling by ubiquitination and degradation of RNA sensor adapter molecules such as mitochondrial antiviral signaling (MAVS) protein and tumor necrosis factor-associated factors (TRAF) 3/6 and by preventing interferon regulatory factor (IRF) 3 nuclear translocation. (8). When type 1 IFN is secreted, the virus inhibits IFN signaling by inhibiting signal transducer and activator of transcription (STAT) 1 phosphorylation (9). Viral proteins that modulate host type 1 IFN responses include structural (such as M, N) and NSPs.. After the weakening of the IFN system, virus replication takes place in the cells. Viral replication in turn triggers the activation of monocytes, macrophages and granulocytes, leading to a hyperinflammatory state described as a "cytokine storm" that massively secretes proinflammatory cytokines, including interleukin (IL)-1, IL-6, IL-6, -8, IL-12, tumor necrosis factor (TNF)- $\alpha$ , etc. This leads to tissue hyperinflammation and subsequent tissue fibrosis and lung inflammation (4, 7, 10). Studies also show the involvement of oxidative stress in the pathogenesis of COVID-19. Available evidence indicates that SARS-CoV-2 infection causes oxidative stress by directly increasing the production of reactive oxygen species (ROS) (11) and indirectly by suppressing host antioxidant defenses mediated by nuclear factor (erythroid derived 2)-like 2. (NRF). - 2) (10). In addition, granulocytosis also promotes the production of superoxide ions, a type of ROS, and further production of proinflammatory cytokines in response to SARS-CoV-2 infection (12). A study by Lin et al (13) showed that viral protease 3CLpro significantly increases ROS production in HL-CZ cells. In addition, the study found that elevated oxidative stress leads to apoptosis and inflammation. Another study on human HCoV- 229E infection shows that lack of expression of the NRF-2 target, glucose-6-phosphate dehydrogenase (G6PDH), leads to increased ROS and virus production (14). Moreover, NRF-2 levels were found to be suppressed in lung biopsies of COVID- 19 patients, on the other hand, NRF-2 activators were found to suppress SARS-CoV-2 replication and the inflammatory response (10). However, it is not known how SARS-CoV-2 infection inhibits NRF-2 signaling. In addition, studies also suggest that SARS-CoV-2 infection triggers the activation of NF- $\kappa$ B-like receptor (TLR) signaling pathways to induce oxidative stress and hyperinflammatory response, ultimately leading to acute lung injury (11).

## STRATEGIES TO BEAT SARS-COV-2 WITH FOOD SUPPLEMENTS

In terms of prevention, stage 1 is crucial because individuals in this stage are carriers and can spread the infection without knowing it. Screening individuals in stage 1, strengthening a specific adaptive immune response, and using antiviral drugs are critical to prevent viral entry, replication, and disease progression to stage 2. Therefore, global strategies may include exogenous antiviral drugs and/or immune-enhancing nutritional supplements. In addition to maintaining the general health of patients affected by stage 2 infection, treatment can focus on tailoring strategies, including the use of nutritional supplements, which can suppress ongoing oxidative stress, acute inflammation and cytokine production. storm to prevent destruction and damage to affected tissues. In conclusion, in addition to symptomatic treatment, strategies to combat SARS-CoV-2 infection include enhancing the immune response in phase 1, while suppressing it in phase 2 can be effective.



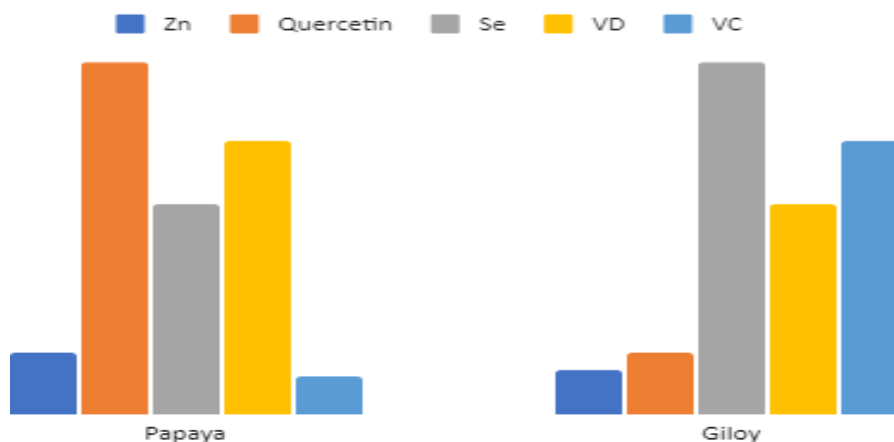
### IMMUNE BOOSTING, ANTIOXIDANTS AND ANTI-INFLAMMATORY SUPPLEMENTS AGAINST COVID-19

There is currently one vaccine; Sputnik V, approved by the Ministry of Health of the Russian Federation. It was quickly adopted as a corona vaccine, but experts have expressed concerns about the effectiveness and safety of the vaccine because it has yet to be evaluated in phase 3 clinical trials. Currently, most countries around the world are interested in developing corona vaccines, some of them have been in human trials, while most are in various stages of research and development. In addition, there are no specific medications for use against COVID-19, and no nationally or internationally relevant data on the effect of dietary supplements on the risk or severity of COVID-19. The development of along with the treatment of COVID-19. Therefore, In this Present Study we have new antiviral drugs for COVID-19 is a major challenge and requires a lot of time and effort to design and validate. Several lines of evidence show that many dietary supplements of various spices, herbs, fruits, roots and vegetables can reduce the risk or severity of several viral infections by increasing the immune response, especially in people with inadequate food sources, and also fighting them. - inflammatory, free radical scavenging and virucidal effect. These nutrients can be reused to reduce the pathological effects caused by SARS-CoV-2 infection. Therefore, the use of natural compounds can provide alternative preventive and therapeutic support taken the tender leaves of Giloy and Papaya. Spectroscopical and Statistical Analysis are used to confirm the presence of nutrients in them



**Papaya Giloy**

Element	Wavelengthnm	Papaya	Giloy
Zn	517	0.71254	0.511581
Quercetin	504	4	0.71254
Se	424	2.4	4
VD	420	3.1	2.4
VC	408	0.445	3.1



AMOUNT OF MINERALS IN GILOY AND PAPAYA LEAVES

The following section describes the beneficial effects of some nutrients.

**QUERCETIN**

Quercetin is a well-known antioxidant with anti-inflammatory and antiviral bioactivity. It suppresses TNF- $\alpha$  production in LPS-induced macrophages (101), IL-8 production in lung A549 cells (102), and TNF- $\alpha$  and IL-1 $\alpha$  mRNA levels in glial cells (103). It also inhibits the production of cyclooxygenase (COX) and lipoxygenase (LOX) enzymes in rat liver epithelial cells (104). Research has also shown that quercetin has antiviral effects against both RNA and DNA viruses. It inhibits virus entry and virus-cell fusion (105) and reduces proinflammatory cytokine expression and rhinovirus-induced lung inflammation in mice (106). Additionally, a metabolite of quercetin (4',5'-diacetyloxy-3,3',7'-trimethoxyflavone) has been shown to inhibit picornavirus replication by inhibiting the RNA replication complex (107). Studies have also found that due to the presence of a hydroxyl group, quercetin-3 $\beta$ -galactoside binds to the viral protease 3CL<sup>pro</sup> and inhibits its proteolytic activity (108). In the context of SARS virus infection, the SUMMIT supercomputer using drug docking screen and gene enrichment analysis (GSEA) found that quercetin, VD and estradiol interfere 85, 70 and 61% of SARS-CoV-2. viral proteins in human cells. Based on these findings, the study also predicts that the ternary combination (Quercetin/VD/Estradiol) compared to the 2-component (VD/Quercetin) can affect 73% of human genes encoding SARS-CoV-2 targets that are strongly associated with the mitigation of COVID-19 to substances (109). Furthermore, the increased ability of estradiol to affect human genes encoding SARS-CoV-2 targets compared to testosterone suggests a plausible explanation for the apparently higher male mortality in this corona pandemic (109).

Consistent with these findings, a randomized intervention trial using estradiol or VD as a palliative agent is listed in the clinical trial (<https://clinicaltrials.gov/ct2/show/NCT04359329>).

In addition, as observed in predictive models, that quercetin binds the S protein of SARS-CoV-2 at its host receptor region or at the S protein-human ACE2 interface, preventing viral entry into cells, indicating its therapeutic potential (110). This prediction is consistent with reports that both quercetin and the structurally similar luteolin inhibit SARS-CoV virus infection (111). In addition, other studies have found that quercetin in combination with VC has synergistic antiviral and immunomodulatory effects against COVID-19 (47). Overall, several studies show that quercetin has potential active against SARS-CoV-2 and can be used as a prophylactic and therapeutic agent in the fight against COVID-19.

**SELENIUM (SE)**

Selenium is abundant in common foods such as corn, garlic, onions, cabbage and broccoli. It is an important trace element that plays an important role in various physiological processes and the immune system. Selenium achieves its biological effect by binding the body's selenium proteins. Optimal selenium status (100  $\mu$ g/day) promotes T-cell proliferation, NK-cell activity and innate cell functions. In addition, it supports a stronger

vaccine react and strong immunity against pathogens. It also suppresses severe inflammation in tissues such as the lungs and intestines (77). Studies have shown that selenium supplementation modulates the inflammatory response in patients with respiratory distress syndrome by restoring lung antioxidant levels and suppressing IL-1 $\beta$  and IL-6 levels (78). Selenium supplementation inhibits pathogen-induced NF- $\kappa$ B activation and downstream proinflammatory cytokine release (79). The antiviral properties of selenium have been found to be mediated by its antioxidant activity. Selenium-deficient HIV+ patients generally have reduced activity of the antioxidant glutathione peroxidase (77). On the other hand, selenium supplementation has been shown to improve the numbers of CD+ T cells (80) and activity of glutathione peroxidase and other antioxidant selenoenzymes and catalase (81). In general, selenium enhances immunity through its non-enzymatic role as a cofactor for enzymes involved in critical post-translational protein modifications. Selenium supplementation may be useful in the fight against COVID-19 because it plays an important role in suppressing inflammation and boosting antioxidant and innate immunity

#### **VITAMIN D (VD)**

VD is a fat-soluble vitamin that plays an important role in immunomodulatory, antioxidant, and antiviral reactions (29, 30). Human airway epithelia constitutively express the vitamin D receptor, which allows VD to protect against respiratory infections. VD inhibits NF- $\kappa$ B p65 activation by regulating the NF- $\kappa$ B inhibitory protein I-kappa-B-alpha (I $\kappa$ B- $\alpha$ ) (31). VD also decreases the expression level of pro-inflammatory type 1 cytokines such as IL-12, IL-16, IL-8, TNF- $\alpha$ , IFN- $\gamma$ , while increasing type 2 cytokines such as IL-4, IL-5, IL-10 and regulatory T cells (32, 33). VD increases the level of antioxidants NRF-2 and facilitates the balanced functioning of mitochondria, prevents oxidation of proteins associated with oxidative stress, lipid Peroxidation and DNA damage (30). Epidemiological data suggest an increased susceptibility to acute respiratory viral infections in VD-lack (30, 34), while its supplementation improves innate immune responses against respiratory infections, including influenza A and B, parainfluenza 1 and 2, respiratory syncytial virus (RSV), and chronic hepatitis C (35, 36). Although VD has not been reported to directly affect viral replication or viral load, studies indicate that VD may promote antiviral activity by inhibiting virus-induced inflammation. Perhaps this function of VD can help prevent the cytokine storm in SARS-CoV-2 infection. In a randomized controlled trial (RCT), the addition of VD at a monthly high dose (100,000 IU/month) compared to a standard dose (12,000 IU/month) helps to reduce the incidence of acute respiratory infections, especially in the elderly term maintenance residents (37). In addition, evidence also suggests that VD can complement the effectiveness of drug therapy, as observed with ribavirin therapy in medical patients with chronic hepatitis C virus (HCV) genotype 1 and HCV genotype 2e3 infections (33, 34, 38, 39). The beneficial effect of the dietary supplement was observed in all age groups and in subjects with chronic diseases (40). The elderly are most often deficient in these important micronutrients. Thus, they may receive the most significant benefit from additional VD therapy (41).

#### **ZINC (ZN)**

Zinc is an important metal involved in many biological processes because it acts as a cofactor, a signaling molecule and a structural element. It regulates inflammatory activity and has antiviral and antioxidant functions (19). Studies in a rat model show that Zn deficiency increases oxidative stress, proinflammatory TNF- $\alpha$  and vascular cell adhesion molecule (VCAM)-1 expression, and causes remodeling of lung tissue, which was partially reversed by Zn supplementation (20). Zn deficiency shows increased TNF- $\alpha$ , IFN- $\gamma$ , and FasR signaling and induction of apoptosis in lung epithelial cells (21) and also increases Janus kinase (JAK)-STAT signaling in lungs under septic conditions (22). Zinc can also modulate viral entry, fusion, replication, translation of viral proteins, and virus formation of respiratory viruses (19, 23). Speth et al. (24) showed that Zn exposure (100  $\mu$ M) decreases the activity of recombinant human ACE-2 in rat lungs. Zn<sup>2+</sup> cations, especially in combination with the Zn ionophore pyrithione, have been shown to inhibit the activity of SARS coronavirus RNA polymerase (RNA-dependent RNA polymerase, RdRp) by preventing its replication (25). Studies have shown that oral Zn supplementation reduces the incidence of acute respiratory infections by 35%. Zn also shortens the duration of flu-like symptoms by two days and improves the speed of recovery. The recommended dose ranges from 20 to 92 mg per week in various studies (27).



## Essential Micronutrients

<u>Vitamins</u>	<u>Minerals</u>	<u>Trace Elements</u>
Biotin	Calcium	Chromium
Folic Acid	Phosphorus	Copper
Niacin	Magnesium	Fluoride
Pantothenic Acid	Sodium	Iodine
Vitamin B1 (Thiamin)	Potassium	Iron
Vitamin B2 (Riboflavin)	Chloride	Manganese
Vitamin B6 (Pyridoxine)	Sulfur	Molybdenum
Vitamin B12 (Cobalamine)		Selenium
Vitamin C		Zinc
Vitamin D		
Vitamin A		
Vitamin E		
Vitamin K		

### VITAMIN C (VC)

Vitamin C may protect against infection because it plays a key role in immune system health (42). This vitamin supports the function of various immune cells and improves their defense against infections. VC supplementation has been shown to reduce the duration and severity of upper respiratory tract infections (most of which are caused by viral infections), including the common cold (43). The recommended dose of VC was 1-3 g/day. The recommended daily allowance (RDA) for VC is 60 mg. Various spices, herbs, fruits and vegetables have been found to be excellent sources of VC.

### CONCLUSIONS

Currently, one corona vaccine is Sputnik V, developed by the Gamaleya Research Institute in Moscow, which has been approved by the Ministry of Health of the Russian Federation. It was quickly adopted as a corona vaccine, but experts have expressed concerns about the effectiveness and safety of the vaccine because it has not yet been evaluated in phase 3 clinical trials. Currently, there are more than 100 different vaccines in research and development stages in the world. Some are in human clinical trials and have been rigorously tested for safety, efficacy and dose standardization. Similarly, several drug candidates have been identified, most of which are in various stages of research and development, while some have been renewed and approved for emergency use in this pandemic. Prominent approved for emergency use include hydroxychloroquine, favipiravir, remdesivir, tocilizumab, etc. In addition, no significant studies support the use of certain nutritional supplements as adjunctive therapy in the treatment of patients with COVID-19. A large body of existing literature provides scientific evidence for the immune-enhancing, anti-inflammatory, antioxidant, and antiviral properties of several phytonutrients. Preliminary studies indicate that some of them have been found to have anti-SARS-CoV-2 activity and are rapidly progressing to clinical trials (Table 2). Repurposing the right combination of these nutrients to achieve functional synergy in the form of ready-made food supplements can provide both prophylactic and adjuvant treatment against COVID-19.

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### Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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**A STUDY OF FACTORS INFLUENCING PROSPECTIVE STUDENTS DECISION IN CHOOSING THE UNIVERSITY**

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**Dr S Radha**

Sr Regional/ Additional Director-IGNOU

**INTRODUCTION**

In India higher education is provided by both public and private institutions, which covers central universities, state universities, private universities, open universities etc., A degree programme is a major career development one which lead to employment or self employment opportunities for the students. So, what and where to study higher education is significant in taking a decision by the prospective student. Here the activities of higher education institution plays a vital role in enhancing the students learning experience and to expose the institution to the prospective students.

The present research paper analyses, what are the sources of information accessed by prospective learners, how the higher education provides the required information to the prospective students and how they are influenced and supported in making their decisions.

**OBJECTIVES:**

1. To analyse the sources of information about higher education institutions
2. To analyse the student support services of higher education institutions
3. To provide the feasible suggestions

**METHODOLOGY:**

To assess the prospective students views on choice and decision making of University, a feedback is collected from present students and alumni. The paper is based on the survey and personal interview with students, faculty, interaction amongst intellectuals and practical observations.

**FACTORS INFLUENCING THE PROSPECTIVE STUDENTS CHOICE:**

The various factors which influence the prospective student choice are discussed below.

**Phase I: Creation of awareness of programmes offered by University:** The following source of information are generally consulted while taking a decision.

- \* University Prospectus and website
- \* UGC and AICTE websites for recognition of degrees
- \* Search engines
- \* Faculty and admission helpdesk and placement cell staff
- \* Family and friends
- \* Printed and digital publicity measures
- \* Alumni experiences
- \* Present students feedback
- \* Reviews in social media
- \* Visit to University and Colleges etc.,

The prospective student may develop the awareness about University based upon his/her individual requirements of higher education like fees, financial support, distance from home, quality teaching & learning methods, placement support etc., Prospective students may be more interested to choose an institution that demonstrates a commitment to addressing their unique needs and providing support services.

**Outcome:** The awareness about University will result the following

- \*To develop enthusiasm / interest about Educational Institute
- \*The prospective learner should develop good academic knowledge & skills.
- \*The prospective learner should compare higher education with other institutions
- \*The prospective learner should feel that education with a particular institute is the best.

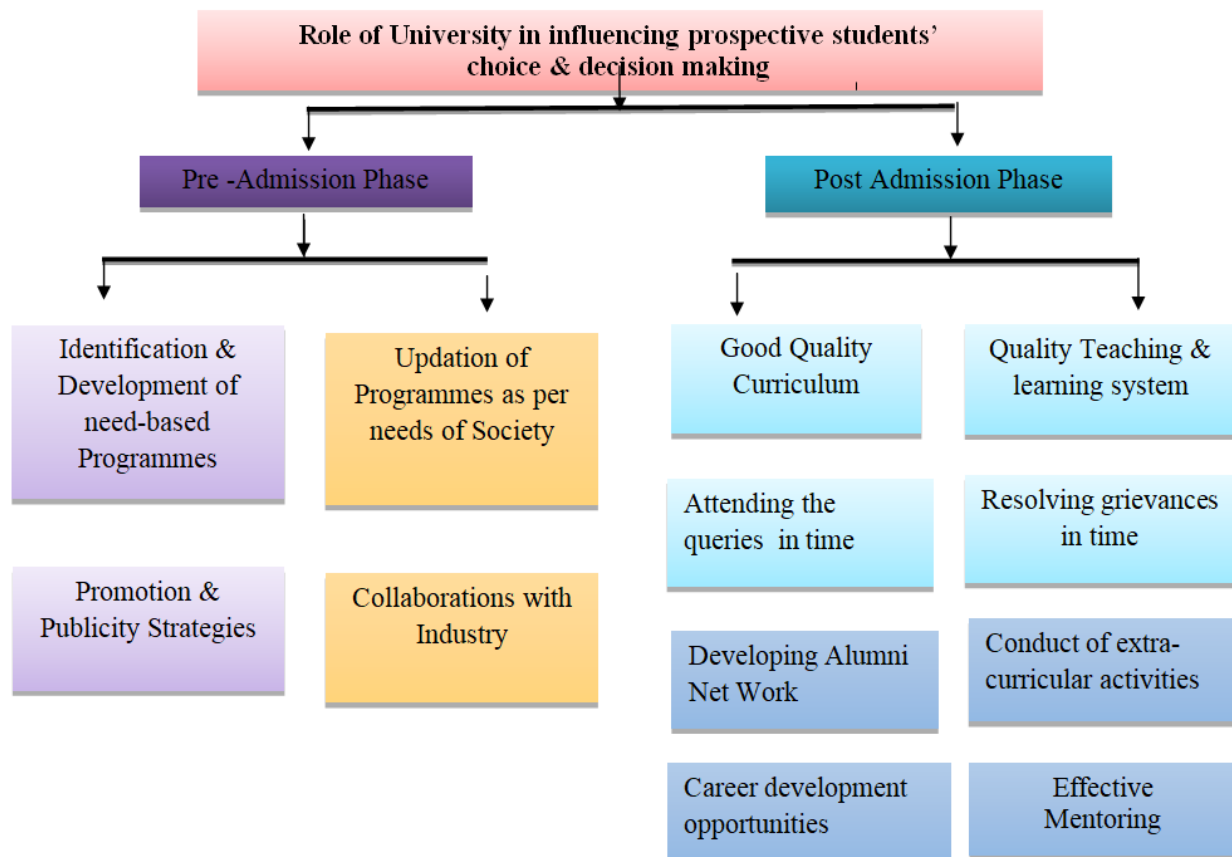
## Phase II: Effective Students Support Services by the University:

The student support services are the same for regular mode, distance mode and online mode education etc., The student support system should be able to provide academic guidance to students, helping them navigate the challenges of their chosen courses.

The effective support system provides timely academic guidance to students, enhance their learning experience, make them overcoming the challenges during the course of study and to complete the programme successfully. So, an effective student support services will develop the learning skills of present learners and influence the decision making of prospective learners.

The following diagram shows the major aspects to be taken care by the University.

**Diagram: Role of University in influencing the prospective students choice and decosn making**



Compiled by Dr S Radha, Sr Regional Director

The pre-admission and post-admission activities are equally important in influencing the prospective students decision making. University has to focus on the following aspects to appeal the significance of higher education.

### Pre-admission Phase:

The higher education institutions can publicize their programmes and effectively through both traditional and modern promotional strategies. These strategies aim to enhance their visibility, influence the prospective students and establish a strong reputation. The publicity measures may include,

### Digital promotional activities:

1. University has to maintain an informative, student-friendly and regularly updated website
2. Website should display the details of programmes, admission criteria, faculty, placements and campus tour etc.,
3. Using social media platforms like You Tube, Facebook, twitter, Instagram etc., to share all academic and non-academic activities
4. Sending personalised emails to potential students with programme details, financial support etc.,
5. Sharing alumni talks on their experience with University

6. Conducting online sessions to interact with faculty
7. Optimizing the website for search engines to improve visibility in search etc

**Other promotional activities:**

1. Advertising in local news papers
2. Conducting awareness campaigns in colleges and offices to inform about programmes, scholarships, financial aid and fee waivers etc.,
3. Academic collaboration with colleges and professional institutions to create more awareness
4. Delivering talks in television and radio
5. Participation in education fairs
6. Broadcast the advertisements in TV and radio channels
7. Display of posters and banners in all public places
8. Release of press news about new programmes, achievements or collaborations with other institutions etc,
9. Getting additional ranking like NAAC, NIRF etc., to gain credibility
10. Involving the alumni in outreach activities like webinars, orientations, pre-placement trainings etc.,

**Post- Admission Phase:**

The University has to take of internal development of system, which is also influence the prospective students decision making.

1. Identification & Development of need-based Programmes
2. Good quality curriculum and revision of curriculum as per needs of society
3. Well-structured academic activities Calander
4. Having the faculty with academic experience and industrial experience
5. Updating the skills of faculty periodically
6. Developing online teaching and learning system
7. Financial support system
8. Developing academic, research and employability skills among the students
9. Collaborations with Industry for Internships, placements etc.,
10. Career development opportunities through strong placement cell
11. Resolving the grievance in time
12. Periodical feedback system

**Outcome:**

The effective strategies, the higher education institutions can publicize their programmes, teaching & learning system, enhance their visibility and attract the diverse prospective students.

**FEASIBLE SUGGESTIONS:**

By ensuring that students receive the necessary academic support, the University can enhance their learning experience and increase their chances of successfully completing their studies. The Universities have to focus on the following areas to face the today challenges from the competitive world.

**1. Website Updation & Publicity activities:**

The University need to build a learner friendly website and able to attend the pre-admission and post admission queries both in offline and online.

**2. Developing Industry collaborated Programmes:**

The present scenario requires more industry collaborated programmes rather than academic oriented programmes. The present teaching & learning system should be able to prepare them as entrepreneurs.

### 3. Online Teaching & Learning:

All the Universities have adopted the blending learning and online learning systems as per the requirements of prospective learners. At the same time, the University has to invest in producing the effective online teaching and learning system. While using the online teaching & learning method, both the teachers and students need to have pre-training, digital infrastructure and good /sufficient internet facilities for successful teaching & learning.

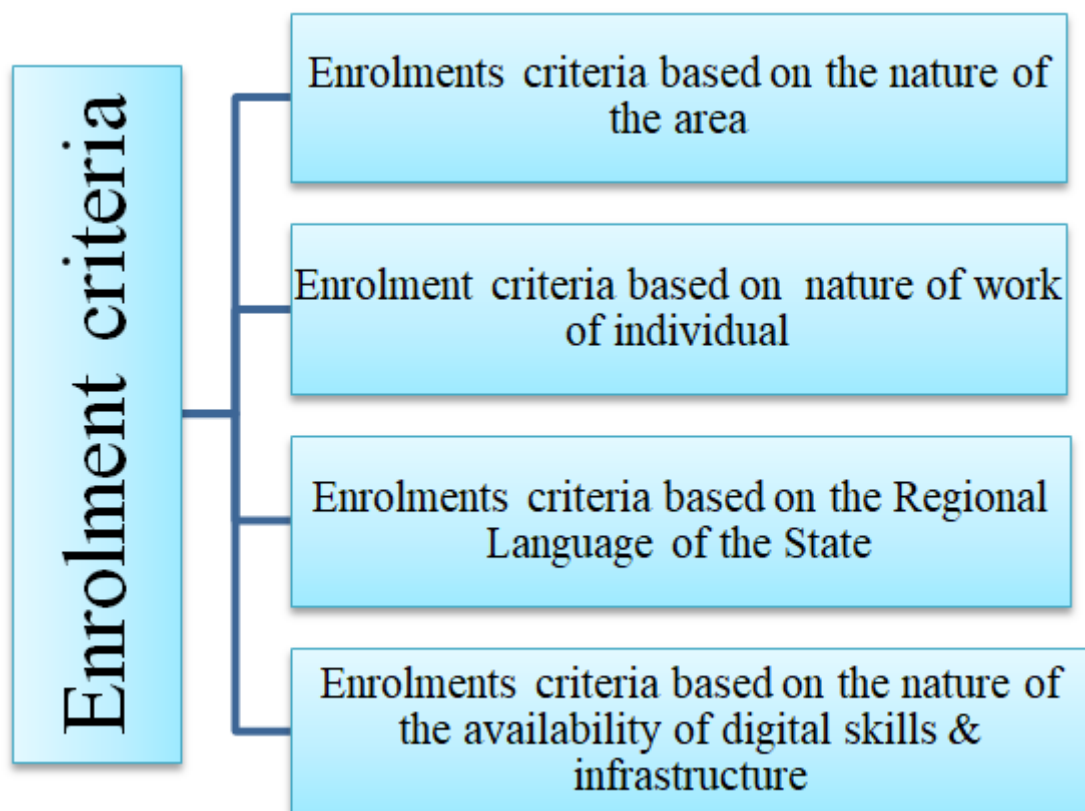


Compiled by Dr S Radha, Sr Regional Director

### 4. Personalised Guidance:

University need to plan personalised guidance through mentor system for various categories like rural Students, urban students , above average students, average students, below average students etc., The following diagram shows the various enrolment criteria to assess the enrolments for different categories.

**Diagram: Enrolment Criteria.**



Compiled by Dr S Radha, Sr Regional Director

### 5. Effective Way of Introducing the New Programmes:

Generally it is noticed that, University launches several programmes based upon the society needs and to get accreditations. But the enrolments in affiliating colleges or autonomous colleges varies depending upon the prospective student choice of study, medium of study, income level, placement opportunities and accessibility etc., Hence, University need to conduct pre-launch surveys before developing the programmes.

**Example 1: An ideal way of introducing a Programme to provide effective student support services by the University.**

- Creating awareness about pre-launch programme through publicity
- Developing the skills of faculty through trainings

- c. Launch of Programme for identified target groups
- d. Activation of additional Programmes in educational institutions
- e. Post-launch publicity
- f. Admitting learners

**6. An ideal Academic Calendar for semester programme**

An ideal academic calendar should provide sufficient time for academic activities and able to contribute for overall development of the student.

**Example 2:** the calendar of Semester based programme may have the following durations,

\*Admission Cycle: One month to one and half months

\*Teaching & Learning activities: three and half months to four months

\*Examinations: one month for examinations.

Whenever University extends the admission cycle extends, the time duration for support services will be reduced.

**7. Alumni Engagement**

Engaging alumni as mentors, guest speakers, or career advisors can create a strong connection between current and former students. When alumni share their success stories and experiences, it can inspire prospective students to choose the institution.

During the survey, majority alumni expressed the quality teaching & learning is priority criteria, while choosing the university and followed by the career opportunities, learning environment, financial support etc.,

In spite of all these, one should remember that, cost of living plays a vital role in creating higher education opportunities in rural & backward areas. Highly populated area people may prefer short duration job oriented programmes rather than higher education programmes.

**CONCLUSION**

The systematic planning and implementation of academic and non-academic activities contribute for higher rate of successful completion of programmes & career development of students. A satisfied student is positive ambassador of university and contributes for the enhancement of enrolments and goodwill. At the same time, a dissatisfied student acts as a negative ambassador and ruins the brand image of the university.

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**BEHAVIOURAL PATTERNS AND DECISION-MAKING PROCESSES OF RETAIL INVESTORS IN THE STOCK MARKET: A STUDY OF MUMBAI SUBURBAN REGION**

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**ABSTRACT**

*This research investigates the behavioral patterns and decision-making processes of retail investors in the stock market, focusing on how external factors, demographic variables, and risk perceptions influence their investment choices. The study finds that retail investors predominantly adopt a moderate investment strategy, with a preference for balanced risk and steady growth. Self-research and market news are identified as the most influential factors in investment decisions, while social media trends have a lesser impact. The study also reveals that most investors have moderate risk tolerance, and both male and female investors exhibit similar risk preferences. Chi-square tests indicate no significant difference in investment experience and strategy of investment as well as in risk tolerance between male and female investors. The findings offer insights into the key drivers of retail investors' behavior and contribute to a better understanding of their decision-making processes in the stock market.*

*Keywords: Retail Investors, Stock Market, Investment Strategy, Risk Tolerance, Behavioural Patterns*

**1. INTRODUCTION**

The stock market serves as a dynamic platform where retail investors—individuals who buy and sell securities for personal accounts rather than for institutions—participate in trading with the goal of capital appreciation, dividend income, or both. Unlike institutional investors, retail investors tend to exhibit unique behavioural patterns, often influenced by a combination of psychological, demographic, and external factors, including social media trends, economic news, and global events. In recent years, the growth of digital platforms and the accessibility of online trading have transformed the investment landscape, making it easier for individuals to engage with the stock market. However, this increase in accessibility also means retail investors face heightened exposure to information that can influence their decision-making processes, frequently in unpredictable ways.

Behavioural finance, a field that merges insights from psychology with financial theory, helps explain the cognitive biases and emotional factors that drive investors' choices. This research aims to identify and analyze the distinct behavioural patterns and decision-making processes of retail investors, focusing on factors that influence their actions in the market. Among these are the psychological influences that shape risk perception, the effects of demographic factors like age, education, and income level, and the impact of social and external cues such as media trends and news events. These elements together contribute to the complexity of investment behaviour, which can vary widely based on individual attitudes toward risk, past experiences, and situational responses to market fluctuations.

**2. REVIEW OF LITERATURE**

This study, "**A Study on the Impact of Behavioral Biases on the Investment Pattern of Indian Retail Investors with a Reference to the Millennial Generation**," examines how behavioral biases influence Indian millennials' investment decisions. Findings show that most investors prioritize principal safety, herding bias is notably influential, and a weak positive relationship exists between income proportion invested and returns. Statistical tests (chi-square, ANOVA) reveal no significant difference in factors considered before investing or impact of biases on average returns. Most investors' average return on investment remains below 10%. (Pooja D. & Vidya R., 2022)

The study titled "**Factors Influencing Retail Investors' Trading Behaviour in the Thai Stock Market**" explores the impact of behavioral biases on Thai retail investors' trading behavior, with data collected from a 2016 survey of 491 participants. Findings suggest that retail investors often exhibit biases, with men displaying higher overconfidence than women. Additionally, experienced investors tend to hold stocks for shorter durations, and younger investors (aged 45 and under) typically maintain more diversified portfolios. Higher-income investors and those using multiple brokers also tend to have diversified portfolios, mirroring trends observed in other emerging markets, such as Turkey, India, and Vietnam. (Paisarn, Chancharat, & Chancharat, 2021)

The thesis, titled “A Study of Retail Investors' Behavior Towards Equity Investment in the Stock Market: A Case Study of the Mumbai Region,” examines how demographic factors (age, gender, income, and education) influence investment objectives and patterns. The results show that demographic factors have a notable impact on both investment objectives and patterns, with findings also confirming that investment experience influences investment decisions. Similarly, sources of information significantly impact investment patterns. Additionally, the study uses Garrett’s Ranking method to assess investment preferences, revealing that retail investors favor equity investments for returns, liquidity, and additional benefits. (Pereira, 2020)

The project titled “A Study on Investment Patterns and Preferences of Retail Investors” shows that most investors favor safe, low-risk options, with many choosing bank investments. While some allocate a family budget, most do not set annual savings targets. The majority prefer a 1–2-year investment horizon for liquidity and long-term goals like home ownership. Decisions are influenced by media advice and past performance, focusing on liquidity, moderate returns, and low tax benefits. Many investors avoid high-risk options, regularly monitor their investments, and prefer steady, low-growth returns. Statistical tests indicate a link between investment horizon and period, but no significant connection between education level and mutual fund preferences. (Basha, 2021)

### 3. OBJECTIVES OF THE STUDY

- 1) To identify the key behavioral patterns exhibited by retail investors in the stock market.
- 2) To assess the impact of external factors, such as market news and social media trends, on the investment choices of retail investors.
- 3) To analyze the risk perception among retail investors.

### 4. HYPOTHESIS STATEMENTS

**H<sub>0</sub>:** There is no significant difference in investment experience and investment strategy in the stock market among retail investors

**H<sub>0</sub>:** There is no significant difference in overall risk tolerance for stock market investments between male and female retail investors

### 5. RESEARCH METHODOLOGY

#### 5.1 Type of Research:

The current study aims to describe and understand the various factors influencing investors’ perceptions, preferences, and strategies, the research employs a **descriptive and conclusive research design**. This design is suitable for identifying and detailing the specific behaviors, motivations, and decision-making factors of retail investors, enabling a comprehensive understanding of their investment patterns and choices.

#### 5.2 Area of study:

The research was conducted among the retail investors of suburb area of Mumbai city.

#### 5.3 Sampling method

Here Non-Probability Convenient sampling technique is used for the purpose of data collection.

#### 5.4 Target Population and Sample size:

A sample size of 77 respondents, who are retail investors in the stock market, is selected from a specific suburban area of Mumbai city.

#### 5.5 Type and Source of Data:

The present study is based on primary data. The primary data was collected by structured questionnaire. Close ended questions were asked in the questionnaire to get the answers.

#### 5.6 Statistical Tools Use:

Graph is used to organize data and to display the data in a way that is easy to understand and remember. Chi-square test is used to test hypothesis.

### 6. DATA ANALYSIS AND FINDINGS OF THE STUDY

#### 6.1 Descriptive Statistics of Demographic Variables

		Count
Gender	Female	34
	Male	43

Age	Below 25	16
	25-35	14
	36-45	21
	46-55	24
	Above 55	2
Monthly Income (in INR)	Below 25,000	13
	25,000-50,000	17
	50,001-1,00,000	17
	1,00,001-2,00,000	13
	Above 2,00,000	17
Educational Qualification	HSC	10
	Under Graduation	29
	Post Graduation	38

Source: Primary Data

## 6.2 Investment Experience in Stock Market

Particulars	Count
Less than 1 year	25
1-3 years	26
4-7 years	14
More than 7 years	12

Source: Primary Data

The data shows that most participants have relatively short investment experience in the stock market, with 26 individuals having 1-3 years and 25 having less than a year. Fewer participants, 14 in total, have 4-7 years of experience, while only 12 have more than 7 years, indicating a smaller group of long-term investors.

## 6.3 How often do you review your stock portfolio

Particulars	Count
Daily	29
Weekly	19
Monthly	14
Quarterly	2
Annually	3
Not specific	10

Source: Primary Data

The majority of participants review their stock portfolios frequently, with 29 individuals checking them daily and 19 doing so weekly. A smaller group, 14 participants, reviews their portfolios monthly, while just 2 and 3 individuals review them quarterly and annually, respectively. Additionally, 10 participants do not have a specific review schedule. This suggests that most investors are highly engaged with their portfolios, while some take a more relaxed approach.

## 6.4 sources influence your investment decisions the most

Particulars	Does not influence	Influence somewhat	Influence the most
Financial advisors / Broker	22	32	23
Social media	30	36	11
Family and friends	34	20	23
Market news and reports	9	29	39
Self-research	14	20	43

Source: Primary Data

The data reveals that self-research is the most influential factor in investment decisions, with 43 participants indicating it influences them the most. Market news and reports follow closely, with 39 individuals considering it the most impactful. Financial advisors or brokers also play a significant role, with 23 participants citing them as the top influence. Family and friends have a more moderate influence, with 23 individuals rating them the highest, while social media has the least strong influence, with only 11 participants rating it the most influential.



**6.5 How would you describe your investment strategy in stock market?**

Particulars	Count
Aggressive (high returns by taking on higher risks)	11
Conservative (low-risk, stable returns)	17
Moderate (steady growth with moderate risk)	44
Speculative (High-risk, high-reward approach focused on short-term gains)	5

*Source: Primary Data*

The majority of participants adopt a moderate investment strategy, with 44 individuals seeking steady growth while managing moderate risk. Seventeen participants follow a conservative approach, prioritizing low-risk, stable returns. Eleven individuals prefer an aggressive strategy, aiming for high returns by taking on higher risks, while only five participants engage in speculative investing, focusing on high-risk, short-term gains. This suggests that most investors favor a balanced approach to risk and reward.

**6.6 How often do you engage in high-risk investment opportunities?**

Particulars	Count
Frequently	7
Never	6
Rarely	24
Sometimes	40

*Source: Primary Data*

The majority of participants engage in high-risk investment opportunities occasionally, with 40 individuals doing so sometimes. A smaller group, 24 participants, invest rarely in high-risk opportunities, while 7 individuals do so frequently. Six participants never engage in high-risk investments, indicating that while most investors are cautious, there is still a subset willing to take on higher risk from time to time.

**6.7 How often does market news affect your investment decisions?**

Particulars	Count
Never	4
Often	21
Rarely	11
Sometimes	29
Very often	12

*Source: Primary Data*

Market news significantly influences investment decisions for many participants, with 29 individuals stating it affects their decisions sometimes, and 21 reporting it often. Twelve participants are highly responsive to market news, indicating it affects their decisions very often. Only 11 participants are rarely influenced by market news, and just 4 individuals report that it never impacts their investment decisions. This suggests that most investors closely monitor market news in making decisions.

**6.8 To what extent do social media trends / online forums influence your stock market decisions?**

Particulars	Count
Insignificant	8
Neutral	39
Significant	22
Very insignificant	5
Very significant	3

*Source: Primary Data*

The influence of social media trends and online forums on stock market decisions varies among participants. A majority, 39 individuals, feel it has a neutral impact, while 22 participants consider it significant. However, only 8 participants view it as insignificant, and just 3 find it very significant. A small group, 5 participants, feels it has a very insignificant influence on their decisions, suggesting that while some investors are influenced by social media and online forums, the impact is not overwhelming for most.

**6.9 How would you describe your overall risk tolerance when it comes to stock market investments?**

Particulars	Count
High	18
Low	8
Moderate	45
Very high	4
Very low	2

*Source: Primary Data*

The majority of participants have a moderate risk tolerance, with 45 individuals indicating a balanced approach to risk in their stock market investments. Eighteen participants are comfortable with high risk, while 8 have a low risk tolerance. Only 4 participants are very high-risk takers, and 2 have a very low risk tolerance. This suggests that most investors prefer a cautious approach, with a smaller group willing to take on higher risks.

**6.10 How likely are you to invest in stocks when there is significant market volatility?**

Particulars	Count
Likely	26
Neutral	35
Unlikely	6
Very likely	8
Very unlikely	2

*Source: Primary Data*

The majority of participants are neutral or likely to invest in stocks during significant market volatility, with 35 individuals remaining neutral and 26 considering it likely. A smaller group, 8 participants, are very likely to invest in volatile markets, while 6 find it unlikely and 2 are very unlikely to do so. This indicates that while many investors are cautious or indifferent, there is still a notable portion willing to invest even in volatile conditions.

**6.11 How does the potential for loss influence your investment decisions?**

Particulars	Count
Does not impact	3
Minimally impacts	7
Neutral	29
Significantly impacts	11
Somewhat impacts	27

*Source: Primary Data*

The potential for loss has a varied impact on participants' investment decisions. A significant portion, 29 individuals, are neutral about the potential for loss, while 27 participants say it somewhat impacts their decisions. Eleven participants report that the potential for loss significantly influences their choices, and 7 individuals find it minimally impactful. Only 3 participants state that the potential for loss does not impact their decisions at all, suggesting that most investors consider the risk of loss to some degree when making investment choices.

**7. HYPOTHESIS TESTING**

**H<sub>0</sub>:** There is no significant difference in investment experience and investment strategy in the stock market among retail investors

**7.1 Chi-square test statistics**

		1-3 years	4-7 years	Less than 1 year	More than 7 years	Total
Aggressive (high returns by taking on higher risks)	Observed	3	3	3	2	11
	Expected	3.71	2.00	3.57	1.71	11.00
Conservative (low-	Observed	4	3	9	1	17

risk, stable returns)						
	Expected	5.74	3.09	5.52	2.65	17.00
Moderate (steady growth with moderate risk)	Observed	18	6	12	8	44
	Expected	14.86	8.00	14.29	6.86	44.00
Speculative (High-risk, high-reward approach focused on short-term gains)	Observed	1	2	1	1	5
	Expected	1.69	0.91	1.62	0.78	5.00
Total	Observed	26	14	25	12	77
	Expected	26.00	14.00	25.00	12.00	77.00
		8.14	chi-square			
		9	df			
		.5200	p-value			

Source: Primary Data

The chi-square test was conducted to assess whether there is a significant difference between investment experience and investment strategy among retail investors. The chi-square value is 8.14, with 9 degrees of freedom, and the p-value is 0.5200. Since the p-value is greater than the 0.05 significance level, we fail to reject the null hypothesis, indicating that there is no significant difference in the investment experience and investment strategy of retail investors. This suggests that investors with varying levels of experience approach their investment strategies similarly.

**H<sub>0</sub>: There is no significant difference in overall risk tolerance for stock market investments between male and female retail investors**

### 7.1 Chi-square test statistics

		Female	Male	Total
High	Observed	5	13	18
	Expected	7.95	10.05	18.00
Low	Observed	3	5	8
	Expected	3.53	4.47	8.00
Moderate	Observed	23	22	45
	Expected	19.87	25.13	45.00
Very high	Observed	2	2	4
	Expected	1.77	2.23	4.00
Very low	Observed	1	1	2
	Expected	0.88	1.12	2.00
Total	Observed	34	43	77
	Expected	34.00	43.00	77.00
		3.07	chi-square	
		4	df	
		.5466	p-value	

Source: Primary Data

The chi-square test was conducted to assess if there is a significant difference in risk tolerance between male and female retail investors. With a chi-square value of 3.07, 4 degrees of freedom, and a p-value of 0.5466, which is greater than 0.05, we fail to reject the null hypothesis. This indicates no significant difference in risk tolerance between male and female investors, suggesting that both groups exhibit similar risk levels in stock market investments.

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**8. LIMITATIONS**

- 1) The study has selected geographic location i.e. Mumbai suburban city.
- 2) The study has limited sample size i.e. 77 respondents.
- 3) It may not be suitable to make generalization of the findings. This is mainly because of its limited sample size and study area being limited only to limited location or suburb area.

**9. CONCLUSION**

In conclusion, the data reveals a general trend where most retail investors have relatively short-term investment experience, frequently review their stock portfolios, and rely on self-research and market news for investment decisions.

Further, the findings reveal that retail investors in the stock market display a blend of caution and selective risk-taking. While they are attentive to market news and somewhat influenced by social media, most prioritize a balanced approach with moderate risk tolerance. This indicates a cautious but opportunity-seeking investor mindset, where calculated risks are acceptable within a structured investment strategy.

The chi-square tests suggest that there is no significant difference in the investment experience and strategy among retail investors, nor is there a significant difference in risk tolerance between male and female investors. This indicates that, despite varying investment experiences and genders, retail investors tend to approach the stock market similarly in terms of strategy and risk-taking behaviour.

There exists large scope for further study both at micro and macro levels.

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**A CRITICAL COMPARISON OF PUBLIC AND PRIVATE HEALTH INSURANCE COMPANIES IN HARYANA**

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**ABSTRACT**

*The health insurance sector in India has witnessed significant growth over the past two decades, with both public and private players expanding their reach. This study presents a critical comparison of public and private health insurance companies operating in Haryana, aiming to evaluate their performance, efficiency, customer satisfaction, and service delivery mechanisms. Using both primary and secondary data, the research analyzes factors such as claim settlement ratios, premium affordability, policy coverage, customer support services, and awareness levels among policyholders. A structured questionnaire was administered to a sample of respondents across urban and rural areas to understand customer perceptions and experiences. The findings reveal that while public insurance providers often enjoy greater trust and wider reach, private insurers excel in innovation, prompt service, and technological integration. However, challenges like lack of awareness, complex procedures, and regional disparities persist across both sectors. The study concludes with key suggestions for improving health insurance delivery in Haryana, ensuring greater accessibility, transparency, and policyholder satisfaction.*

**Keywords:** Public Health Insurance, Private Health Insurance, Haryana, Customer Satisfaction, Claim Settlement, Accessibility, Awareness.

**1. INTRODUCTION**

Health insurance is an essential component of financial security, providing protection against unexpected medical expenses. With the rising cost of healthcare services, health insurance has become a necessity rather than a luxury. In India, the health insurance sector comprises both public and private players, each catering to different segments of society based on affordability, accessibility, and service efficiency.

Public insurance companies, such as Life Insurance Corporation (LIC) and New India Assurance, are government-backed institutions that offer standardized plans at relatively lower premiums. They aim to provide health coverage to a broader segment of the population, including lower-income groups and rural communities. However, these public insurers often face challenges such as lengthy claim settlement processes, bureaucratic red tape, and limited customization of policies.

On the other hand, private insurance companies, such as ICICI Lombard, HDFC Ergo, and Max Bupa, operate in a competitive market environment, leading to innovation in policy structures, customer service, and claim processing efficiency. Private insurers provide a range of health insurance policies that cater to various customer needs, offering benefits such as cashless hospitalization, quick claim settlements, and additional riders. However, these benefits come at a cost, with higher premiums and sometimes stringent claim approval conditions.

The state of Haryana has witnessed a growing demand for health insurance due to increasing healthcare awareness and rising medical costs. Both public and private insurers play a crucial role in meeting this demand. The study aims to explore and compare the performance of these insurance providers in Haryana, analyzing factors such as claim settlement ratios, premium affordability, customer satisfaction, policy benefits, and regulatory compliance. Understanding these differences will help stakeholders make informed decisions about choosing suitable health insurance plans based on their needs.

Additionally, the study examines the regulatory framework governing the health insurance industry in India, highlighting the role of the Insurance Regulatory and Development Authority of India (IRDAI) in ensuring transparency, consumer protection, and market stability. By providing a comparative analysis, this research seeks to identify the strengths and weaknesses of both sectors, offering insights that can contribute to policy improvements and enhanced customer experience in the health insurance domain.

**2. REVIEW OF LITERATURE**

The review of literature provides a comprehensive understanding of previous research conducted on health insurance in India. Several studies have focused on the comparative analysis of public and private health insurance providers, claim settlement processes, premium rates, and customer satisfaction levels. Below is a detailed table summarizing key studies:

Author & Year	Title of Study	Key Findings
Sharma & Gupta (2018)	Comparative Study on Public and Private Health Insurance in India	Public insurers provide wider coverage, but claim processing is slower compared to private insurers.
Mehta (2019)	Customer Satisfaction in Health Insurance Sector	Private insurers score higher in customer satisfaction due to better service quality, though they charge higher premiums.
Patel & Roy (2020)	Growth and Challenges in Health Insurance	Health insurance penetration is increasing but rural areas still face accessibility issues.
Reddy (2021)	Effectiveness of Health Insurance Regulations	Stringent regulations improve transparency in both sectors but lead to increased operational costs.
Singh et al. (2022)	Analysis of Claim Settlement Ratios	Private insurers have a higher claim settlement ratio but also more claim rejections due to stricter scrutiny.
Verma & Kapoor (2017)	Affordability of Health Insurance Plans	Public insurance is more affordable but offers limited services compared to private insurers.
Kumar & Das (2019)	Consumer Awareness and Health Insurance	Awareness about health insurance remains low, particularly in rural areas, affecting penetration.
Banerjee (2020)	Impact of Digitalization on Health Insurance	Digital claim processing has improved efficiency in both public and private insurance sectors.
Aggarwal (2021)	Role of Government in Health Insurance	Government policies have significantly contributed to increasing insurance coverage but require better implementation.
Choudhury & Sen (2022)	Health Insurance and Financial Inclusion	Inclusion of lower-income groups remains a challenge despite multiple initiatives by both public and private insurers.
Mishra et al. (2023)	Customer Perception of Public and Private Insurers	Customers prefer private insurers for faster claims but trust public insurers for long-term security.
Nair & Pillai (2023)	Comparative Analysis of Health Insurance Policies	Public insurers focus on basic coverage, whereas private insurers offer diverse add-ons and premium services.

The literature suggests that while public insurers ensure affordability and broader accessibility, private insurers excel in efficiency and customer service. However, challenges such as claim rejections, premium affordability, and rural penetration remain crucial areas of concern.

### 3. OBJECTIVES OF THE STUDY

1. To compare the claim settlement efficiency of public and private health insurance companies in Haryana.
2. To assess customer satisfaction with public and private health insurance providers.
3. To analyze the affordability and accessibility of health insurance policies.
4. To examine regulatory challenges and policyholder grievances in both sectors.
5. To evaluate the role of technological advancements in the efficiency of health insurance services.
6. To determine the impact of health insurance policies on healthcare accessibility and affordability in Haryana.

4. RESEARCH METHODOLOGY

4.1 Data Collection

- **Primary Data:** Collected through surveys, structured interviews, and focus group discussions with policyholders, insurance agents, healthcare professionals, and industry experts. The sample includes urban and rural policyholders to ensure a comprehensive understanding.
- **Secondary Data:** Extracted from government reports, industry whitepapers, journal articles, company reports, and regulatory publications. Sources include IRDAI reports, insurance company databases, academic research papers, and online databases such as PubMed and Scopus.

4.2 Analysis Techniques

- **Descriptive Statistics:** Used to summarize demographic information and general trends.
- **Comparative Analysis:** Employed to evaluate the differences in policy coverage, claim settlement efficiency, and customer satisfaction.
- **Regression Analysis:** Used to determine factors influencing policyholder satisfaction and claim success rates.
- **Hypothesis Testing:** Statistical tests applied to validate differences between public and private insurance performance metrics.

5. LIMITATIONS OF THE STUDY

1. Limited sample size due to geographical constraints.
2. Possible response bias in survey data.
3. Rapidly evolving insurance policies may affect findings.
4. Limited availability of data from private companies.

6. ANALYSIS AND INTERPRETATION

The analysis is conducted based on the objectives outlined earlier, using primary and secondary data.

Objective 1: Claim Settlement Efficiency

Parameter	Public Insurance (%)	Private Insurance (%)
Claim Settlement Ratio	92-95	83-88
Average Processing Time	15-30	7-14
Customer Satisfaction (Out of 100)	75	85

**Interpretation:** Public insurers have a higher settlement ratio but take longer to process claims, whereas private insurer’s process claims faster with slightly lower settlement rates.

Objective 2: Customer Satisfaction Levels

Parameter	Public Insurance (%)	Private Insurance (%)
Customer Service Rating	65	90
Affordability Rating	85	70
Claim Process Satisfaction	78	88

**Interpretation:** Private insurers lead in customer service and claim process satisfaction, while public insurers excel in affordability.

Objective 3: Affordability and Accessibility of Policies

Factor	Public Insurance	Private Insurance
Average Premium (INR per annum)	3000-8000	5000-15000
Coverage Amount (INR)	2-5 Lakhs	3-10 Lakhs
Hospital Network Coverage	Wide (Govt. & Private)	Mostly Private Hospitals

**Interpretation:** Public insurance policies are more affordable but may have lower coverage limits, whereas private insurers provide broader coverage at higher costs.

Objective 4: Regulatory Challenges and Policyholder Grievances

Issue	Public Insurance (%)	Private Insurance (%)
Claim Rejections	10	15
Processing Delays	20	10
Transparency Concerns	5	15

**Interpretation:** Public insurers face more delays, whereas private insurers have more transparency-related grievances.

Objective 5: Technological Advancements in Insurance Services

Digital Feature	Public Insurance Adoption (%)	Private Insurance Adoption (%)
AI-Based Claim Processing	30	80
Mobile App Services	50	90
Online Policy Purchase	60	95

**Interpretation:** Private insurance companies are ahead in digital adoption, which enhances customer convenience and service efficiency.

Objective 6: Impact on Healthcare Accessibility

Factor	Public Insurance	Private Insurance
Access to Premium Hospitals	Limited	High
Ease of Reimbursement	Moderate	High
Coverage of Pre-Existing Conditions	High	Moderate

**Interpretation:** Public insurance ensures financial security for lower-income groups, while private insurance provides premium healthcare access.

7. FINDINGS AND SUGGESTIONS

7.1 Findings:

- Public insurers have a higher claim settlement ratio but longer processing times.
- Private insurers excel in customer service and digital experience.
- Public insurance is more affordable, while private insurance offers better coverage.
- Policyholder grievances differ, with public insurance facing delays and private insurance facing transparency concerns.
- Private insurers have a competitive advantage in digital service integration.
- Healthcare accessibility is better with private insurance, but public insurance provides essential financial security.

7.2 Suggestions:

- Enhance Digital Services in Public Insurance:** Public insurers should invest in AI-driven claim processing, mobile apps, and seamless online policy management.
- Improve Transparency in Private Insurance:** Private insurers should ensure clear communication of policy terms, minimizing hidden charges and exclusions.
- Reduce Claim Settlement Time in Public Insurance:** By adopting modern digital solutions, public insurers can significantly improve their claim processing speed.
- Make Private Insurance More Affordable:** Government regulations should encourage private companies to offer low-cost plans with adequate coverage.
- Strengthen Consumer Awareness Programs:** Both sectors should enhance policyholder education regarding claim procedures, coverage benefits, and exclusions.
- Government Regulations for Better Consumer Protection:** Policy standardization and better regulatory oversight can improve trust and efficiency in the sector.
- Expand Public-Private Partnerships:** Collaboration between public and private insurers can enhance healthcare coverage, especially in rural areas.



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**8. CONCLUSION**

The study concludes that both public and private health insurance providers play crucial roles in Haryana's healthcare landscape. While public insurance offers affordability and wider accessibility, private insurance excels in service quality and digital efficiency. A hybrid approach, leveraging the strengths of both sectors, can create a more inclusive and efficient health insurance framework. Government policies should aim to bridge the gap between public affordability and private innovation, ensuring enhanced healthcare coverage for all. Strengthening regulatory frameworks, promoting technological advancements, and improving customer awareness will contribute to a more transparent and consumer-friendly health insurance industry.

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2. Ministry of Health and Family Welfare ([www.mohfw.gov.in](http://www.mohfw.gov.in))
3. PolicyBazaar and insurer-specific portals ([www.policybazaar.com](http://www.policybazaar.com))
4. Research papers from PubMed and Scopus Databases
5. Articles from The Economic Times and Business Standard Magazines

# MANUSCRIPT SUBMISSION

## GUIDELINES FOR CONTRIBUTORS

1. Manuscripts should be submitted preferably through email and the research article / paper should preferably not exceed 8 – 10 pages in all.
2. Book review must contain the name of the author and the book reviewed, the place of publication and publisher, date of publication, number of pages and price.
3. Manuscripts should be typed in 12 font-size, Times New Roman, single spaced with 1” margin on a standard A4 size paper. Manuscripts should be organized in the following order: title, name(s) of author(s) and his/her (their) complete affiliation(s) including zip code(s), Abstract (not exceeding 350 words), Introduction, Main body of paper, Conclusion and References.
4. The title of the paper should be in capital letters, bold, size 16” and centered at the top of the first page. The author(s) and affiliations(s) should be centered, bold, size 14” and single-spaced, beginning from the second line below the title.

**First Author Name1, Second Author Name2, Third Author Name3**

1Author Designation, Department, Organization, City, email id

2Author Designation, Department, Organization, City, email id

3Author Designation, Department, Organization, City, email id

5. The abstract should summarize the context, content and conclusions of the paper in less than 350 words in 12 points italic Times New Roman. The abstract should have about five key words in alphabetical order separated by comma of 12 points italic Times New Roman.
6. Figures and tables should be centered, separately numbered, self explained. Please note that table titles must be above the table and sources of data should be mentioned below the table. The authors should ensure that tables and figures are referred to from the main text.

## EXAMPLES OF REFERENCES

All references must be arranged first alphabetically and then it may be further sorted chronologically also.

### • Single author journal article:

Fox, S. (1984). Empowerment as a catalyst for change: an example for the food industry. *Supply Chain Management*, 2(3), 29–33.

Bateson, C. D.,(2006), ‘Doing Business after the Fall: The Virtue of Moral Hypocrisy’, *Journal of Business Ethics*, 66: 321 – 335

### • Multiple author journal article:

Khan, M. R., Islam, A. F. M. M., & Das, D. (1886). A Factor Analytic Study on the Validity of a Union Commitment Scale. *Journal of Applied Psychology*, 12(1), 129-136.

Liu, W.B, Wongcha A, & Peng, K.C. (2012), “Adopting Super-Efficiency And Tobit Model On Analyzing the Efficiency of Teacher’s Colleges In Thailand”, *International Journal on New Trends In Education and Their Implications*, Vol.3.3, 108 – 114.

- **Text Book:**

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2007). *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies* (3rd ed.). New York: McGraw-Hill.

S. Neelamegham," Marketing in India, Cases and Reading, Vikas Publishing House Pvt. Ltd, III Edition, 2000.

- **Edited book having one editor:**

Raine, A. (Ed.). (2006). *Crime and schizophrenia: Causes and cures*. New York: Nova Science.

- **Edited book having more than one editor:**

Greenspan, E. L., & Rosenberg, M. (Eds.). (2009). *Martin's annual criminal code: Student edition 2010*. Aurora, ON: Canada Law Book.

- **Chapter in edited book having one editor:**

Bessley, M., & Wilson, P. (1984). Public policy and small firms in Britain. In Levicki, C. (Ed.), *Small Business Theory and Policy* (pp. 111–126). London: Croom Helm.

- **Chapter in edited book having more than one editor:**

Young, M. E., & Wasserman, E. A. (2005). Theories of learning. In K. Lamberts, & R. L. Goldstone (Eds.), *Handbook of cognition* (pp. 161-182). Thousand Oaks, CA: Sage.

- **Electronic sources should include the URL of the website at which they may be found, as shown:**

Sillick, T. J., & Schutte, N. S. (2006). Emotional intelligence and self-esteem mediate between perceived early parental love and adult happiness. *E-Journal of Applied Psychology*, 2(2), 38-48. Retrieved from <http://ojs.lib.swin.edu.au/index.php/ejap>

- **Unpublished dissertation/ paper:**

Uddin, K. (2000). A Study of Corporate Governance in a Developing Country: A Case of Bangladesh (Unpublished Dissertation). Lingnan University, Hong Kong.

- **Article in newspaper:**

Yunus, M. (2005, March 23). Micro Credit and Poverty Alleviation in Bangladesh. *The Bangladesh Observer*, p. 9.

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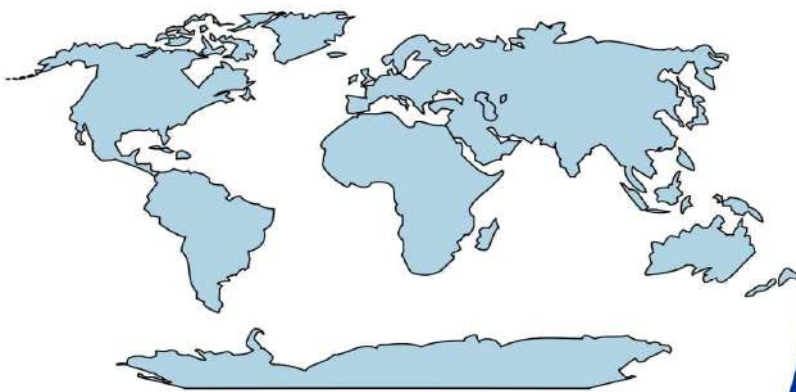
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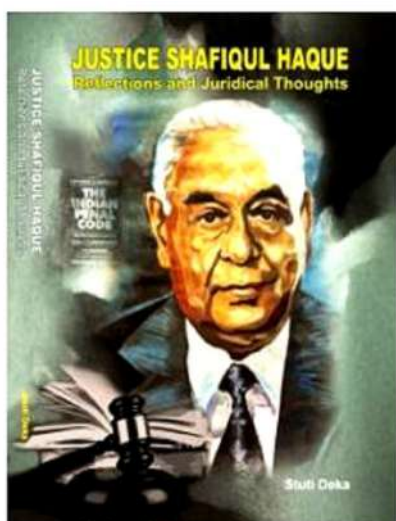


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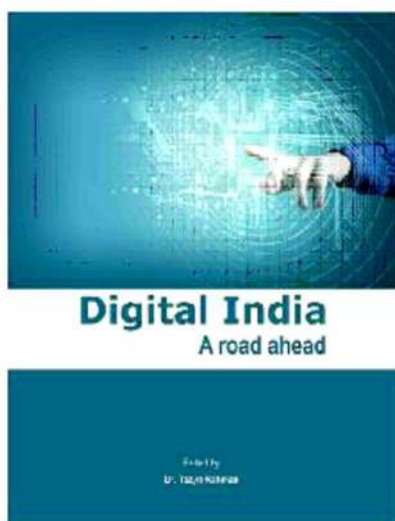
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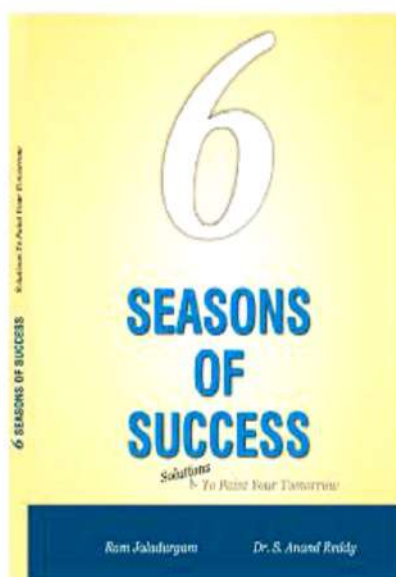
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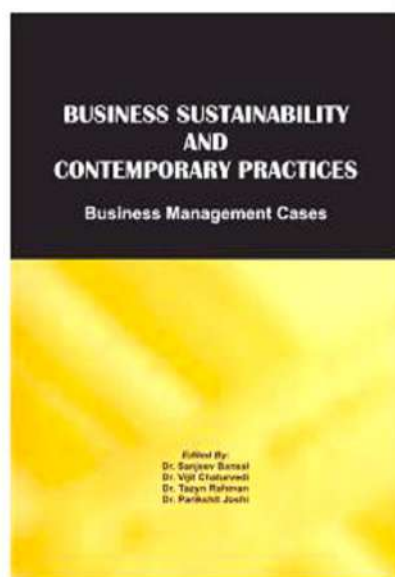
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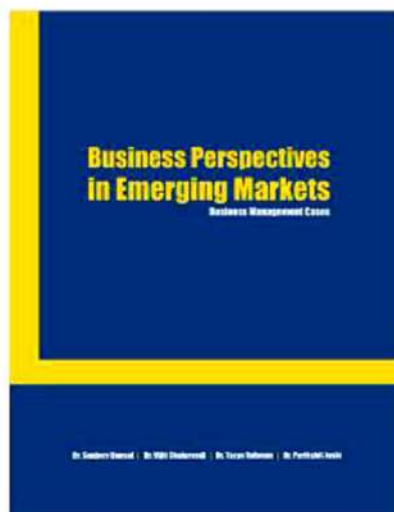
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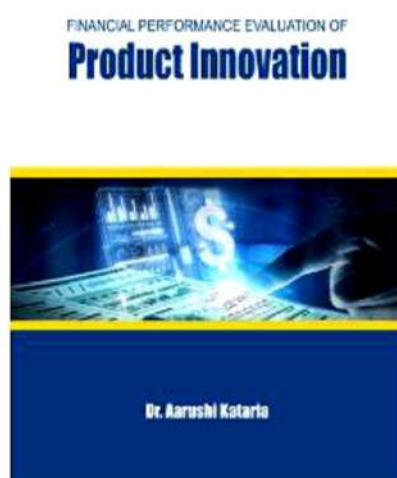
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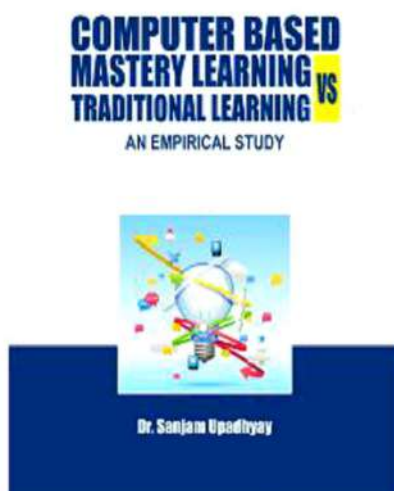
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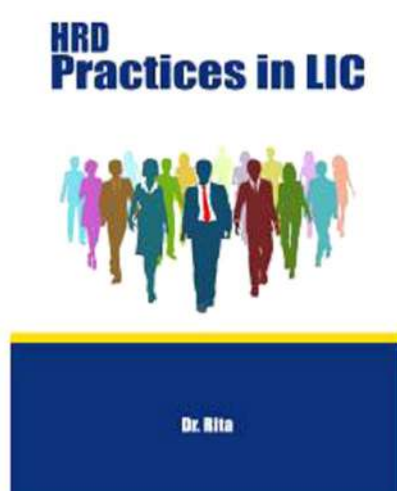
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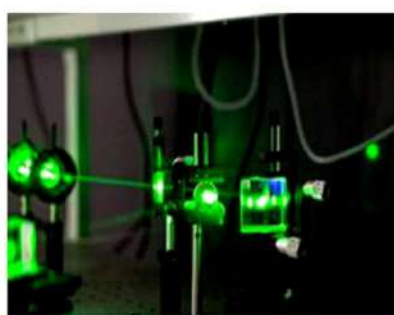


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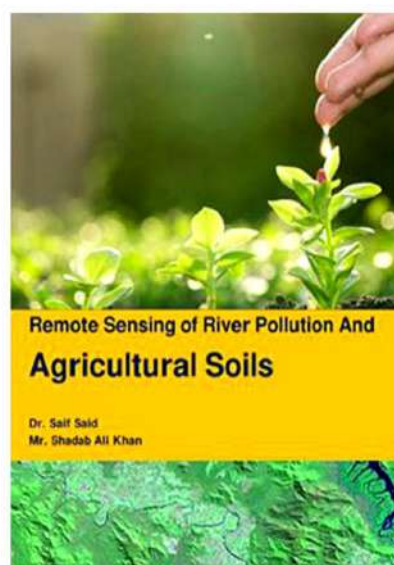
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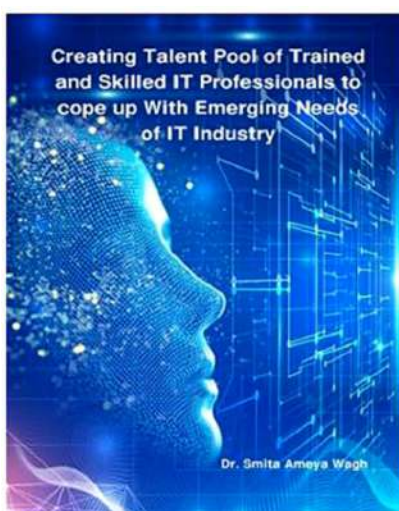
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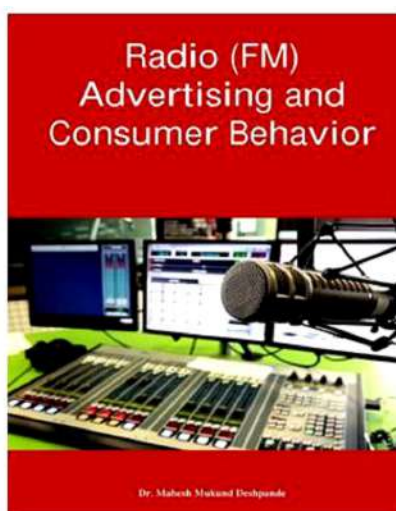
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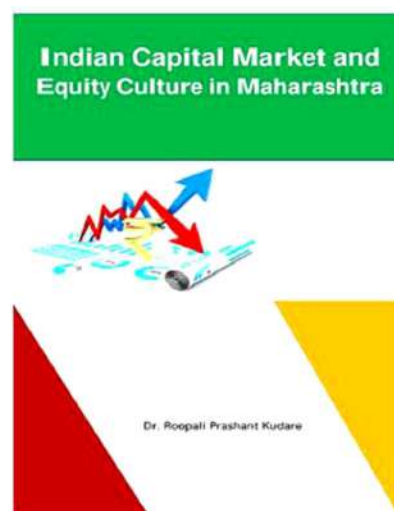
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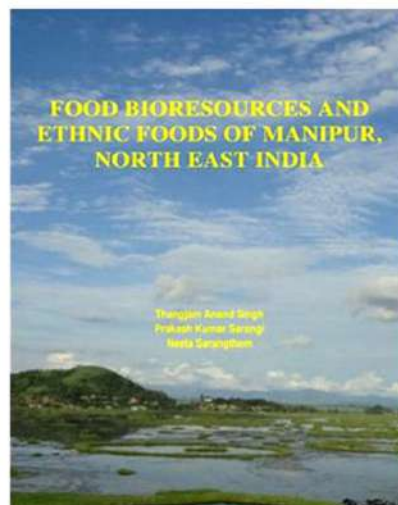
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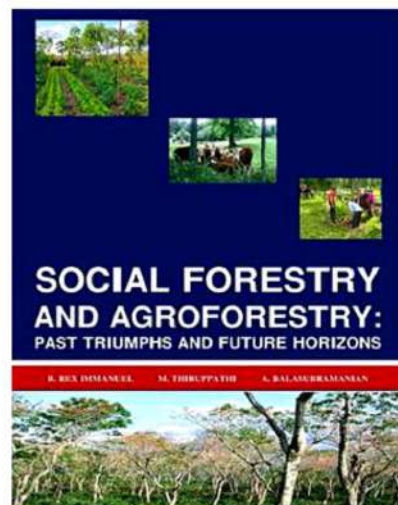




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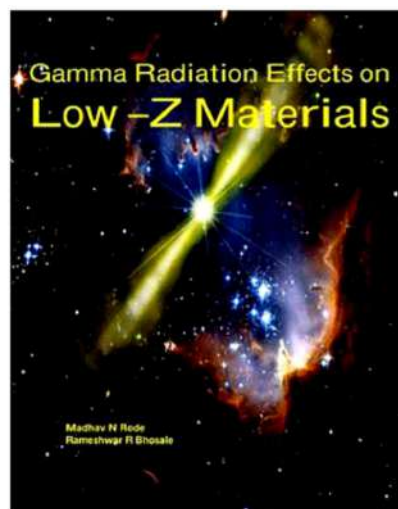
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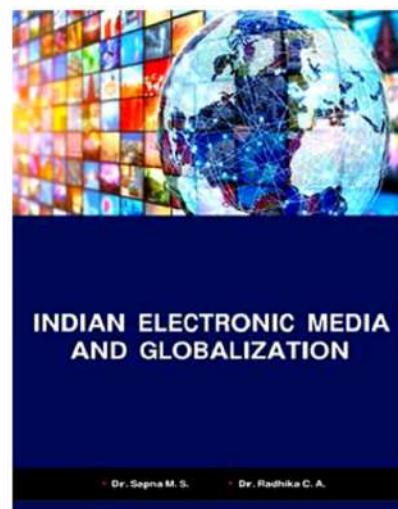
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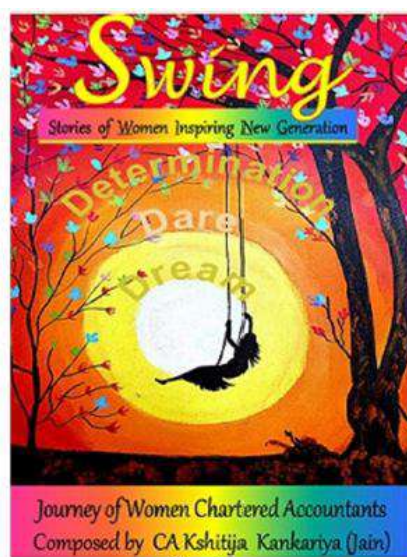
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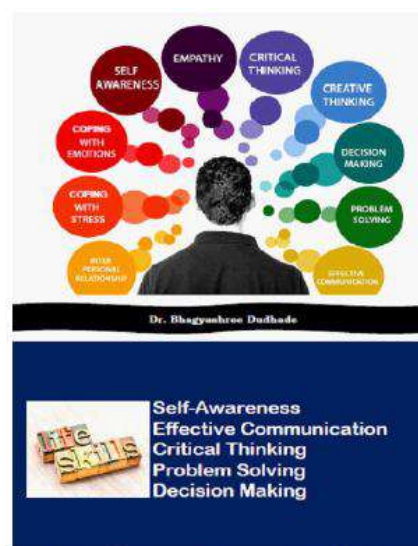
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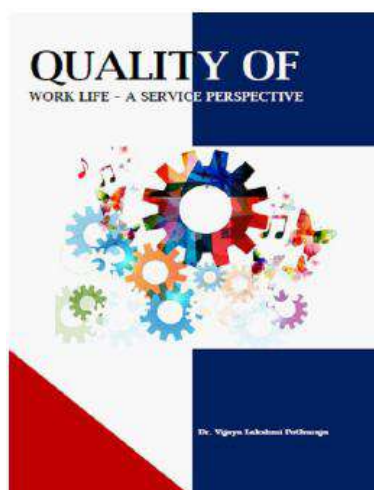


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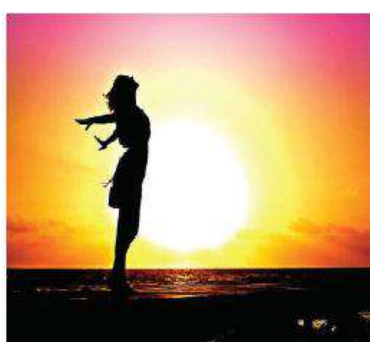
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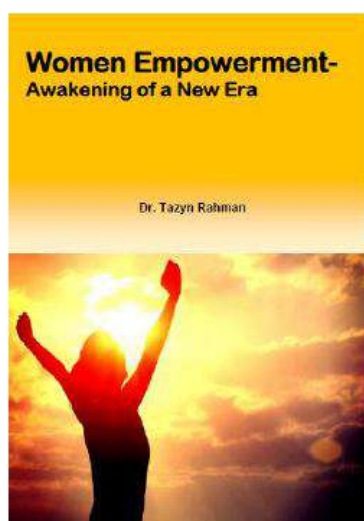


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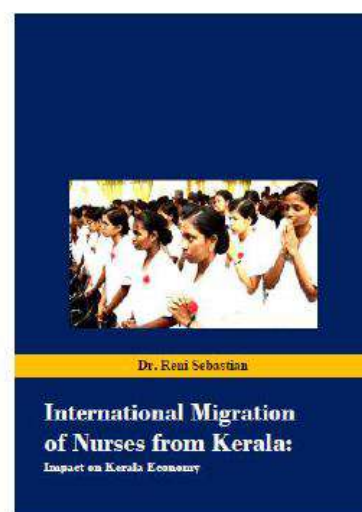


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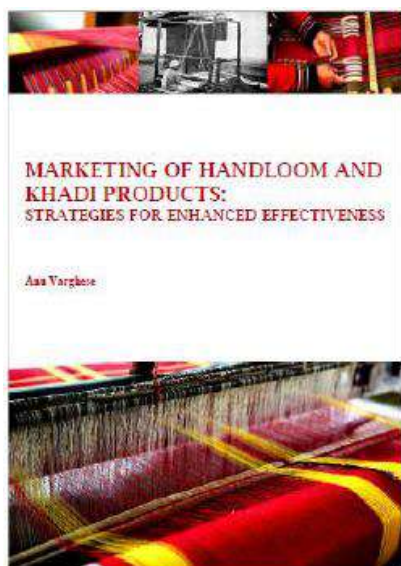
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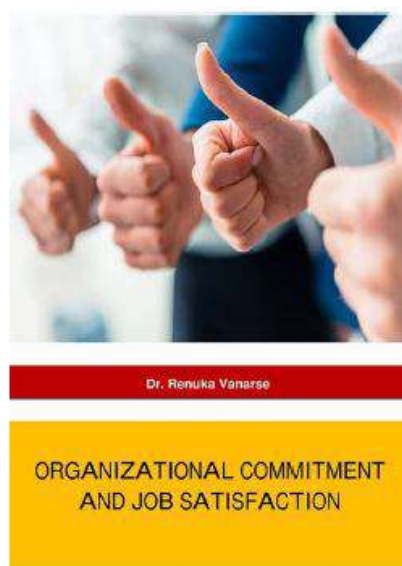
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