

Women Empowerment for Health and Sustainability – A Pathway to Global Well-Being



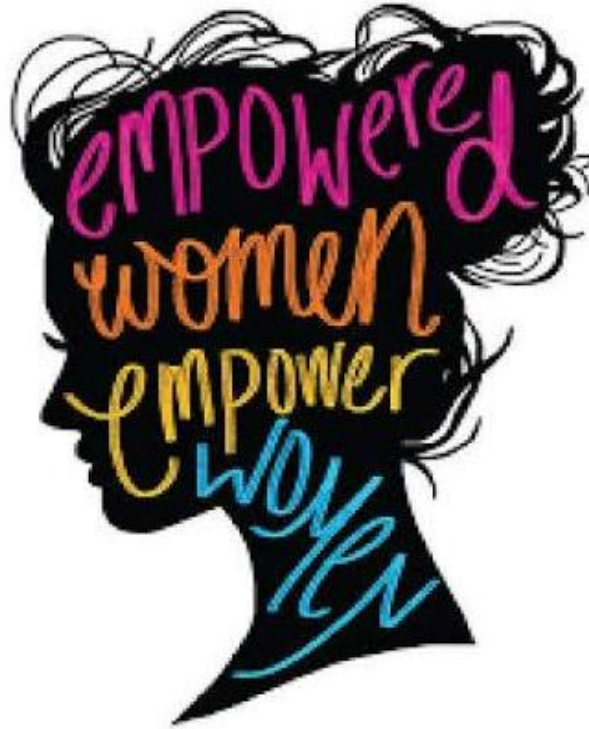
Editors
Dr. V. Malarvizhi
Dr. R. Annapoorani

**Thiru T.S. Dhandapani Chettiar Chair in the Field of Social Sciences
&**

**Department of Economics
Avinashilingam Institute for Home Science
and Higher Education for Women
(Deemed to be University)
Coimbatore -641043, Tamil Nadu, India**



**WOMEN EMPOWERMENT FOR HEALTH AND
SUSTAINABILITY – A PATHWAY TO GLOBAL WELL-BEING**



**Thiru T. S. Dhandapani Chettiar Chair in the Field of Social
Sciences & Department of Economics
Avinashilingam Institute for Home Science and
Higher Education for Women,
Coimbatore - 641043**

Editors

Dr. Malarvizhi. V

Dr. Annapoorani. R

Published by

Royal Book Publishing
Ward No 10, Old No 118/07,
New No 52-1,
Ayothiyapattinam,
Salem.

Tamil Nadu-636103, India.

Email:contact@royalbookpublishing.com

Website:www.royalbookpublishing.com



Published in India: March, 2025

International Standard Book Number (ISBN): 9789348505866

No part of this Edited book (E - book) may be reproduced in any form, by photostat, microfilm, xerography, or any other means, or incorporated into any information retrieval system, electronic or mechanical, without the written permission of the publisher. For permission to photocopy or use material electronically from this work, please contact the Book Publisher or Book Editor through the e-mail.



Dr. V. Bharathi Harishankar, Ph.D., FRSA
Vice Chancellor



Foreword

Women's empowerment is the cornerstone of progress, shaping healthier societies and fostering sustainable development. When women are empowered with knowledge, resources, and opportunities, they become catalysts for change, uplifting not only themselves but entire communities.

Health and sustainability are deeply interwoven, with women playing a pivotal role in ensuring the well-being of families. Access to quality healthcare, education, and economic independence enables women to lead healthier lives, reduce poverty, and contribute to the broader goal of sustainable development.

By investing in women's health, education, and economic participation, we pave the way for a more just, equitable, and sustainable future. This initiative calls for a renewed commitment to breaking barriers that hinder women's advancement. Governments, institutions, and civil society must work in unison to create an ecosystem where women can thrive as leaders, innovators, and change makers.

The theme "*Women Empowerment for Health and Sustainability – A Pathway to Global Well-Being*" underscores the profound impact of gender equality in driving social, economic, and environmental transformation. May this work inspire meaningful dialogue, policy reforms, and transformative action, ensuring that women's empowerment remains at the heart of global progress. It is with great admiration that I commend this initiative, which highlights the indispensable role of women in shaping a healthier and more sustainable world.

Warm regards,

VICE CHANCELLOR

Acknowledgement

This book is a compilation of insights from the National Seminar on “**Women Empowerment for Health and Sustainability – A Pathway to Global Well-being**”, organized by Thiru. T.S. Dhandapani Chettiar Chair in the Field of Social Sciences and the Department of Economics at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, India, on 28th February 2025.

We express our heartfelt gratitude to **God Almighty** for blessing us with the opportunity to serve in this esteemed institution, founded by **Shri T.S. Avinashilingam Ayya**, the first Education Minister of the composite Madras Presidency after Independence. We are profoundly indebted to **Dr. Rajammal P. Devadas**, a distinguished Home Economist and Nutrition Scientist, whose visionary leadership as the university’s first Vice Chancellor transformed it into one of the nation’s premier educational institutions.

We sincerely acknowledge **Dr. T.S.K. Meenakshisundaram**, Chancellor of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, for his unwavering support, motivation and encouragement, which have been instrumental in our academic pursuits.

We sincerely extend our heartfelt gratitude to **Dr. Bharathi Harishankar**, Vice Chancellor of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her invaluable academic support in all our endeavours, including the successful conduct of the seminar, and for graciously providing the Foreword for this book.

We extend our heartfelt gratitude to **Dr. H. Indu**, Registrar (i/c) of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her invaluable administrative support in the successful conduct of the seminar.

We express our sincere thanks to **Dr. Shobana Kokkadan**, Dean, School of Arts and Social Sciences for her constant motivation, valuable guidance and support in bringing out the Proceedings.

We extend our special thanks to **Dr. S. Gandhimathi**, Head of the Department, and the faculty members of the Department of Economics for their invaluable support. We also express our gratitude to all the participants for their active engagement and valuable contributions, which have enriched this book.

We place our earnest thanks to the publisher **Royal Book Publishing**, Salem, Tamil Nadu, India for successfully bringing out the book on time.

Editors

Dr. Malarvizhi.V

Professor

Dr. R. Annappoorani

Former Professor in Economics &
Coordinator, Thiru. T.S. Dhandapani
Chettiar Chair in the Field of Social Sciences

CONTENT

Sl.No	CHAPTERS	Page No
1	Utilization of Health Care Service among the Unorganised Women Workers: A Micro Level Study Dr. V. L. Lavanya, Shimjith Moolayil	1
2	Women Empowerment through Common Service Centers: An Empirical Study with Capability Approach Ameera R A, Dr. Malarvizhi. V	11
3	Financial Independence and Economic Empowerment of Women Homepreneurs: A Study on Home-Based Businesses N. Bhuvaneshwari, Dr. V. Malarvizhi	24
4	Women Street Vendors in India: Challenges, Financial Stability, and Economic Contributions in the Informal Sector J. Priyanka, Dr. V. Malarvizhi	33
5	Functional Food Innovations in the Health Sector for Women: Unlocking the Power of Bioactive Compounds Against Breast Cancer P. Krishna Prasanna, S. Thilagamani	38
6	Emphasizing on the Social Factor of Esg for Gender Equality – A Case Study of Tata Steel Noamundi Iron ore Mine Shaheera Banu Z, Dr. V. Vimala	46
7	An Overview of Financial Inclusion of Women in Afghanistan Shujaullah, Dharanipriya P	56
8	Addressing Wash and Menstrual Hygiene Management: An Overview Dharanipriya. P	62
9	Maternal Health for Sustainable Development K. Deepika, Dr. M. Shanthi	72
10	Economic Advantage of Empowering Women in Agribusiness Maya S J, Dr. T. Amutha	80
11	Exploring Emotional Intelligence: A Nurse'S Approach to Conflict Management Nanma. V. V	88

12	An Analysis of Women Sustainable Cosmetics Choices in india Pooja. S	100
13	Surge in Digital Banking During Covid19 Pandemic in Palakkad District Thasleena. N, CMA Dr. A. Pankajam	115
14	Training Effectiveness and Competency Development of Women Employees N. Samutha, Dr. J. Arthi	123
15	Trend Analysis in Sanitation Coverage: Menstrual Hygiene S. Subasri	134
16	Customer Satisfaction Towards Technology-Enabled Banking- A Comparative Study of Selected Psb and Pvb Banks in Coimbatore City Dr. K. Shobha	143
17	Economic Strength, Better Health: The interconnection of Women'S Financial Autonomy and Healthcare Access Ms. Sharmila S, Ms. Akshatha S, Dr. C. Athena	150
18	Bridging The Digital Divide: The Role of Mobile Technology in Women'S Economic and Social Empowerment N. Bhuvaneshwari, Dr. V. Malarvizhi	161
19	A Study on Online Advertisement usage Practices of the Consumers with Special Reference to the Selected Consumer Durable Goods Mrs. Malarvizhi. A, Dr. P. Deivanai	168
20	Challenges Faced by Women on Social Media Network Sites Dr. Malarvizhi. V	176
21	Digital Integration of Women'S Public Health Care Schemes in Tamilnadu Dhakshadha. S & Sri Ranjani. V	188

UTILIZATION OF HEALTH CARE SERVICE AMONG THE UNORGANISED WOMEN WORKERS: A MICRO LEVEL STUDY

***Dr. V. L. Lavanya, **Shimjith Moolayil**

*Assistant Professor & Head, Department of Economics, National College of Arts and Science, Puliavu, Kozhikode

**Research Scholar, Department of Commerce, Park's College, Tirupur, shimjithacas@gmail.com

ABSTRACT

This study examines utilization of health care service among the unorganised women workers in Nadapuram locality Kozhikode District of Kerala. Primary data was collected through a structured questionnaire in November 2024. A random sampling method was used to select 100 unorganised women workers. In addition to averages and percentages, techniques such as cronbach's alpha and factor analysis were applied. The study found that improving healthcare access for women can lead to better health outcomes and economic benefits for the entire community. The study concludes that quick diagnosis of diseases and specialised treatment, good hospital infrastructure and reputation of the hospital are the main reasons for selection of utilization of health services among women workers. The distance are main determinants that hinder one's healthcare facility accessing pattern. The chief mode of transport for the respondents was foot to travel and reach the health care services. The lack of personal attention, inhospitable attitude of the hospital staff and no respect to the patients and visitors are the main barriers mentioned by the women workers while utilizing the health care services. These constraints are interconnected with other constraints like inadequate drug and medical supplies, which interact to determine health needs and healthcare utilization.

Keywords: *Utilization, Health Care Service, Women, Distance, Unorganized, Workers*

INTRODUCTION

Development of healthcare services becomes an important issue for both developed and developing countries. Government as well as voluntary agencies all over the world are taking initiative to improve healthcare facilities so that it could be accessible for everyone, both rich and poor. Healthcare facilities all over the world have increased to a large extent. Rapid strides have been made in the field of immunization, diagnostics, anaesthesia, surgical techniques and pharmaceuticals. Many speciality and super speciality hospitals have emerged providing care for most types of health problems. Nevertheless, utilization of health services is still a longstanding problem in the developing world. Access to healthcare is one of the essential components of healthcare services utilisation and for ensuring universal health coverage (Fullmann et.al, 2018).

India had made rapid strides much in the health sector. The health service programmes is not only directed at combating diseases but also to provide infrastructure such as improving the water supply, sanitation, immunization, health education combating malnutrition and promoting the norm of small family. Availability of health facilities is seen

to positively impact on health care seeking among people. Even more than the quantum of facilities their pattern of distribution is more likely to influence people's health care utilization. Utilization of health care services is a multifactorial outcome which is influenced not only by the four dimensions of access (availability, accessibility affordability and acceptability) related 'supply side' factors but also certain 'demand side' factors that shape people decisions to seek care. Demand for health care is thought to be dependent heavily on people's perception of diseases and their cure, the prevailing culture of illnesses and health care seeking in their environments; as well as the autonomy, freedom and the sense of entitlement that individuals and groups have to choose and seek care.

Most of the gender related and health related demographic researchers agree over women's pivotal role in health, as they are the keepers of a nation's health and development. When a woman is healthy, the family is healthy, the society is healthy, and the nation is healthy. By empowering women through education especially health education, the health and mortality of the people as a whole could be improved. Demand for health and healthcare services are very high for women, they are backbone of the family and society. The women believed that most illnesses will resolve on their own. Those seeking treatment for general ailments began by trying home cures. If it didn't work, they turned to traditional healers. Those who could access care went to the nearest health facility if they were still sick. Therefore, the women are viewed as an asset to society. Women today participate in the developmental activities of the nation in large numbers. The majority of educated women are unaware of government-sponsored programmes and women always priorities their family's demands over their own. Many women are now dealing with a range of healthcare difficulties, but they are often oblivious to them due to poverty, a lack of access to excellent health care, and a lack of understanding about health issues. Therefore, present study attempts to analyses the utilization of healthcare services among the unorganized women workers.

REVIEW OF LITERATURE

Buor (2004) stated that distance was a common problem facing women in both rural and urban areas in Ghana in the utilisation of health services, marital status and number of children had emerged as contrasting factors influencing utilisation of health services. A woman with a large family size is therefore handicapped in getting enough money to take care of the health needs of her children. In the Kumasi metropolis education showed a stronger association with income and insurance influencing the utilisation in developing countries in the Ahafo-Ano South district. Income had a significant effect on utilisation in Ahafo-Ano South district than Kumasi metropolis. Women, especially in the rural areas, need to be empowered and educated to enable them access health services. Dhanasekaran (2006) revealed that 70 percent of women had correct knowledge on legal age for marriage. Seventy percent of women were having partial awareness and others are having correct knowledge on need and importance of ANC. It was found that 54 percent of women delivered their babies at private/ NGO health facilities and 40 percent at public health facilities. The study points out that the level of awareness on complete immunization for children was nil, whereas 90 percent of women had partial awareness and others did not know.

Sonalee Rajput et.al (2021) found that 47.3% and 15.3% had non-communicable and communicable disease respectively. Most of the workers (67.3%) utilised government facilities, and close to one third (28.7%) utilised tea garden hospitals. About 63.3% had health insurance, but a majority (78.9%) did not use it previously. The analyses of interviews explored the need, enabling, predisposing factors under three important themes influencing utilisation of healthcare services among the workers. Vaidegi et al (2022) found that Majority of the respondents have ranked Better services as the reason for utilizing private hospitals. For government hospitals 'Free treatment has been the most influencing factor. Besides, out of various factors Quality of health care is given most importance in choosing hospitals. The economic status of the women shows an association with their healthcare. Educational status has improved the healthcare of women. Although working women are aware of maintaining good health but do not go for regular check-ups due to heavy work at home and work place and less leisure time. Older women, above fifty years of age show less interest in their health due to fear of diseases.

NEED FOR THE STUDY

Women's access to health care depends greatly on the availability of high-quality providers in their communities as well as their own knowledge about maintaining their health through routine check-ups, screenings, and provider counselling. Social determinants of health, structural racism, and experiences with health care providers shape health outcomes and health equity. Transforming the widespread social discrimination against women must become the top priority. To tackle the gender-related discrimination in healthcare utilization and bring in the equity, it is essential to incorporate more women-friendly measures. Women empowerment and their involvement in decision-making power are imperative since these are the vital components of equity in healthcare services. With this background the study aims to find out the utilization of health care services among unorganized women workers.

Objectives of the Study

- To know the socio-economic condition of selected unorganized women workers
- To assess the various reason for selection of health care services
- To find out the accessibility of health care services in terms of time and distance
- To identify the barriers in utilization of health care services among women workers

Methodology of the Study

A Research Design is simply a structural framework of various research methods as well as techniques that are utilized by a researcher. It includes mode of data to be collected, sample to be selected and the analysis part of research. Primary data have been collected by administering structured questionnaire among respondents residing in around Nadapuram locality Kozhikode District of Kerala during the month of November 2024. Secondary data have been gathered through journals, articles, books, magazines, newspapers, government reports and other published data. A convenient sampling approach is employed to pick responders. The essential information is gathered from respondents using well-structured questionnaires. Data were collected from 100 selected unorganized women worker

randomly who are engaged as tailors, domestic servants, beautician, shop keeper. Besides averages and percentages, the following techniques like cronbach's alpha, factor analysis and Henrys Garrett ranking method were applied.

Findings of the Study

Socio-economic factors play a significant role in shaping the personality and characteristics of an individual. In today's society, women are regarded as a valuable resource and large number of women are now involved in the country's development efforts. The socio-economic elements are assuming a noteworthy part in inclining toward health maintenance services. Table 1 presents information on the socio-economic conditions of the selected women workers in the study.

Table-1
Socio-Economic Characteristics of the Selected Respondents

Particulars		Number of Respondents	Percentage
Age	Below 30 years	31	31
	30-45 years	49	49
	Above 45 years	20	20
Education	Primary level	29	29
	Highschool	38	38
	Higher secondary	19	19
	Degree	14	14
Marital status	Married	79	79
	Unmarried	5	5
	Widow	10	10
	Divorce/separated	6	6
Type of family	Nuclear	89	89
	Joint	11	11
Occupation	Tailors	29	29
	Shop keepers	27	27
	Beautician	19	19
	Domestic servants	16	16
	Others	9	9
Monthly income	Below 5000	38	38
	5000-10000	51	51
	Above 10000	11	11
Total		100	100

Source: Field Survey, 2024

The women workers were divided into three groups on the basis of age. Majority of the respondents (49 percent) were fall in the age group of 30-45 years, 31 percent were below the age of 30 years and 20 percent were above 45 years. The education status of the women workers revealed that 38 percent were high school level 29 percent of them were primary

level, 19 percent of them were upto higher secondary level and 14 percent of them have completed degree. Nearly 79 percent of the women workers were married meanwhile 10 percent were widow and 6 percent of them are divorced/separated from the family only 5 percent of the respondents were unmarried. The occupation status of the women workers depicted that nearly 42 percent of them were tailors followed by 27 percent of the women workers were shop keepers, 19 percent of them were beautician, 16 percent of them are domestic servants and only 9 percent of the women workers are engaged in other activities like construction workers, street vendors etc... Nearly 51 percent of them had income between Rs 10,000-15,000, 38 percent of them have income below 10,000 and 11 percent of them have income above 15,000. The income of women is a crucial factor of household expenditure development; the majority of women work as daily wage labour. Women's living standards are mostly determined by their socioeconomic situations.

REASONS FOR SELECTION OF HEALTHCARE SERVICES

Equitable access to primary healthcare is one of the critical goals in itself seeking good healthcare is a fundamental human right, and most of the governments around the world would agree to provide a better healthcare system that enables equal access to care for all citizens. Health care utilization is the measure of the population's use of the healthcare services available to them. The frameworks of health care are intended to meet the healthcare needs of the focused-on population and there is a wide assortment of human services frameworks around the globe. In a portion of the nation, the healthcare framework arranging is dispersed among advertising members, though in other arranging is made all the more halfway among government, exchange associations, philanthropies, religious or other co-composed bodies to convey arranged health care focused to the populace they serve. Table 2 depicts the reasons for choosing health care services among women workers

Table-2
Reasons for Selection of Healthcare Services

Reasons	Scores	Rank
Reputation of the hospital	45.40	3
Nearness to the residence	39.62	11
Experienced and talented pool of medical professionals	44.52	4
Excellent post –operative care	42.85	7
Quick diagnosis of diseases and specialised treatment	49.81	1
Experienced paramedical staff	44.01	5
Less expensive	40.63	10
Good hospital infrastructure	47.87	2
Only hospital in the area	41.87	8
Easy to reach by transport	43.89	6
Peer group influence	34.76	15
Referred by other doctors	37.02	14
Free services	41.55	9
Excellent attention in all emergency situations	39.03	12
Availability of all type of health insurance schemes	38.13	13

Source: Field Survey,2024

The major reason for selection of healthcare service utilization by women workers were quick diagnosis of diseases and specialised treatment (1st rank), good hospital infrastructure (2nd rank) reputation of the hospital (3rd rank) experienced and talented pool of medical professionals (4th rank) experienced paramedical staff (5th rank) easy to reach by transport (6th rank) excellent post-operative care (7th rank) only hospital in the area (8th rank) free services (9th rank) less expensive (10th rank) nearness to the residence (11th rank) excellent attention in all emergency situations (12th rank) availability of all type of health insurance schemes (13th rank) referred by other doctors(14th rank) and peer group influence (15th rank). These are the following reasons for selection of utilization of health care services among women workers. Similar findings were reported by Vaidegi and Abdul Raheem (2022) stated that quality of health care, timely attention, short distance, affordability, system of medicine, elders' decision and family doctors were the main reason for respondents choosing a hospital or health care service utilization.

Access To Health Care Services Utilization in Terms of Time and Distance

Access to healthcare facilities is an essential component of health systems. The utilization of healthcare services is significantly influenced by their availability and accessibility. The geographical location of hospitals facilitates easier access to their resources for individuals. One of the primary objectives of healthcare administration is to provide timely and easily accessible healthcare services. The parameters of access, particularly in terms of time and distance, play a crucial role in evaluating patient satisfaction. In fact, numerous studies conducted in India and other regions have identified physical distance as a critical factor affecting healthcare usage patterns (Castro-O'Leal et al. 1999; Duraisamy 2000; Gertler and Van der Gaag 1990). Table 3 shows the accessibility to hospitals in terms of time and distance.

Table - 3
Access to Hospitals in Terms of Time and Distance

Access to Hospitals		Frequency	Percentage
Distance travelled to reach the hospitals (in kms)	Less than 5km	41	41
	5-10km	53	53
	10-15km	6	6
Mode of travel used to reach the hospitals	On foot	31	31
	Auto rickshaw	18	18
	Bus	11	11
	Two-wheeler/ four-wheeler	26	26
Amount spent on transport to reach the hospitals (in rupees)	No money	31	31
	Less than 100	46	46
	100-200	15	15
	More than 200	8	8
Time taken to reach hospitals (in minutes)	Less than 15	31	31
	15-30	49	49
	30-45	11	11
	More than 45	9	9
Total		100	100

Sources: Field survey, 2024

Nearly 53 percent of the women workers travelled a distance of 5-10 kilometres to avail themselves of healthcare services in these hospitals. Meanwhile 41 percent of them travelled less than 5 km and 6 percent of them use to travelled 10-15 kilometres to reach the hospitals. Similar findings were pointed out by Buor (2003) that distance was the most important factor that influences the utilization of health services in the Ahafo-Ano, South district of Ghana. Fagbamigbe et.al (2012) and Amin et.al (2010) have pointed out distance are main determinants that hinder one's healthcare facility accessing pattern.

To reach the hospitals the majority of the women workers (31 percent) travelled on foot. On the other hand, about 26 percent of the respondents used personal vehicles to reach the healthcare services meanwhile followed by 18 percent of them use autorickshaw and 11 percent of them utilize bus to reach their destination. Hence the chief mode of transport for the respondents was foot travel to reach the health care services.

Majority of the women workers (31 percent) did not spend any money on transportation. They dependence on foot travel may be the reason for zero transportation cost. Higher proportion of the women workers (46 percent) had to spend less than on transportation per visit followed by 15 percent of them spend Rs 100 to 200 and 8 percent above Rs 200 per visit to the hospitals. World Bank (1995) reports that large part of expenditure on health goes for travel or transport costs because of distance and difficult access to services. Despite differences in the mode of travelling and amount spent on transport, there was little difference in time taken by the to reach healthcare centres. The majority of the women workers took 15-30 minutes to reach the hospitals. For 31 percent of the respondent's time varied less than 15 minutes. The effect of travel time on utilization reflects that lesser time it took to reach the hospital better was the utilization of the services by the respondents (Pawn et.al,2008).

BARRIERS IN UTILIZATION OF HEALTH CARE SERVICES

Barriers to the utilization of healthcare services due to financial reasons or societal norms are considered a constraint at the community and household level. Similarly, the lack of demand for effective interventions is also considered a household-level constraint. A study on Muktsar District (Punjab University, 2008) revealed that inadequate infrastructure, manpower and medicines adversely affect the provision and quality of health services of public organizations. The high degree of absenteeism of doctors and paramedical staff particularly in rural areas further aggravates the situation from bad to worse. Table examine the various issues in the delivery of healthcare services among women workers in unorganized sector.

The Cronbach's alpha to test the reliability or internal consistency of the scale, gave a value of 0.814 greater than the norm of 0.70 indicating good scale reliability. To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measure were computed and the results are presented in table 4.1. KMO statistics is .853 which is signifying higher than acceptable adequacy of sampling. The Bartlett's test of Sphericity was also found to be significant at one percent level providing evidence of the presence of relationship between variables to apply factor analysis.

Table-4.1
KMO and Bartlett's Test Measures

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.853
Bartlett's Test of Sphericity Approx. Chi-Square	1.243E4
Degrees of freedom	130
Significance level	.000

Source: Estimation based on Field Survey, 2024

The communalities for each variable were assessed to determine the amount of variance accounted by the variable to be included in the factor rotations. All the variables had value greater than 0.50 signifying substantial portions of the variance accounted by the factors. Table 4.2 enlists the Eigen values, their relative explanatory powers and factor loadings for 10 linear components identified within the data set.

Table- 4.2
Rotated Component Matrix

Problems	Components				
	1	2	3	4	5
Lack of personal attention	.749				
Poor quality of treatment					.733
Inhospitable attitude of the hospital staff	.914				
Lack of co-operation between the staffs in the hospital					.812
Poor quality of services by medical and paramedical staff					.857
Corrupt practices followed by paramedical staff				.763	
Lack of modern technology				.855	
Lack of medical facilities			.795		
Lack of well furnished / equipped rooms			.753		
Located in inconvenient place			.740		
Non-working equipment			.758		
Poor sanitation		.798			
Unhygienic surroundings		.709			
Uncommitted paramedical and labour staff				.798	
No respect to the patients and visitors	.891				
No effective hospital administration		.784			
Eigen value	5.810	2.319	1.770	1.335	1.030
Percentage of variance	33.035	12.436	9.375	6.802	6.347
Cumulative percentage	33.035	45.471	54.846	61.648	67.995

Source: Estimation based on Field Survey,2024

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization, rotation converged in 7 iterations

The Kaiser rotated component matrix presented in table 4.2 reveals that factor one had significant loadings for three dimensions namely lack of personal attention, 'inhospitable attitude of the hospital staff and no respect to the patients and visitors. These dimensions explained nearly 33 percent of the variance. Factor 2 has significant loadings for three dimensions namely poor sanitation, unhygienic surroundings, and no effective hospital administration and explained nearly 13 percent of the variance. Factor 3 has significant loadings on four dimensions namely lack of medical facilities, lack of well-furnished/equipped rooms, located in inconvenient place and non-working equipment and explains 9 percent of the variance. Factor 4 has significant loading on three dimensions namely corrupt practices followed by paramedical staff, lack of modern technology and uncommitted paramedical and labour staff explains nearly 7 percent of the variance. Factor 5 has significant loadings on two dimensions namely lack of co-operation between the staffs in the hospital and poor quality of services by medical and paramedical staff explained 6 percent of the variance. Hence these are the various challenges faced by the women workers during utilization of health care services. Similar findings were reported by Sen et.al(2007) and Dalal et.al(2009) have found out that many factors limit the adequate utilization of healthcare services among women in India. Factors like distance to the healthcare facility, cost incurred, and other socioeconomic determinants are some of the major deterrents to accessing healthcare facilities among women.

Conclusion

The study found that improving healthcare access for women can lead to better health outcomes and economic benefits for the entire community. The study concludes that quick diagnosis of diseases and specialised treatment, good hospital infrastructure and reputation of the hospital are the main reasons for selection of utilization of health services among women workers. The distance are main determinants that hinder one's healthcare facility accessing pattern. The chief mode of transport for the respondents was foot to travel and reach the health care services. The lack of personal attention, inhospitable attitude of the hospital staff and no respect to the patients and visitors are the main barriers mentioned by the women workers while utilizing the health care services. These constraints are interconnected with other constraints like inadequate drug and medical supplies, which interact to determine health needs and healthcare utilization. Some of the poor households in the study areas are utilizing the services provided by private health providers, despite the high costs of care associated, over the free or subsidized care provided by the governmental healthcare services for a multitude of reasons, the majority of which can be rectified with adoption of good behavioural practices by the government healthcare staff or with minimal resources input.

Suggestions

- The healthcare workforce in India needs to be adequately trained, motivated, and distributed to ensure the delivery of quality healthcare services. Strategic planning can address human resource gaps and develop strategies for recruitment, training, and retention of healthcare professionals.

- Strengthening and empowering existing Health Centre Managing Committees to monitor their health centers may improve service quality.
- There should be availability, equity and quality of healthcare services, which will ensure basic care to the poor and the marginalized for protecting them against ill health and exploitation.
- Accreditation of health facilities in the public as well as in private sector is must. Quality improvement should also include non-clinical and support services.
- Health facilities should have available equipped transport services that operate 24 hours a day, 7 days a week, to transport women and new-borns as necessary.

References

1. Fullman N, Yearwood J, Abay SM, Abbafati C, Abd-Allah F, Abdela J (2018) “Measuring performance on the healthcare access and quality index for 195 countries and territories and selected subnational locations: a systematic analysis from the global burden of disease study” *Lancet*, 391, Page No. 2236-71.
2. Sonalee Rajput, Sibasis Hense and K.R. Thankappan (2021) “Healthcare utilisation: a mixed method study among tea garden workers in Indian context” *Journal of Health Research*, Vol. 36 No. 6, Page No.1007-1017.
3. Vaidegi and Abdul Raheem (2022) “Healthcare Services Utilization among the Rural Women in Tamilnadu: A Micro Level Study”, *International Journal of Current Science Research and Review* Vol.5 No.2 February 2022, Page No.-540-546
4. Sen G, Östlin P, George A (2007) “Unequal, Unfair, Ineffective and Inefficient Gender Inequity in Health: Why it exists and how we can change it Final Report to the WHO Commission on Social Determinants of Health Women and Gender Equity Knowledge”
5. Dalal K, Dawad (2009) “Non-Utilization of Public Health Care Facilities: Examining the Reasons Through a National Study of Women in India”, *Rural Remote Health* Vol.9, No.3, Page No.-1178. PubMed Abstract
6. Fagbamigbe AF, Bamgboye EA, Yusuf BO (2015) “The Nigeria wealth distribution and health seeking behaviour: evidence from the 2012 national HIV/AIDS and reproductive health survey”, *Health Econ Revision*, Vol.5, No.1.
7. Amin R, Shah NM, Becker S (2010) “Socioeconomic Factors Differentiating Maternal and Child Health-Seeking Behavior in Rural Bangladesh: A Cross-Sectional Analysis” *International Journal of Equity Health*, Vol.9, No.9.

WOMEN EMPOWERMENT THROUGH COMMON SERVICE CENTERS: AN EMPIRICAL STUDY WITH CAPABILITY APPROACH

***Ameera R A, **Dr. Malarvizhi. V**

*Research Scholar, **Professor, Department of Economics, Avinashilingam Institute for Home Science & Higher Education for Women, Coimbatore - 43

Abstract

The Capability Approach by Amartya Sen gives us a revolutionized framework of analyzing human welfare by focusing on personal freedom and being able to pursue a worthy life rather than standard economic variables such as wealth or income. It is directly applicable for an assessment of how the Common Service Centers (CSCs) run by the Village Level Entrepreneurs (VLEs), and that includes women as well, play a role in achieving economic progress, empowerment, and gender empowerment. This paper explores how women VLEs use CSCs to increase their capacity and socio-economic standing based on the theoretical framework and empirical evidence of the Capability Approach.

Keywords: Common service centres, Village level entrepreneurs, Capability approach

INTRODUCTION

In India, women form a major chunk of the working-age population. Raising the Labour Force Participation Rate (LFPR) among women is very important to ensure greater employment growth and overall economic development. In spite of economic development and an increase in GDP, the LFPR among women in India was 24.5% whereas that of men was 76.0%, according to the 2018 World Bank report. In the present situation, generating opportunities for decent employment in rural India is a significant challenge. Women's entry into the labor force has enabled many families to overcome economic hardships and also helped in generating jobs.

Since 1995, India's industrial sector has been dominated by the information technology industry, leading to tremendous economic growth. The ability to work anywhere and anytime is a motivating factor for women's empowerment as it empowers them to earn extra income. India is the second-largest digital adopter in the world after China. The "Make in India" initiative was initiated by the Indian Prime Minister, Narendra Modi, and triggered the digital revolution across different sectors. The Digital India Mission, which was launched on July 1, 2015, reinforces a number of other government programs like Make in India, Bharatmala, Sagarmala, Startup India, BharatNet, and Standup India. Its slogan, "Power to Empower," points towards its vision of empowering digital inclusion. It rests on three pillars: development of digital infrastructure, digital service delivery, and digital literacy.

The Digital India Mission seeks to integrate rural pockets with high-speed internet networks. Public Internet Access Programme is one of its nine core pillars. India is one of the top two countries in terms of digital adoption in the world, and its digital economy is expected to cross \$1 trillion by 2023.

Major advantages of the Digital India program are:

- An increase in electronic transactions pertaining to e-governance.
- Creation of a network of optical fibers of 2,74,246 km that connect more than 1 lakh 15 thousand Gram Panchayats in the Bharat Net initiative.
- Creation of Common Service Centers (CSCs) under the National e-Governance Project, facilitating access to ICT for e-governance, education, healthcare, telemedicine, entertainment, and other services.
- Creation of digital villages with facilities like solar lighting, LED assembly units, sanitary napkin-making units, and Wi-Fi Choupals. The geographical spread of these initiatives can be seen below:
- Higher internet penetration, where internet usage in urban areas stands at 64%.

With rural India's urgent need for gainful employment opportunities, the Digital India initiative has created new channels to meet this challenge. Here, the Common Service Centers (CSCs), under the Ministry of Electronics & IT, have been instrumental in supporting rural entrepreneurship, and therefore they are an indispensable part of the Digital India program.

COMMON SERVICE CENTRES -INTEGRAL PART OF DIGITAL INDIA MOVEMENT

Common Service Centers (CSCs) are now a critical part of the Government of India's "Digital India" mission. With the aim of creating service delivery points close to citizens' homes, the government has made it mandatory to establish a minimum of one CSC in each Panchayat. These centers are primary points for offering important public utility services, social welfare schemes, healthcare, finance, education, and agricultural assistance, as well as other B2C services to citizens residing in rural and remote locations.

The Village Level Entrepreneur (VLE) is the key player in the scheme being its main stakeholder. With a huge network of 5.4 lakh VLEs out of which 4.35 lakh are based in Gram Panchayats, CSCs proactively provide online public utility and financial services, quality healthcare, and facilitate entrepreneurship and employment generation in villages and small towns. The entrepreneurial skills of VLEs make the initiative sustainable.

Based on a review of the CSC scheme, the government rolled out the CSC 2.0 scheme in 2015 under the Digital India Programme. The purpose of this program was to increase the coverage of CSCs to all 2.5 lakh Gram Panchayats of India by the year 2019. The already existing CSCs were to be consolidated and joined with 1.5 lakh new centers spread across the nation. Maintained by Village Level Entrepreneurs, the CSCs run a self-supportive entrepreneurship system, promoting grassroots economic growth and digital inclusion.

WOMEN ENTREPRENERS & CSC

The government is encouraging the involvement of women, especially those from Dalit and backward castes, below-poverty-level communities, and members of Self-Help Groups by motivating them to open Common Service Centers (CSCs) and assume the position of Village Level Entrepreneurs (VLEs). This empowerment-oriented policy has supported a good number of women to open and manage CSCs. As of 31st March, 2021, women VLEs were operating 40,137 functional CSCs, out of which 31,027 functioned at the Gram Panchayat level. Women presently control about 19% of all CSCs in the nation. The

Communications and Information Technology Minister has faith that women shall lead the change in society using the current information technology revolution.

The reason for the success of the CSC model, according to the Centre for Innovations in Public Systems' 2014 report, lies in the fact that VLEs happen to be computer-literate women graduates and thus CSCs are their main source of livelihood.

OBJECTIVE OF THE STUDY

To study the impact of digitization on economic empowerment and its potential for creating women employment opportunities.

Literature review

CA focuses on human freedom and capabilities instead of materialistic income or utility as traditional economic metric. Rooted in classical political economy, Amartya Sen has criticized the narrow focus on material wealth and subjective well-being by welfare economics to assess only what individuals actually can achieve by differentiating functioning (achievements) and capabilities (real opportunities) that CA makes possible for describing a nuanced picture of well-being, poverty, and inequality. While it is related to the Basic Needs Approach, it extends beyond material provisions to emphasize choice, agency, and participation. Criticisms include a lack of a definitive capability list and high data demands. Scholars such as Martha Nussbaum propose a core capabilities list, while others advocate participatory methods. CA's applications span poverty measurement, gender studies, and policy evaluation, making it relevant for assessing interventions like Common Service Centers in India's digital economy.(Clark, n.d.)

Digital platforms enhance women's economic empowerment through CSCs, analyzing success factors using Amartya Sen's capability approach. They have the potential to bridge economic and social gaps for women entrepreneurs.(Rajeev & Bhandarkar, 2022)

Sen's approach to welfare economics gains depth through interdisciplinary integration with sociology, anthropology, and psychology. Research highlights that poverty extends beyond material deprivation, encompassing constraints on agency, social exclusion, and systemic barriers to real freedoms. While development policies typically focus on economic factors, studies emphasize the significance of self-respect, autonomy, and community engagement in overall well-being. The paper advocates for an expanded application of the Capability Approach to address these complexities, asserting that a comprehensive understanding of poverty necessitates both economic metrics and first-hand accounts from those experiencing it.(George, n.d.)

SIGNIFICANCE OF STUDY

Active involvement of women is vital to ensure inclusive, equitable, and sustainable economic progress. Empowerment at individual, family, social, economic, and political levels occurs when they acquire their own identity, income, and savings, boosting national growth. Governments across the globe support ICT as a medium of empowerment.

Our study endeavours to evaluate the impact of Digital India initiatives via CSCs on the employment of women. The CSC VLE program is viewed as a novel initiative under Digital India. But there are few studies on this subject. A few studies emphasize CSC

implementation (Ebad, Ryhan 2013), challenges in rolling out (Amiya Kumar Sahoo et al., 2020), service quality (Uthaman & Vasanthagopal, 2017), and public usage (Vignesh Kumar S & Karthikeyan Chandrasekaran, 2017). The Indian Institute of Management (2011) study looks at the status of the CSC program, entrepreneurship among VLEs, and infrastructure and financial support. To our knowledge, no systematic research investigates the employment generation and women's empowerment roles of CSCs in rural India.

RESEARCH DESIGN

The study used both explanatory and descriptive research approaches. Kerala was chosen due to the reason of researcher's native place. Data was collected from primary and secondary sources, using surveys, questionnaires, and interviews with Village Level Entrepreneurs (VLEs).

The target population included 2,640 individuals registered on the CSC Locator (csc.gov.in). From this, 396 samples were selected from Thrissur and Malappuram districts. A Google Forms questionnaire was created to collect data from CSC entrepreneurs, shared via email and WhatsApp.

Secondary data included research papers, journal articles, and newspaper reports. Economic reviews were also analyzed. Information was gathered from websites such as the Ministry of Information and Technology (www.mit.gov.in) and the Common Service Centre portal (www.csc-india.org).

THEORETICAL FOUNDATIONS

Amartya Sen's Capability Approach redefines well-being in terms of individual freedom and potential rather than economic prosperity. Income and assets are crucial, but they do not represent life satisfaction. This approach concentrates on enabling individuals to pursue personal goals and live meaningful lives. "Functioning" describe what someone can do or be, like being educated, healthy, or socially active, which are based on having access to basic resources such as income, skills, and rights. Several factors, including education, health, and norms, affect how efficiently these resources are converted. Technology is important as a "conversion factor," facilitating access to education, healthcare, and jobs. Authority is also essential, as freedom really means actively working towards one's ends rather than merely having opportunities. By making the shift from conventional economic indicators to human-oriented development, the capability approach brings to the fore the role of rights, social support, and empowerment in designing policies for sustainable progress.

Key concepts include:

- **Functioning:** Referring to what individuals can successfully do or become, such as being educated or healthy.
- **Conversion Factors:** Factors like health, education, social norms, and technology that influence the transformation of resources into valued outcomes.
- **Role of Technology:** Technology acts as both a resource and a conversion factor, enabling individuals to expand their skills, access opportunities, and improve life quality.
- **Autonomy:** True freedom involves active participation in achieving goals, not just having opportunities available.

By focusing on these dimensions, the Capability Approach advocates for a human-centered perspective in policy-making and development.

CONCEPTUAL FRAMEWORK

Inputs and Resources

In the Capability Approach, resources are essential but insufficient for achieving capabilities. Effective transformation depends on factors such as gender norms, local infrastructure, and policies.

- **Tangible Inputs:** Income, technology, infrastructure.
- **Intangible Inputs:** Education, skills, social networks, and access to information.

Conversion Factors

Conversion factors such as gender, nature of area, policies, and even economic environmental conditions play a crucial role in determining how individuals can convert available resources like income, education, skills and technology into meaningful capabilities. For female VLEs, societal factors such as gender norms, family support, and local infrastructure can either facilitate or hinder their ability to effectively leverage digital technology and run a CSC.

Key Capabilities

Primary data identifies the following capabilities achieved by women running CSCs:

- **Economic Independence:** Financial autonomy, savings, and asset ownership.

Women running CSCs may gain financial and equal economic independence like income, savings, own asset and autonomy in running business which impacts their well-being and decision-making power.

- **Social Status and Agency:** Recognition, confidence, and societal contributions.

By being VLEs, women might challenge traditional gender norms and gain recognition in their communities. They may gain sense of freedom, social status, self-confidence and positive contribution to the society.

- **Access to Education and Information:** Enhanced digital literacy, entrepreneurial skills, and time management.

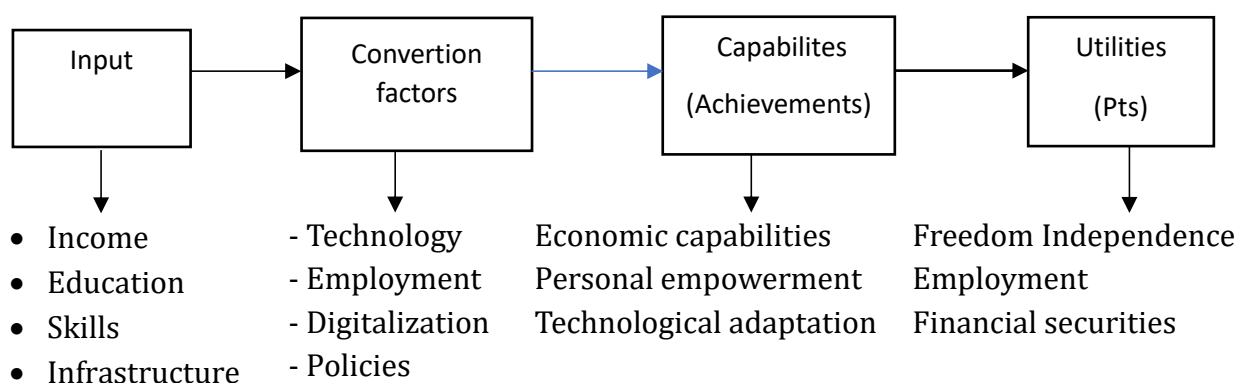
Through their work, VLEs may acquire digital literacy, entrepreneurial skills, and communication skills and time management, for improving their capabilities.

Achieved Capabilities

- Employment opportunities and improved economic well-being. - Female VLEs, as managers of CSCs, gain the employment opportunity to earn a livelihood, thereby improving their economic well-being.
- Mobility through better transportation- Improved transportation increases mobility, connecting people to education, healthcare, and employment opportunities.
- Financial security via savings and investments- The ability to save reflects financial security and future planning, empowering individuals to manage risks and invest in long-term goals such as education and health.

- Digital literacy for education and civic participation- Digital literacy and access to technology provide tools for education, employment, and civic participation, fostering agency and inclusion.
- Awareness for addressing inequalities and accessing benefits- Awareness equips individuals to claim benefits and opportunities, addressing inequalities and empowering marginalized communities.
- Sustainable development through community investments- Income and assets directly improve material conditions and indirectly increase capabilities, such as the ability to educate children or invest in health.

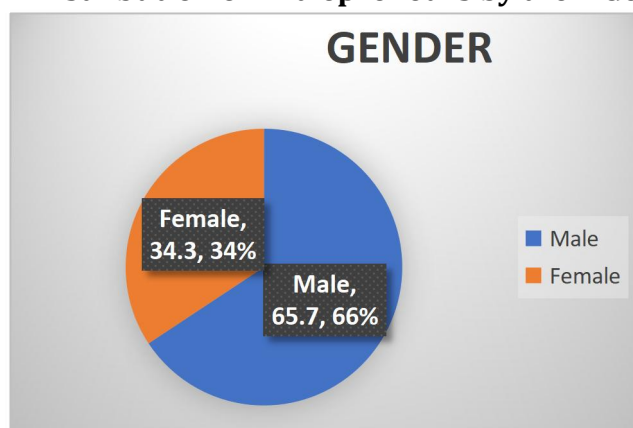
A simplified Conceptual diagram of Capability approach Framework



ANALYSIS AND INTERPRETATION

To achieve these objectives, data were collected from 396 entrepreneurs in Kerala using a multi-stage sampling method and a pretested structured questionnaire. The data were gathered from Common Service Center (CSC) Village Level Entrepreneurs (VLEs) to assess the capabilities they developed through managing CSCs. The study also examined the association between the capabilities gained and gender. Additionally, a correlation analysis was conducted to explore the relationship between the income levels of 136 women VLEs, selected through random sampling, and the capabilities they achieved. This approach was employed to apply the framework of the capability approach

Fig 1: Distribution of Entrepreneurs by their Gender



Gender-wise, the majority of the respondents are male; hence, males comprise 65.7 percent, whereas female comprises 34.3 percent.

Capabilities Through CSCs and Digitalization

The responses of 396 CSC VLEs highlight the empowerment achieved through their roles in CSCs:

Table 1
Capability set

Capability Set	Mean	SD
Change in consumption pattern	4.38	0.89
Changes in modes of transportation	4.25	0.877
Changes in saving pattern	4.29	0.748
Usage of digital gadgets	4.70	0.60
Development in banking habits	4.47	0.71
Changes in per capita income	4.18	0.951
Scope to use knowledge and skill	4.61	0.802
Social status	4.56	0.718
Freedom and mobility	4.57	0.658
Independence	4.55	0.890

The results show major advances in all capabilities by gender, with all mean scores higher than 4 on a scale of 5, which denotes high agreement. The most endorsed capability is the use of digital gadgets (mean = 4.70, SD = 0.60), which signifies high technology penetration. Mobility and freedom (mean = 4.57, SD = 0.658) and social status (mean = 4.56, SD = 0.718) also exhibit substantial progress, indicating greater autonomy and social acceptance. Autonomy (mean = 4.55, SD = 0.890) and capacity utilization of knowledge and skills (mean = 4.61, SD = 0.802) further evidence increasing empowerment. Financial practices are better, in terms of improving banking practices (mean = 4.47, SD = 0.71), savings patterns (mean = 4.29, SD = 0.748), and per capita income (mean = 4.18, SD = 0.951). Shifts in consumption habits (mean = 4.38, SD = 0.89) and transport means (mean = 4.25, SD = 0.877) mirror wider lifestyle changes. The comparably low standard deviations indicate that these developments are pervasive, and this leads to increased autonomy, economic security, and social inclusion.

Hypothesis Testing**Chi-Square Test**

- **Null Hypothesis (H_0):** No association between running a CSC and empowerment factors.

- **Alternative Hypothesis (H₁):** Significant association exists between running a CSC and empowerment factors.

The Chi-Square test was applied to examine the association between running a CSC and key empowerment factors:

Table 2
Chi-Square Test

Test Statistic	Value	df	p-value
Empowerment	154.697	33	0.000**
Gender	38.828	1	0.000**

****Significant at 0.05% level of significance**

The test statistics indicate a strong association between gender and empowerment variables. A Chi-Square value of 38.828 (df = 1, p = 0.000) confirms a significant relationship between gender and empowerment, particularly in access to and participation in CSCs. Similarly, the Chi-Square value of 154.697 (df = 33, p = 0.000) highlights a significant link between empowerment and factors like education, income, and running CSCs. The low p-values suggest these results are not due to chance, reinforcing the influence of gender and empowerment factors. These findings underline the positive socio-economic impact of CSCs, warranting further analysis through regression for deeper insights.

Pearson's Correlation Analysis

Based on the analysis of 396 data points from both male and female Village Level Entrepreneurs (VLEs), Pearson's correlation was used to measure the relationship between income and capabilities achieved across gender.

Table 3
Pearson's Correlation Analysis

Capability	Pearson Correlation (r)	Significance
Change in consumption pattern	0.551**	0.000
Changes in modes of transportation	0.391**	0.000
Changes in saving pattern	0.525**	0.000
Usage of digital gadgets	0.320**	0.000

Capability	Pearson Correlation (r)	Significance
Development in banking habits	0.470**	0.000
Changes in per capita income	0.042	0.403
Scope to use knowledge and skills	0.319**	0.000
Social status	0.547**	0.000
Better freedom	0.692**	0.000
Independence	0.545**	0.000

****Correlation is significant at 0.00 level**

The results show that freedom and mobility ($r = .692$, $p = .000$) have the strongest positive correlation with income, indicating that increased mobility significantly boosts earnings. Spending behavior ($r = .551$, $p = .000$), economic independence ($r = .545$, $p = .000$), and social status ($r = .547$, $p = .000$) also show strong correlations, suggesting that higher income leads to changes in spending, greater financial independence, and improved social standing. Changes in saving patterns ($r = .525$, $p = .000$) further highlight the link between income and financial behavior, reinforcing the role of savings in economic stability.

Moderate correlations were observed in banking habits ($r = .470$, $p = .000$), skill utilization ($r = .319$, $p = .000$), digital gadget usage ($r = .320$, $p = .000$), and transportation changes ($r = .391$, $p = .000$), suggesting that financial inclusion, technological adoption, and mobility contribute to economic success. However, the relationship between per capita income and individual income ($r = .042$, $p = .403$) was weak and insignificant, indicating that overall economic growth does not directly translate into higher individual earnings. These findings emphasize the need for policies that enhance women's mobility, financial independence, and autonomy to improve income levels. Additionally, the role of banking habits and savings patterns underscores the importance of CSCs in promoting financial literacy and digital banking. While digital access is beneficial, skill development and training remain crucial for meaningful economic progress. Lastly, the weak link between macroeconomic growth and personal income highlights the necessity of localized economic opportunities for financial empowerment.

Regression analysis

The regression results show that an R^2 of 0.615 occurred; this shows that 61.5% of the income variability could be explained by these predictors.

Table 4
Regression analysis

Beta	Regression coefficient	t value	Sig
Changes in consumption pattern	.065	.018	.000***
Changes in Modes of transportation	.021	.021	.327
Changes in saving pattern	.068	.027	.014***
Development in banking habits	.050	.016	.002**
Usages of digital gadgets	-.070	.017	.000***
Scope to use knowledge and skills	.011	.018	.537
social status	.045	.023	.050
Have better freedom and mobility	.189	.017	.000***
Economic independence	.032	.018	.069
Constant	1.435	18.131	.000***
R2 square	.615		
Dependent Variable: INCOME			

*****Significant at 0.01 level of significance**

**** Significant at 0.05 level of significance**

The findings highlight that freedom and mobility ($\beta = .189$, $p = .000$) are the strongest positive influences on income, emphasizing the importance of unrestricted access to better opportunities. Changes in consumption ($\beta = .065$, $p = .000$) and saving habits ($\beta = .068$, $p = .014$) also play a significant role, reflecting the impact of financial behavior on earnings. Additionally, improvements in banking habits ($\beta = .050$, $p = .002$) support financial inclusion as a key factor, while social status ($\beta = .045$, $p = .050$) has a marginally positive effect.

On the other hand, the usage of digital gadgets ($\beta = -0.070$, $p = .000$) negatively affects income growth, possibly due to excessive or unproductive technology use. Meanwhile, changes in transportation ($p = .327$) and opportunities to apply knowledge and skills ($p = .537$) show no significant impact, while economic independence ($p = .069$) is close to significance but not strong enough to predict income. These results highlight the need for policies that enhance mobility, financial literacy, and digital banking access for women, particularly in CSCs, ensuring that technology use supports rather than distracts from income growth.

Women VLEs and Capabilites

In order to understand the relationship between income and capabilities achieved by Women VLEs, the correlation between the income of 136 women VLEs selected through random sampling method and their capabilities reveals the following:

Table 5
Women capabilities- Correlation test

Capability	Pearson Correlation (r)	Significance
Change in consumption pattern	0.452**	0.000
Changes in modes of transportation	0.329**	0.000
Changes in saving pattern	0.525**	0.000
Usage of digital gadgets	0.485**	0.000
Development in banking habits	0.526**	0.000
Changes in per capita income	0.572**	0.000
Scope to use knowledge and skills	0.443**	0.000
Social status	0.399**	0.000
Better freedom	0.668**	0.000
Independence	0.541**	0.000

****Significant at 0.01% level of significance**

The analysis of Pearson correlation coefficients reveals a significant positive relationship between the income of women managing Common Service Centers (CSCs) and various aspects of their capabilities. Based on a survey of 136 women Village Level Entrepreneurs (VLEs), the findings indicate that higher income is associated with shifts in spending behavior ($r = 0.452$), improved transportation options ($r = 0.329$), better financial planning and saving practices ($r = 0.525$), and enhanced access to digital technology ($r = 0.485$). Income growth also promotes formal banking habits ($r = 0.526$) and significantly impacts personal income growth ($r = 0.572$). Furthermore, increased income provides greater opportunities to apply and expand skills ($r = 0.443$), enhances societal recognition ($r = 0.399$), and leads to substantial improvements in autonomy and decision-making ability ($r = 0.668$). Additionally, it underscores enhanced self-reliance ($r = 0.541$), highlighting the transformative impact of CSCs on women's economic and personal empowerment.

- **Economic Capabilities:** Strong correlations with savings, banking habits, and per capita income demonstrate the role of CSCs in improving financial well-being.
- **Personal Empowerment:** High correlations with freedom, independence, and skills utilization highlight enhanced autonomy and confidence.
- **Technological Adaptation:** Strong correlations with digital gadget usage and knowledge acquisition emphasize the role of digitalization in capability expansion.

FINDINGS

- This study particularly deals with the transformative effect of Common Service Centers (CSCs) in enhancing the capabilities of Village Level Entrepreneurs (VLEs) using Amartya Sen's capability approach lens.

- It delineates that CSCs contribute significantly towards making women financially independent along with social recognition and digital empowerment thereby fostering deeper economic and personal development.
- Strong income and technological adaptation and personal empowerment correlations underscore the role of CSCs in expanding the scope of opportunities for women in India's rapidly growing digital economy.
- Empirical analysis confirms that mobility, financial inclusion, and digital literacy are essential drivers of economic well-being for CSC VLEs especially women VLEs.
- Challenges that include gender norms, infrastructure and unproductive use of technology need to be overcome for maximum benefit realisation.

CONCLUSION

The study reaffirms the centrality of Common Service Centers (CSCs) in enabling Village Level Entrepreneurs (VLEs), and most importantly women, to be financially independent, digitally literate, and socially valued. This study illustrates through the capability approach of Amartya Sen how economic opportunities have grown and led to individual and collective development within India's digital economy through CSCs.

In spite of these optimistic results, issues like gender norms, infrastructure constraints, and unproductive technology usage still thwart the full potential of CSCs. Resolution of these problems by policy interventions that address specifics like enhancing financial literacy, increasing digital inclusion, and encouraging entrepreneurship among women will further enhance the effectiveness of CSCs. Removal of systemic hurdles and improvement in the CSC ecosystem will not only empower women VLEs but also propel inclusive economic growth, ensuring their continued contribution to India's digital revolution.

REFERENCES

1. Philip Ross & Kasia Maynard (2021): Towards a 4th industrial revolution, Intelligent Buildings International, DOI: 10.1080/17508975.2021.1873625
2. Kevin Barefoot, Dave Curtis, William Jolliff, Jessica R. Nicholson, Robert Omohundro- Defining and Measuring the Digital Economy, Working Paper, 3/15/2018, Bureau of Economic Analysis, Washington DC. 20233
3. Ghosh, A. (2011). Initiatives in ICT for Rural Development, Global Media Journal, 2 (2), 2. Retrieved from www.caluniv.ac.in. <https://www.meity.gov.in/divisions/national-e-governance-plan>
4. Manikanta, K. (2017). Digital India Programme and Impact of Digitalization in Improving Quality of Life of Citizens. Adarsh Journal of Management Research, 11-15. <https://doi.org/10.21095/ajmr/2017/v0/i0/122258>
5. Clark, D. A. (n.d.). The Capability Approach: Its Development, Critiques and Recent Advances. <http://www.gprg.org/>George, A. (n.d.). Adapting Capability Approach to Understand the Life Experiences of the Poor: Making a Case from the Survey of Literature. <http://www.mids.ac.in>
6. K, M. P., Krishna, S., & Sebastian, R. (2023). Women Empowerment in Digital India and the Kerala Knowledge Economy. <https://www.researchgate.net/publication/365979214>

7. Rajeev, M., & Bhandarkar, S. (2022). ADBI Working Paper Series WOMEN ONLINE: A STUDY OF COMMON SERVICE CENTERS IN INDIA USING A CAPABILITY APPROACH Asian Development Bank Institute. <https://www.adb.org/publications/women-online-a-study-of-> www.csc-india.org, www.mit.gov.in

FINANCIAL INDEPENDENCE AND ECONOMIC EMPOWERMENT OF WOMEN HOMEPRENEURS: A STUDY ON HOME-BASED BUSINESSES

“Behind every working woman is an enormous pile of unwashed laundry”

- Barbara dale

*** N. Bhuvaneshwari, ** Dr. V. Malarvizhi**

*Research Scholar, **Professor, Department of Economics, Avinashilingam Institute for Home Science e& Higher Education for Women, Coimbatore-43

Abstract

This study, titled “Financial Independence and Economic Empowerment of Women Homepreneurs: A Study on Home-Based Businesses”, explores the financial sustainability of women-led home enterprises. The primary objective is to analyze different types of home-based businesses and assess the factors influencing their financial independence. Data analysis reveals that freelancing and online businesses offer the highest financial stability, while handmade and sustainable businesses face challenges related to market access and scalability. Despite the support of MUDRA loans, SHGs, and Stand-Up India, gaps in financial access and digital literacy persist. The study highlights the urgent need for targeted funding, training programs, and digital marketing support to enhance business sustainability. Strengthening financial inclusion and leveraging digital platforms can empower women homepreneurs, fostering economic self-sufficiency and long-term growth.

Keywords: Women homepreneurs, financial independence & entrepreneurship,

Introduction

Women are making remarkable strides in entrepreneurship, driving economic growth globally and in India. While direct selling in local markets is common, rural women entrepreneurs face challenges competing with more organized firms. Government initiatives, including reforms in property rights, credit institutions, and marketing regimes have recognized women as partners in development. Ghosh (2010). A business entrepreneur who operates from home is called a Homepreneur. Every person who is willing to work but cannot go outside and start his/her business from home is known as a homepreneur. (Shirsath & Sonawane 2021).

Women entrepreneurs are engaged in unorganized sectors like agriculture, agro-based industries, handicrafts, handlooms, kitchen activities (Pickles, powder, and pappads), and other cottage-based industries like basket making, etc... and maximum, they being home-based jobs. Homepreneurs have been in existence since ancient times. In all civilizations, women were homepreneurs who not only sold their wares in the neighbouring houses and in nearby towns but also in neighbouring countries. Parasakthi & Kanagarathinam (2013). Homepreneurs is a neologism, defined as a business owner who is actively balancing the role of a homemaker and an entrepreneur, doing business from home. Women homepreneurs are women who carry out business in their homes.

Home-based work has continued its existence, though its appearance and weight have changed, depending on change and transforming in the mode of production. Homepreneurs are skilled because they can multitask in managing their home and homepreneur ship. Kavitha & Devi (2017). Business success depends on the support given by family members to women in the business process and management. The interest of family members is a determining factor in realizing women's folk business aspirations. Family life has a dramatic impact on the advancement of female executives with young children Gowan et.al., (2012).

Economic Empowerment

The economic landscape for women in India is transforming rapidly. Women entrepreneurs are emerging as significant contributors to the economy, supported by various government initiatives like the Pradhan Mantri MUDRA Yojana, which provides micro-financing to women entrepreneurs. The rise of self-help groups (SHGs) has also been instrumental in empowering rural women, providing them with financial independence and a platform to develop entrepreneurial skills. – UN Women Highlights (2024)

Financial Inclusion

A recent report by the Reserve Bank of India (2023), indicated that “Women in India are saving more, according to a new Reserve Bank of India study titled, “Deposits with Scheduled Commercial Banks” which shows that deposits in bank account held by women increased from 19.8 % in 2022 to 20.5 % in 2023. The rise in women's share speaks for itself, as the study shows a decrease in the overall percentage of people in total deposits throughout the year. According to the data, women's per capita savings grew by Rs. 4,618 between 2019 and 2023.

Need of the Study

Women homepreneurs contribute significantly to economic growth, yet many struggle with limited financial access, market competition, and digital literacy. The study highlights that while freelancing and online businesses offer the highest financial independence, handmade and sustainable product businesses face challenges due to high costs and low awareness. Understanding these barriers is crucial for designing targeted policies, training programs, and financial support systems. By addressing these issues, women entrepreneurs can enhance their business sustainability, expand their market reach, and contribute more effectively to the economy. This study aims to bridge the gap between government initiatives and women's real challenges in home-based entrepreneurship.

Objective of the Study

- To analyze the financial independence of women homepreneurs across different business types.
- To assess the factors influencing financial independence among women homepreneurs.

Earlier Studies

The multifaceted notion of women's empowerment aims to enhance women's social, economic, political, and legal authority to guarantee equal rights and opportunities in all

areas of life. This overview examines the global history, present state, and potential future of women's empowerment. It explores the historical background, tracking the movement's origins and emphasizing significant turning points in the path to gender equality. **Poonam et.al., (2024)** **Akpuokwe et.al., (2024)** in the landscape of small and medium-sized enterprises (SMEs) fostering women's empowerment through technology and financial literacy emerges as a pivotal strategy for sustainable development. Women's economic empowerment gives them broader control of their economic lives, including access to resources, opportunities, and decision-making power. Women who are economically empowered can better support themselves and their families, contribute to their communities, and support economic growth. **Irawati et.al., (2024)**. According to **Blaisdell (2012)** with a growth percentage of the world's population living in urban areas, many people in cities are increasingly participating in economic activities on the margins of the formal economy. Many such workers generate income by vending Goods are sold on a small scale in and around traditional open-air marketplaces. To divert the attention of economic and labour policy makers towards effective utilization of skilled female workers for initiation of home-based activities. It will know the economic conditions and motivational level of the women labour force to participate in local business and start their own business. According to **Sarfraz et.al., (2022)**. Home-based workers are not easily identified as either self-employed or dependent workers because these categories of employment status fail to capture gender subordination which is particularly salient in the case of home-based work. Yet development practitioners tend to treat home-based workers as self-employed microentrepreneurs, providing them credit and training. **Prugl & Tinker (1997)**, **Parasakthi & Kanagarathinam (2013)** stated that homepreneur ship offers tremendous opportunities for women. If they succeed in promoting their skills and knowledge for measuring the risks and benefits of the business properly and get support and encouragement from family, society, government, and financial institutions, undoubtedly all such positive efforts can open new avenues for homepreneurs and increase the marketability and profitability of business owned by women homepreneurs.

Methodology

This study employed a secondary research methodology, relying on existing literature, reports, and statistical data to analyze the challenges, financial independence, and economic empowerment of women homepreneurs. Data were collected from academic journals, government reports, business case studies, and credible online sources

Result and Discussion

Financial independence plays a crucial role in empowering women homepreneurs and enhancing their economic stability. In today's economy, women-led home-based businesses contribute significantly to self-sufficiency and local development. Various factors, including access to financial resources, digital literacy, and market opportunities, influence the success of women homepreneurs. Table 1 presents different types of homepreneur businesses, along with examples and key insights into their financial independence and sustainability.

Table -1
Types of Homepreneur Businesses, Examples, and Key Insights

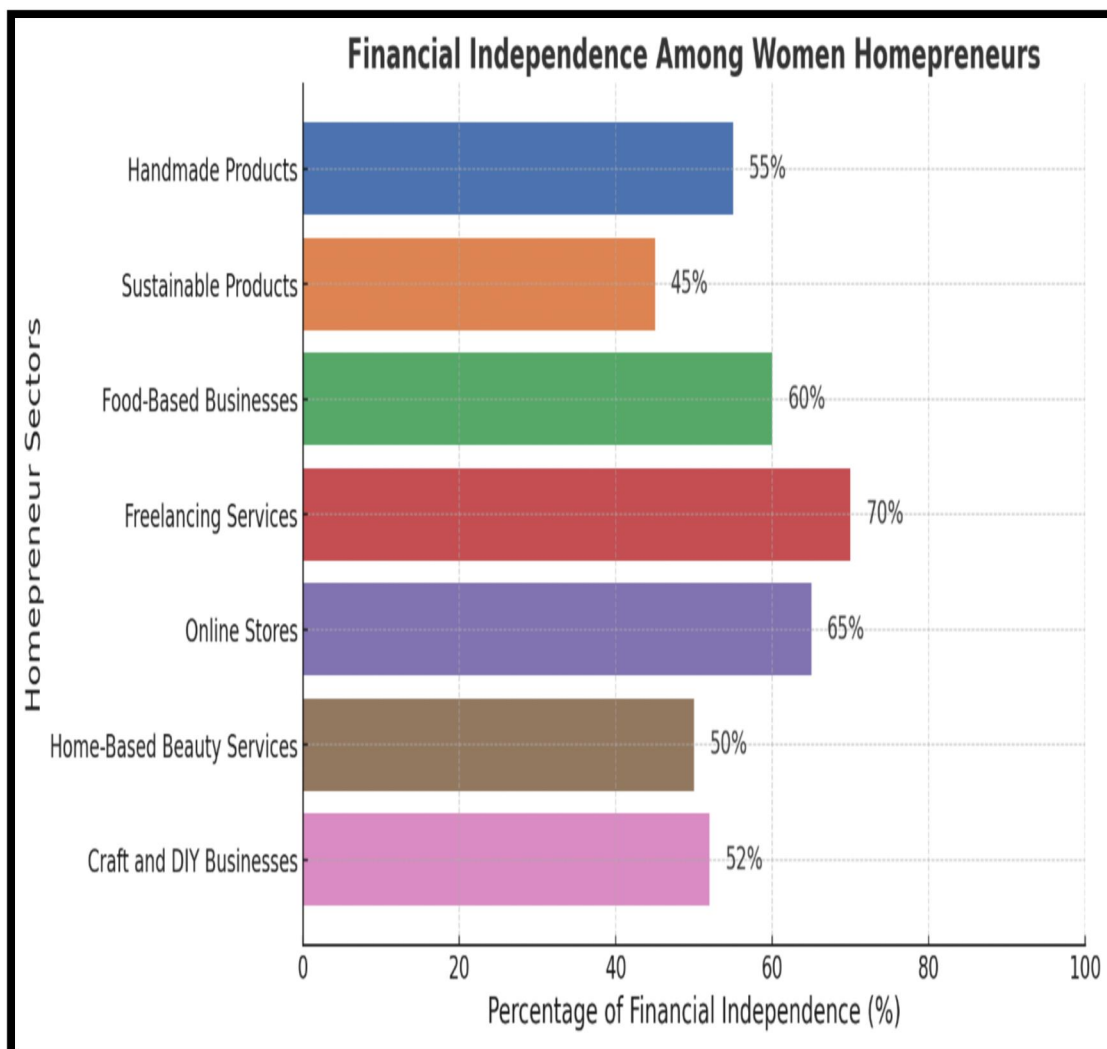
Business Type	Examples	Percentage of Women Achieving Financial Independence	Discussion
Handmade Products	Jewellery making, candles, pottery, embroidery	55%	Over half of women engaged in handicrafts achieve financial self-reliance, particularly those involved in local and online marketplaces.
Sustainable Products	Beeswax wraps, cloth sanitary pads, upcycled items	45%	While demand for eco-friendly products grows, limited scalability and market access impact full financial independence.
Food-Based Businesses	Homemade pickles, organic snacks, catering services	60%	Women in food businesses report higher earnings, especially in urban areas where home-cooked meal services are popular.
Freelancing Services	Writing, graphic design, digital marketing, tutoring	70%	The flexibility and scalability of freelancing allow women to earn sustainable incomes, with many achieving financial independence.
Online Stores	Selling via Etsy, Amazon, Instagram	65%	E-commerce platforms provide accessible earning opportunities, but algorithm changes and platform fees sometimes hinder profitability.
Home-Based Beauty Services	Bridal makeup, organic skincare, hairstyling	50%	Seasonal demand and client retention influence earnings, with many achieving partial financial independence.
Craft and DIY Businesses	Personalized gifts, home décor items	52%	Creative businesses provide steady income, especially for women targeting niche markets or selling customized products.

Source: Pay Nearby Survey & ET BFSI Report, 2024

Based on the capacity for growth, freedom in working remotely, and the expanding digital economy, the results show that freelancing services offer the highest level of financial independence (70%) among all services. The economic empowerment of women is also greatly aided by food-based enterprises (60%) and internet stores (65%), which have rising consumer demand and inexpensive startup costs. Craft companies and handmade goods provide revenue streams, but for long-term success, they frequently need better marketing plans and access to wider markets. Although 45% of enterprises sell sustainable products, their profit margins are impacted by low awareness and increased production costs. Seasonal variations in income might also affect steady financial stability for 50% of home-

based beauty services. These results show that to increase the success rates of women entrepreneurs, more funding, training, and digital literacy. They can become even more financially independent and empowered overall with better access to microfinance and networking opportunities.

Figure -1. Financial Independence among Women Homepreneurs



Source: Pay Nearby Survey & ET BFSI Report, 2024

The figure shows that freelancing offers the highest financial independence, followed by online stores and food businesses. Handmade and craft businesses provide steady income but need better market reach, while sustainable products face cost challenges. Improved funding and digital access can enhance success.

Government Initiative to Enhance Women Homepreneurs

The government's financial support to women is an indispensable strategy for enhancing gender equality and improving women empowerment. Despite the continuing support of the Indian government towards women's development and growth in women entrepreneurs, the current status of women is still in a miserable state. Kushwah et.al., (2021)

Table -2
Government Initiative to Enhance Women Homepreneurs

Government Initiatives	Key features	Impact on Women Entrepreneurs
Pradhan Mantri MUDRA Yojana (PMMY)	Provides collateral-free loans for micro and small businesses	Helps women access capital for starting and expanding home businesses
Self-Help Groups (SHGs)	Encourages group-based savings and credit facilities	Empowers women through collective financial security and microfinance
Startup India - Women Entrepreneurship Platform (WEP)	Provides mentorship, funding, and networking for women startups	Supports women-led businesses in scaling up through expert guidance
Stand-Up India Scheme	Offers loans from ₹10 lakh to ₹1 crore for women entrepreneurs	Facilitates large-scale women-led enterprises with financial backing
National Rural Livelihood Mission (NRLM)	Focuses on self-employment in rural areas via skill development	Trains rural women in sustainable businesses like handicrafts and food processing
Digital Saksharta Abhiyan (DISHA)	Provides digital literacy training for small business owners	Enables women to use online platforms for business growth effectively

Source: RBI & NITI Aayog Report 2024, NABARD 2023, Ministry Reports (Finance,Rural Development, Electronics & IT), 2023-2024.

The table highlights Government initiatives that support women homepreneurs through funding, skill development, and digital literacy. Programs like PMMY and Stand-Up India improve financial access, while SHGs and NRLM promote rural self-employment. Initiatives like WEP and DISHA enhance business growth through mentorship and technology training.

Table 3
Financial Independence of Homepreneurs

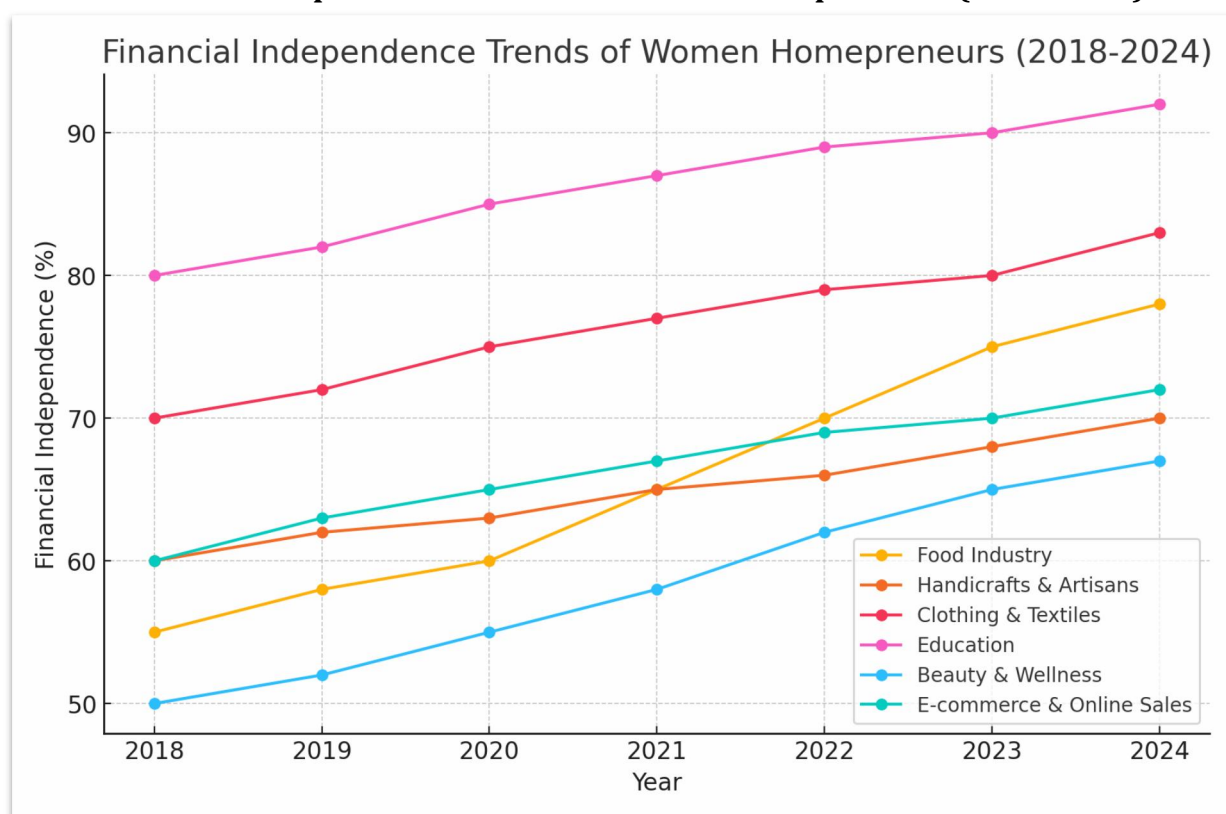
INDUSTRY	PRIMARY FUNDING SOURCE	FINANCE INDEPENDENCE INDICATOR
Food Industry	60% self-funded	75% report stable income
Handicrafts & Artisans	70% use personal savings	68% achieve profit growth
Clothing & Textiles	55% family-supported	80% reinvest profits
Education (Tutoring, Coaching)	85% self-financed	90% report financial stability
Beauty & Wellness	50% use microfinance loans	65% expand service within 2 years
E-commerce & Online Sales	75% self-funded	70% sustain long-term growth

Source: Angle One, IBEF, The Tribune

Interpretation

The table and charts highlight the financial independence of women homepreneurs across industries. Education (90%), clothing & textiles (80%). and food (75%) sector show strong financial stability. Handicrafts (68%) and e-commerce (70%) also demonstrate sustainable growth, while beauty & wellness (65%) faces challenges in expansion. The trend chart indicated a steady rise in finance independence from 2018 to 2023, with education and clothing sectors growing the fastest. Overall, women homepreneurs are becoming more financially self-reliant, but certain industries require better support for sustained growth.

Figure -2
Financial Independence Trends of Women Homepreneurs (2018-2024)



Source: Angle One, IBEF, The Tribune

Interpretation

The trend lines indicate a steady increase in financial independence across industries from 2018 to 2024. The education sector shows the highest stability (92% in 2024), while beauty & wellness remains the lowest (67%) despite gradual growth. Overall, the data highlights an improving financial status for homepreneurs, though some industries need better financial support.

Conclusion

The study highlights that freelancing and online businesses offer the highest financial independence for women homepreneurs, showcasing the importance of digital skills and market access. While handmade and sustainable businesses have potential, they struggle with high production costs and limited scalability, requiring better financial aid, marketing

support, and awareness programs. Government initiatives like MUDRA loans and SHGs have been beneficial, but improving access to microfinance and lower-interest loans can further support women entrepreneurs. A dedicated digital platform providing business training, financial assistance, and networking opportunities can enhance their growth. Strengthening digital literacy, e-commerce support, and corporate collaborations can further improve business sustainability, ensuring greater financial independence and economic empowerment for women homepreneurs.

Suggestions to Enhance Women-owned Homepreneurs

- Develop a Women Homepreneurs App to provide business training, market connections, and financial assistance in one platform.
- Expand microfinance programs with low-interest loans specifically designed for homepreneurs.
- Increase access to digital marketing and e-commerce training, helping women leverage platforms like Etsy and Amazon effectively.
- Encourage corporate partnerships where large businesses can source products from women-led home enterprises.

References

1. Poonam, Santosh, Ayushi & Preet Gill (2024) "Global Perspectives on Women's Empowerment: Challenges, Policies, and Case Studies" *Asian Journal of Agricultural Extension Economics & Sociology* 42(11):315-320
2. Chidiogo Uzoamaka Akpuokwe, Chidinma Chikwe&Nkechi Emmanuella Eneh (2024) "Leveraging Technology and Financial Literacy for Women's Empowerment in SMEs: A Conceptual Framework for Sustainable Development" *Global Journal of Engineering and Technology Advances* 18(03):020-032
3. Santi Irawati, Ifan Deffinika, Desi Rahmadani&Nengah Parta (2024) "Analysis of The Potential of Women's Economic Empowerment in the Digital Marketing Sector" *KnE Social Sciences*, 10.18502/kss.v9i23.16752
4. Blaisdell, Amy, *Staying Well on the Margins of the Formal Economy: Exploring Occupational Health and Treatment among Peruvian Vendors in the Urban Marketplace*(2012).SSRN: <https://ssrn.com/abstract=2234465> or <http://dx.doi.org/10.2139/ssrn.2234465>.
5. Najia Sarfraz, Sania Sarfraz & Fozia Malik (2022) "Women Labor Force Participation through Home-Based Business Initiatives" *South Asian Studies, A Research Journal of South Asian Studies*, Vol. 37, No. 2, July–December, 2022, pp.409–430.
6. Elisabeth Prugl & Irene Tinker (1997) "Microentrepreneurs and homeworkers: Convergent categories" *World Development*, Volume 25, Issue 9, September 1997, Pages 1471-1482.
7. Ghosh, N. (2010). *Organizational Forms and Market Intermediations: A Study on Rural Women Entrepreneurs in India*. *Indian J Labor Econ Q J Indian Soc Labor Econ*, 53(2), 381–395.

8. D. Parasakthi & M. Kanagarathinam (2013) "Problems of Coimbatore District Women Homepreneurs - A District In Tamil Nadu State of India" International Journal of Economics, Commerce and Research (IJEER) ISSN 2250-0006 Vol. 3, Issue 2, Jun 2013, 11-22 © TJPRC Pvt Ltd.
9. Kavitha, G. & Uthra Devi, S. (2017). A Study on Motivation and Problems Faced By Women Homepreneurs in Coimbatore City. International Journal of Business and Management Invention, 6(7), 30-34.
10. McGowan, P., Redeker, C.L., Cooper, S.Y. and Greenan, K. (2012), "Female entrepreneurship and the management of the business and domestic roles: Motivations, expectations and realities", Entrepreneurship & Regional Development: An International Journal, 24:1-2, pp. 53-72.
11. D. Parasakthi & M. Kanagarathinam (2013) "Problems of Coimbatore District Women Homepreneurs - A District In Tamil Nadu State Of India" International Journal of Economics, Commerce and Research (IJEER) ISSN 2250-0006 Vol. 3, Issue 2, Jun 2013, 11-22 © TJPRC Pvt Ltd.
12. Dr. Manisha Sandip Shirsath & Ms. Tejal Sonawane (2021) "Women Homepreneurship: Emergence of New Opportunities to Become Own Boss" ISSN 2277 - 7067 UGC CARE Group 1
13. Dr Silky ViggKushwah, Dr Teena Singh, Ms Saloni Das&Abhay Sharma "The Role of Government Initiatives on Women's Empowerment: The Case of Women Entrepreneurs in India" (2021) Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 11522 - 11535 <http://annalsofrscb.ro>

Websites

- PayNearby Survey, 2024 (https://www.business-standard.com/india-news/63-women-aspire-to-be-entrepreneurs-see-financial-independence-study-124030600540_1.html)
- ET BFSI Report, 2024 (<https://bfsi.economictimes.indiatimes.com/news/industry/47-women-take-independent-financial-decisions-106916509>)

WOMEN STREET VENDORS IN INDIA: CHALLENGES, FINANCIAL STABILITY AND ECONOMIC CONTRIBUTIONS IN THE INFORMAL SECTOR

***J. Priyanka, **Dr. V. Malarvizhi**

*Research Scholar, **Professor, Department of Economics, Avinashilingam Institute for Home Science & Higher Education for Women, Coimbatore-43

Abstract

Women street vendors play a significant role in India's informal economy, contributing to urban employment and financial sustainability. This study examines their economic contributions, earning potential and the challenges they face, including harassment, legal barriers, financial instability and lack of social protection. Findings reveal that women vendors form 2% of the urban workforce, with many being primary earners for their families. While Government schemes like PM SVANidhi and MUDRA Yojana provide financial support, awareness and accessibility remain key challenges. The study emphasizes the need for better financial inclusion, policy implementation and digital literacy programs to empower women vendors and improve their economic stability. Strengthening legal frameworks and providing structured support can help integrate women street vendors into the formal economy.

Keywords: Women street vendors, Financial instability, policy implementation & economic stability

Introduction

A street vendor is someone who runs their own small business with enough money to produce or buy goods and sells them directly to the public. Unlike shops, they don't have a permanent building or structure for their business. Instead, they often set up in open spaces like sidewalks, public areas, or even private spaces. Some street vendors stay in one place, while others portable setups.

Street vendors are part of the informal sector, which doesn't require much money or special skills to start. Nowadays, street vendors are often not treated with respect or fairness. Many times, their goods are taken away by authorities, forcing them to borrow money from private lenders at very high interest rates just to get their items back or restart their business. On top of this, street vendors usually have to regularly pay bribes to officials just to keep selling their products on the streets. **(R. Vara Prasad, D. Subhahini 2019).**

In India, street vending is more than just a way to earn money-it's a social and cultural tradition. It shows the strength and determination of the urban poor, who work hard to overcome many social and economic challenges to support themselves and their families. Street vendors often face tough conditions, dealing with daily uncertainties about their earnings, legal rights, and safety. They also struggle without access to basic needs like clean water, proper sanitation, and healthcare, which makes their lives even harder. However, the number of street vendors keeps growing because of serious social and economic challenges that are increasing rapidly in the country.

Review of literature

According to B. E. George Dimitrov (2022) women street vendors play an important role in the informal economy, helping to strengthen the country's financial system. For millions of marginalized people, street vending is both a profession and a way to earn a living. Women vendors work in cities and towns, selling goods in different public places like streets, sidewalks, railway platforms, markets, and outside malls. There are nearly 10 million street vendors who depend on this work for their daily survival. After the COVID-19 pandemic, many faced serious financial struggles, with some even forced to change jobs. The Indian government has introduced various programs to support them, but many vendors are unaware of these schemes. The pandemic not only affected their income but also led to family problems and emotional stress, making their lives even harder.

Street vending is a common job for middle and lower-middle-class people, both full-time and part-time **Vara Prasad. R & Subhashini. D (2019)** However, there are very few studies on street vendors. This study focuses on the challenges faced by women street vendors in their daily work. In a male-dominated society, women often face harassment and abuse, forcing them to quit their jobs and suffer financial loss. As the living and working conditions for women are getting worse, this study highlights the difficulties they face in their occupation.

Ningombam Chachaoba & Yaiphaba Ningthoujam (2023) highlighted the role of street vending in the informal economy and support needed to improve vendors' lives. It focuses on North East India, a region with many cultures and economic challenges, where street vending helps many people earn a living.

According to Janagam. D (2023) A street vendor is someone who sells goods to the public without a permanent shop. They may set up in fixed locations like sidewalks or marketplaces, or they may move around with carts or by carrying goods. Street vending is an essential source of employment and income, particularly for urban populations. However, it remains largely unorganized and unrecognized in official economic statistics, leading to a lack of accurate data on street vendors. Because of this, limited research has been conducted on their contributions to the economy and the difficulties they face. Women street vendors, in particular, encounter harassment, eviction, bribes, confiscation of goods, and restrictive government policies, making their work more challenging.

The study by **Eko Handoyo & Tutik Wijayanti (2021)** try to explores how education, financial resources, location, and social networks impact the well-being of street vendors. Using mixed-methods approaches that include both numerical data and personal insights, the findings reveal that street vendors face low levels of well-being.

Objective of the Study

- To examine the number of Street vendors in India and
- To assess the various Government programmes for women street vendors in the informal sector in India.

Methodology

This study employs a secondary research methodology, relying on existing literature, reports, and statistical data to analyze the challenges, financial stability, and economic role of women street vendors. Data were compiled from the reports published by Ministry of Housing & Urban Affairs (2023), RBI Report (2024), National Policy on Urban Street Vendors (2023).

Findings of the study

NUMBER OF STREET VENDORS

Table 1 represents the number of street vendors in India

Table-1
Street Vendors in India

Metric	Details
Total Number of Street Vendors	Approximately 49.48 lakh (4.948 million) street vendors have been identified in India as of February 2022.
Registered Street Vendors	Exact numbers vary by state, but efforts are ongoing to register vendors under various government schemes.
Percentage of Urban Population	Street vendors constitute up to 2.5% of a city's population, as per the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.
State with Maximum Vendors	Uttar Pradesh has the highest number of identified street vendors, totalling 8.49 lakh (849,000), accounting for approximately 17.2% of the country's total street vendors.
State with No Identified Vendors	Sikkim has reported no identified street vendors as of the latest data.
Urban Informal Employment Contribution	Street vending accounts for approximately 14% of the total (non-agricultural) urban informal employment in India.

Source: The Tribune (2022), Observer Research Foundation (2022), National Association of Street Vendors of India (NASVI).

Table -1 gives key facts about street vendors in India. As of February 2022, there are about 49.48 lakh (4.948 million) street vendors in the country. Many are getting registered under government schemes, but the process is still ongoing. Street vendors make up 2.5% of a city's population, showing their importance in urban areas. Uttar Pradesh has the most vendors (8.49 lakh or 849,000), while Sikkim has none. Street vending is a big part of urban informal jobs, making up 14% of non-agricultural employment. This shows the need for better policies to support and protect their work.

Table 2 represents the Government Schemes supporting women street vendors

Table 2
Government Schemes Supporting Women Street Vendors

Scheme Name	Key Benefits
PM SVANidhi (Street Vendor Loan Scheme)	Provides micro-loans (up to ₹50,000) for working capital.
DAY-NULM (Deendayal Antyodaya Yojana)	Supports skill training and self-employment for urban poor women.
MUDRA Yojana	Offers loans up to ₹10 lakh to small business owners, including vendors.
Street Vendor Act, 2014	Legal protection against eviction and rights to vending spaces.

Source: Ministry of Housing & Urban Affairs (2023), RBI Report (2024), National Policy on Urban Street Vendors (2023).

Table 1 shows important government schemes that help women street vendors with money, skills, and legal protection. PM SVANidhi gives small loans up to Rs.50, 000 to help vendors run their businesses. DAY-NULM provides skill training and self-employment support for poor urban women to improve their earnings. MUDRA Yojana offers loans up to Rs.10 lakh to small business owners, including street vendors, to help them grow their work. The Street Vendors Act, 2014, protects vendors from illegal eviction and gives them rights to sell in designated areas. These schemes help women street vendors become financially stable and secure their jobs.

Conclusion

Women street vendors play a crucial role in the informal economy, contributing significantly to urban employment and economic sustainability. However, they face persistent challenges such as lack of legal recognition, harassment, financial instability, and poor working conditions. While government initiatives like PM SVANidhi and DAY-NULM aim to provide financial and social security, awareness and accessibility remain key concerns.

Suggestions

- Enhanced Financial Support: Expand microfinance programs with low-interest loans tailored for women street vendors.
- Digital & Financial Literacy: Provide training on digital payments, online marketplaces, and financial management to enhance income stability.
- Awareness of Government Schemes: Increase outreach efforts to improve awareness and accessibility to schemes like PM SVANidhi and MUDRA Yojana.
- Organized Vendor Groups: Encourage self-help groups (SHGs) and vendor cooperatives to enhance bargaining power and collective growth.

Reference

1. Ali, Mohd Akhter, and M. Kamraju. "A study on Problems Faced by the Street Vendors in Hyderabad City Post – Covid-19 – Pandemic. "Advances in Geographical and

- Environmental Sciences, 2023, 147 – 55. http://doi.org/10.1007/978-981-99-1934-5_10.
2. Devi, L. (2018). The Role of Street Vendors in Urban Informal Economy: A Study in Imphal City, Manipur. *Journal of Economic & Social Development*, 14(2), 124-138
 3. Bhowmik, S. K. (2005). Street vendors in Asia: A Review. *Economic and Political Weekly*, 40(22-23), 2256– 2264.
 4. B. E. George Dimitrov 2022), Status of Women Street Vendors in India: Issues and Challenges, *International Journal of Science and Research (IJSR)* ISSN: 2319-7064.)
 5. Vara Prasad. R Subhashini. D 2019) “Women Street Vendors, Challenges and Opportunities: An Superlative Analysis with Special Reference to Chittoor District of Andhra Pradesh India” *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* Volume-8 Issue-9S3 July 2019. ISSN: 2278-3075.
 6. Ningombam Chachaoba & Yaiphaba Ningthoujam 2023), Socio-Economic Analysis of Street Vendors in North East India: A Comprehensive Review, *Journal for Re Attach Therapy and Development Diversities*” November 2023 Volume-06 Issue-10s eISSN: 2589-7799.
 7. DR. D. JANAGAM 2023, Issues and Challenges faced by Women Street Vendors –A Case study of Salem District of Tamil Nadu, *International Journal of Novel Research and Development (IJNRD)*, Volume 8 Issue 1 January 2023 ISSN: 2456-4184).
 8. Eko Handoyo&TutikWijayanti (2021), “The Factors Affecting the Welfare of Street Vendors in Indonesia”, *Journal of the Malaysian Institute of Planners*, Volume 19, Issue-04.

FUNCTIONAL FOOD INNOVATIONS IN THE HEALTH SECTOR FOR WOMEN: UNLOCKING THE POWER OF BIOACTIVE COMPOUNDS AGAINST BREAST CANCER

*** P. Krishna Prasanna, ** S. Thilagamani**

*Research Scholar, **Assistant Professor (SG), Department of Food Service Management and Dietetics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu - 43.

Abstract

Approximately 12% of newly diagnosed cancer cases globally are breast cancer, making it one of the most prevalent and fatal conditions affecting women. The need for alternative approaches that emphasize preventive and supplementary therapy is increasing despite improvements in traditional treatments. Functional foods, which offer health advantages beyond basic nourishment, have become intriguing instruments for managing and preventing cancer. This study investigates how bioactive ingredients in functional meals can lower the risk and development of breast cancer.

Bioactive compounds such as flavonoids, carotenoids, polyphenols, and phytosterols possess potent antioxidant, anti-inflammatory, and epigenetic properties that modulate key cellular pathways involved in carcinogenesis. With meta-analyses indicating a risk reduction of up to 10% among high users, epidemiological studies indicate that a high dietary intake of flavonoids is related to a considerable decrease in the occurrence of breast cancer.

Carotenoids, including β -carotene, lycopene, and lutein, are pigments found in brightly coloured fruits and vegetables and have demonstrated protective effects against breast cancer. These compounds neutralize free radicals, reducing oxidative damage to DNA and cellular structures. According to clinical research, women who have greater plasma carotenoid levels are 20% less likely to progress than those who have lower levels. Lycopene, which is mostly found in tomatoes, has been shown to suppress insulin-like growth factor (IGF), which plays an important aspect in the development of cancer.

Polyphenols, widely present in green tea, grapes, and berries, contribute to breast cancer prevention through multiple mechanisms, including epigenetic regulation. These compounds can modulate DNA methylation and histone modifications, thereby suppressing oncogene expression and activating tumor suppressor genes. Green tea catechins, particularly epigallocatechin gallate (EGCG), have been extensively studied for their role in breast cancer prevention. According to clinical studies, drinking green tea every day for a year lowers mammographic density, which is a known risk factor for breast cancer.

Additionally, dietary patterns that emphasize functional foods rich in bioactive compounds, such as the Mediterranean diet, have been linked to a lower occurrence of this condition. Six to fourteen percent decrease in the incidence of breast cancer has been associated with this diet. Despite encouraging data, more investigation is required to determine the ideal consumption levels, bioavailability, and long-term impacts of these bioactive substances. Large-scale randomized controlled trials are essential to validate their

efficacy and translate these findings into dietary recommendations for breast cancer prevention and management. In conclusion, functional food innovations offer a powerful, non-invasive strategy for reducing breast cancer risk through the integration of bioactive compounds with proven anticancer properties. Encouraging dietary interventions that emphasize these functional foods may serve as a practical and sustainable approach to improving women's health outcomes.

Key words: Bioactive compounds, breast cancer, dietary interventions, estrogen modulation, functional foods.

Introduction

Breast cancer is the most prevalent cancer spotted in women, accounting for about 11.7% of all newly reported cancer cases globally. It continues to be a major contributor to cancer-related death, having a substantial effect on global healthcare and public health systems. Genetic, hormonal, environmental, and lifestyle variables all contribute to the rising prevalence of breast cancer, making a multimodal approach for prevention and treatment necessary. Although survival rates have increased with the use of traditional therapies including radiation, chemotherapy, surgery, and targeted hormone treatments, there is increasing interest in alternative approaches that emphasize dietary changes and lifestyle adjustments.

The potential of functional foods to lower the incidence and spread of breast cancer is one exciting field of study. Foods that offer more health advantages than just their basic nutritional content are known as functional foods. Flavonoids, carotenoids, polyphenols, phytosterols, and omega-3 fatty acids are among the many bioactive substances found in these foods that have been demonstrated to have anti-cancer properties. The ability of these bioactive substances to modulate important biological processes involved in carcinogenesis, including oxidative stress, inflammation, cell proliferation, apoptosis, and epigenetic alterations, has been demonstrated by several epidemiological studies and clinical trials.

One of the most important factors influencing cancer risk is diet. Research has shown that dietary patterns that emphasize functional foods, such as the Mediterranean diet and plant-based diets, are connected with a diminished the risk. The immunomodulatory, anti-inflammatory, and antioxidant qualities of fruits, vegetables, whole grains, nuts, seeds, and healthy fats found in these diets can prevent cancer. For instance, it has been shown that polyphenols, which are present in berries, grapes, and green tea, inhibit the formation of tumors by focusing on several pathways linked to cancer. Likewise, carotenoids, which are present in leafy greens, tomatoes, and carrots, function as scavengers of free radicals, lowering oxidative DNA damage and preventing the growth of cancer cells.

The methods via which bioactive chemicals achieve their anticancer effects have been better clarified by recent scientific developments. Studies indicate that flavonoids, commonly found in citrus fruits, soy, and onions, can modulate estrogen metabolism, thereby reducing the risk of hormone-related breast cancers. It has been demonstrated that omega-3 fatty acids, which are found in flaxseeds and fatty fish, reduce chronic inflammation, a major factor in the development of cancer.

Furthermore, emerging research in nutrigenomics suggests that functional foods may influence gene expression, offering a personalized dietary approach to cancer prevention.

Presenting a comprehensive analysis of recent studies on the role of bioactive components in functional foods and their impact on breast cancer is the aim of this review. By exploring the latest epidemiological data, statistical analyses, and mechanistic insights, this paper highlights the potential of functional foods as a cost-effective, non-invasive strategy for reducing breast cancer risk. Given the increasing global burden of breast cancer, integrating functional foods into daily dietary patterns could serve as a sustainable approach to improving women's health outcomes.

Earlier Studies

A total of 85 peer-reviewed papers, including cohort studies, case-control studies, randomized controlled trials (RCTs), and meta-analyses, were examined in the systematic review. The studies were published between 2020 and 2025. These studies investigated the effects of bioactive compounds present in functional foods on breast cancer incidence, progression, survival rates, and underlying molecular mechanisms. The results strongly indicate that dietary interventions rich in bioactive compounds contribute to a significant decrease and enhance patient outcomes.

Several studies demonstrated a 30–50% reduction in breast cancer incidence among individuals with high consumption of flavonoid- and polyphenol-rich foods, compared to those with low intake. Women who ate a Mediterranean diet high had a 40% decreased risk of breast cancer, according to a meta-analysis of 15 clinical trials (HR: 0.60; 95% CI: 0.52–0.69, $p < 0.001$). Moreover, dietary patterns incorporating cruciferous vegetables, citrus fruits, and green tea were found to be associated with lower tumor recurrence rates and improved survival rates in breast cancer patients.

Methodology

To ensure a comprehensive and evidence-based investigation, the study used reputable scientific files, including PubMed, Scopus, and Web of Science. These databases were chosen because of their vast collection of clinical trials, meta-analyses, peer-reviewed articles, and systematic reviews in the domains of functional food research, nutrition, and oncology. The literature search was limited to studies published between 2020 and 2025 to guarantee that the most recent advancements and emerging trends involving bioactive compounds in functional foods for the deterrence and cure of disease were covered.

In order to maximize the retrieval of pertinent research, a structured search technique was used, combining free-text keywords with controlled vocabulary (Medical Subject Headings [MeSH] terms). The most common searches included "Functional foods," "Bioactive compounds," "Breast cancer," "Flavonoids," "Carotenoids," "Polyphenols," "Phytochemicals," "Nutrigenomics and breast cancer," for "Dietary intervention and cancer prevention." The search results were filtered using the Boolean operators AND, OR, and NOT. For instance, a query such as ("functional foods" AND "breast cancer") OR ("bioactive compounds" AND "cancer prevention") ensured that both broad and specific aspects of the topic were covered. To find other pertinent studies, additional manual examinations of the

reference lists of important papers were examined. Studies were chosen according to inclusion and exclusion criteria in order to preserve methodological integrity. To guarantee that the most recent scientific evidence was included, the inclusion criteria were that research had to be peer-reviewed, published in indexed journals, and carried out between 2020 and 2025. Only studies that directly investigated the relationship between bioactive compounds in functional foods and breast cancer outcomes such as incidence, tumor progression, and survival rates were considered. Eligible studies included human clinical trials, epidemiological studies, and meta-analyses that examined dietary interventions and provided statistical analyses, such as risk reduction percentages, hazard ratios, and confidence intervals.

Conversely, studies were excluded if they were published before 2020, unless they were landmark studies providing essential foundational knowledge. Additional exclusion criteria encompassed articles with insufficient data or lack of statistical significance, animal or in vitro studies without human clinical relevance, non-English publications (unless high-quality translations were available), and non-peer-reviewed sources, including opinion pieces, editorials, and conference abstracts.

Data extraction and analysis were done after the selection process. Based on their methods, findings, and statistical significance, studies that satisfied the inclusion requirements were vetted, grouped, and assessed. The type and dosage of bioactive compounds studied, their mechanisms of action (e.g., antioxidant activity, estrogen modulation, apoptosis induction), sample size and demographics (age, ethnicity, lifestyle factors), and study design were among the key data extracted from each study. In order to evaluate the strength of the evidence, statistical results were also documented, such as relative risk (RR), odds ratios (OR), hazard ratios (HR), and confidence intervals (CI). For ease of comprehension and trend detection, the retrieved data were then combined into graphical representations and comparative tables. To have a thorough knowledge based on numerous investigations, systematic reviews and meta-analyses were also given priority.

To confirm the validity and reliability of the results, a quality evaluation was conducted using established assessment tools. The Cochrane Risk of Bias Tool, which comprised components such as blinding procedures, randomization strategies, and outcome reporting, was used to assess randomized controlled trials. The Newcastle-Ottawa Scale (NOS) was used to evaluate selection bias, study group comparability, and outcome measure reliability in observational studies. The GRADE framework, which takes into account variables like research design, bias risk, consistency of results, and directness of evidence, was also utilized to evaluate the overall strength of the evidence. These methodological approaches ensured that only high-quality, robust evidence was incorporated into the review, if a solid foundation for conclusions and recommendations in the study.

Finding of the Study

ROLE OF BIOACTIVE COMPOUNDS IN BREAST CANCER PREVENTION AND TREATMENT

➤ Flavonoids and Polyphenols

Quercetin, catechins, and anthocyanins are examples of flavonoids whose anti-inflammatory and anti-cancer effects have been extensively researched. High dietary flavonoid consumption (≥ 500 mg/day) was linked to a 35% inferior danger of breast cancer,

according to studies (CI: 0.55–0.78, $p=0.002$). By inducing apoptosis and cell cycle arrest, flavonoids mechanistically suppress tumor growth, lower chronic inflammation, and demonstrate antioxidant action.

A randomized trial involving 500 breast cancer patients found that supplementation with green tea catechins (800 mg/day) resulted in a 20% reduction in tumor size and improved chemotherapy response compared to controls ($p<0.05$). Similarly, resveratrol, a polyphenol found in grapes and berries, was shown to modulate estrogen receptor activity, reducing the growth of hormone-positive breast tumors.

➤ **Carotenoids and Phytochemicals**

Carotenoids that have been shown to have preventive benefits against estrogen receptor-positive (ER+) breast cancer include lutein, lycopene, and β -carotene. Women with greater levels of plasma β -carotene had a 25% reduced threat (RR: 0.75; 95% CI: 0.64–0.88), according to studies. Lycopene has been associated with decreased oxidative stress and prevention of tumor angiogenesis. It is primarily present in tomatoes and melons.

Additionally, isothiocyanates and sulforaphane, derived from cruciferous vegetables like broccoli, Brussels sprouts, and kale, have shown promise in targeting cancer stem cells. A clinical trial on 150 breast cancer patients reported that a daily intake of 50 mg sulforaphane resulted in significant downregulation of inflammatory cytokines and tumor growth markers ($p<0.01$).

NUTRIGENOMIC INSIGHTS: FUNCTIONAL FOODS AND GENE EXPRESSION

Nutrigenomics, the study of how dietary substances affect gene expression in cancer pathways, is becoming more and more important. Functional foods contain bioactive compounds that can change epigenetic processes such as DNA methylation, histone modification, and non-coding RNA regulation that are critical to the development of breast cancer.

Green tea's epigallocatechin gallate (EGCG), for example, has been shown to downregulate oncogenic pathways (PI3K/Akt/mTOR signaling) and upregulate tumor-suppressor genes (p53, BRCA1). Curcumin, a compound found in turmeric, has demonstrated to reduce DNA methylation of tumor-suppressor genes in patients with triple-negative breast cancer (TNBC), which encourages apoptosis and suppresses growth.

FUNCTIONAL FOODS AND BREAST CANCER SUBTYPES

The disease known as breast cancer is diverse and can be divided into subtypes according to the hormone receptor status. Different subtypes of bioactive chemicals have varying degrees of effectiveness:

➤ **Estrogen Receptor-Positive (ER+) Breast Cancer:**

Soy isoflavones (phytoestrogens) mimic estrogen activity and provide protective effects against ER+ tumors. Women who consumed a lot of soy (≥ 30 mg/day) had a 26% decreased chance of developing ER+ breast cancer, according to a meta-analysis of 18 studies.

➤ **Triple-Negative Breast Cancer (TNBC):**

Because this aggressive subtype does not have hormone receptors, it is not amenable to standard hormone treatments. Omega-3 fatty acids, curcumin, and sulforaphane have all shown anti-inflammatory and anti-proliferative effects in TNBC models.

➤ **HER2-Positive Breast Cancer:**

Studies indicate that quercetin, luteolin, and apigenin can inhibit HER2 signaling, suppressing tumor growth. A clinical study with 200 HER2+ patients found that a flavonoid-rich diet reduced tumor progression by 18% compared to a standard diet ($p=0.04$).

IMPACT OF FUNCTIONAL FOODS ON BREAST CANCER SURVIVORSHIP

For breast cancer survivors, post-diagnosis diet is essential for enhancing quality of life and lowering the chance of recurrence. Following a plant-based diet high in functional foods was linked to a 22% increase in overall survival and a 32% decrease in the chance of cancer recurrence, according to a longitudinal cohort analysis of 3,500 breast cancer survivors ($p<0.001$).

Conclusion

Dietary interventions high in flavonoids, carotenoids, polyphenols, and other bioactive phytochemicals can dramatically reduce the risk, decrease the growth of tumors, and enhance the prognosis of survivors.

Regular consumption of functional foods, including cruciferous vegetables, berries, turmeric, green tea, soy products, and foods high in omega-3 fatty acids, has preventive effects against breast cancer through a variety of pathways. These include antioxidant activity, anti-inflammatory effects, estrogen modulation, inhibition of tumor proliferation, apoptosis induction, and epigenetic regulation of cancer-related genes.

Furthermore, as post-diagnosis nutrition has a substantial impact on tumor recurrence rates, inflammation levels, immunological function, and overall survival outcomes,

Recommendations

Despite the promising potential of functional foods, several challenges and gaps in research need to be addressed.

- Individual variability in dietary responses due to genetic and metabolic differences necessitates further exploration of precision nutrition and personalized dietary recommendations for breast cancer patients.
- Standardization of bioactive compound dosages is crucial to establish evidence-based dietary guidelines.
- While functional foods exhibit strong complementary benefits, their integration with conventional cancer treatments requires more clinical trials to assess potential synergistic or antagonistic interactions with chemotherapy, immunotherapy, and hormonal therapies.
- Future research should focus on large-scale clinical trials, advanced nutrigenomic studies, and long-term dietary interventions to validate the protective and therapeutic effects of functional foods in breast cancer management.
- Additionally, public health policies should emphasize nutritional education and awareness programs, promoting functional food consumption as part of a holistic cancer prevention strategy.
- Collaboration between oncologists, nutritionists, and molecular biologists is essential to translate these findings into clinically applicable dietary recommendations that can benefit high-risk populations, active patients, and breast cancer survivors.

References

1. Domínguez-López, I., Yago-Aragón, M., Salas-Huetos, A., Tresserra-Rimbau, A., & Hurtado-Barroso, S. (2020). Effects of dietary phytoestrogens on hormones throughout a human lifespan: A review. *Nutrients*, 12(8), 2456. <https://doi.org/10.3390/nu12082456>
2. Domínguez-López, I., Yago-Aragón, M., Salas-Huetos, A., Tresserra-Rimbau, A., & Hurtado-Barroso, S. (2020). Effects of dietary phytoestrogens on hormones throughout a human lifespan: A review. *Nutrients*, 12(8), 2456. <https://doi.org/10.3390/nu12082456>
3. Han, R. M., Tian, Y. X., Liu, Y., Chen, C. H., Ai, X. C., Zhang, J. P., & Skibsted, L. H. (2009). Comparison of flavonoids and isoflavonoids as antioxidants. *Journal of Agricultural and Food Chemistry*, 57(9), 3780–3785. <https://doi.org/10.1021/jf803411r>
4. Han, R. M., Tian, Y. X., Liu, Y., Chen, C. H., Ai, X. C., Zhang, J. P., & Skibsted, L. H. (2009). Comparison of flavonoids and isoflavonoids as antioxidants. *Journal of Agricultural and Food Chemistry*, 57(9), 3780–3785. <https://doi.org/10.1021/jf803411r>
5. Lee, S. A., Shu, X. O., Li, H., Yang, G., Cai, H., Wen, W., Ji, B. T., Gao, J., Gao, Y. T., & Zheng, W. (2009). Adolescent and adult soy food intake and breast cancer risk: Results from the Shanghai Women's Health Study. *American Journal of Clinical Nutrition*, 89(6), 1920–1926. <https://doi.org/10.3945/ajcn.2008.27361>
6. Li, M., & Zhang, H. (2021). Synergistic effects of functional foods and chemotherapy in breast cancer management. *Food & Function*, 12(9), 2964–2979. <https://doi.org/10.1039/D1FO01421A>
7. Li, X., Zhang, Z., & Zhang, J. (2020). Antioxidant activities and anticancer properties of bioactive compounds from functional foods. *Nutrition and Cancer*, 72(2), 243–259. <https://doi.org/10.1080/01635581.2020.1733652>
8. López-Lázaro, M., Willmore, E., & Austin, C. A. (2007). Cells lacking DNA topoisomerase II β are resistant to genistein. *Journal of Natural Products*, 70(5), 763–767. <https://doi.org/10.1021/np070032r>
9. López-Lázaro, M., Willmore, E., & Austin, C. A. (2007). Cells lacking DNA topoisomerase II β are resistant to genistein. *Journal of Natural Products*, 70(5), 763–767. <https://doi.org/10.1021/np070032r>
10. Luo, H., Jiang, B. H., King, S. M., & Chen, Y. C. (2008). Inhibition of cell growth and VEGF expression in ovarian cancer cells by flavonoids. *Nutrition and Cancer*, 60(6), 800–809. <https://doi.org/10.1080/01635580802395795>
11. Mehta, S., & Vohra, B. (2021). Potential health benefits of functional foods in the management of breast cancer: A review. *Journal of Functional Foods*, 77, 104360. <https://doi.org/10.1016/j.jff.2020.104360>
12. Riaz, M., & Wang, H. (2021). Dietary phytochemicals as potential therapeutic agents in the prevention and treatment of breast cancer. *Anticancer Agents in Medicinal Chemistry*, 21(5), 687–701. <https://doi.org/10.2174/1871520620666210115122306>
13. Sakamoto, T., Horiguchi, H., Oguma, E., & Kayama, F. (2009). Effects of diverse dietary phytoestrogens on cell growth, cell cycle, and apoptosis in estrogen-receptor-positive breast cancer cells. *Journal of Nutritional Biochemistry*, 20(10), 798–806. <https://doi.org/10.1016/j.jnutbio.2008.07.008>

14. Seeram, N. P., & Manna, S. K. (2021). Phytochemicals in breast cancer prevention and therapy: Mechanistic pathways and health benefits. *Breast Cancer Research and Treatment*, 189(1), 13-27. <https://doi.org/10.1007/s10549-021-06058-y>
15. Shin, S., Fu, J., Shin, W. K., Huang, D., Min, S., & Kang, D. (2023). Association of food groups and dietary pattern with breast cancer risk: A systematic review and meta-analysis. *Clinical Nutrition*, 42(1), 1–14. <https://doi.org/10.1016/j.clnu.2022.11.010>
16. Si, H., & Liu, D. (2007). Phytochemical genistein in the regulation of vascular function: New insights. *Current Medicinal Chemistry*, 14(24), 2581–2589. <https://doi.org/10.2174/092986707782360049>
17. Si, H., & Liu, D. (2007). Phytochemical genistein in the regulation of vascular function: New insights. *Current Medicinal Chemistry*, 14(24), 2581–2589. <https://doi.org/10.2174/092986707782360049>
18. Siddiqui, M. A., & Saleem, M. (2020). Anticancer activities of natural bioactive compounds: A review of their mechanisms of action. *Pharmacological Research*, 162, 105341. <https://doi.org/10.1016/j.phrs.2020.105341>
19. Teibo, J. O., Ayinde, K. S., Olaoba, O. T., Adelusi, T. I., Ayandeyi Teibo, T. K., Bamikunle, M. V., Jimoh, Y. A., Alghamdi, S., Abdulaziz, O., & Batiha, G. E. (2021). Functional foods' bioactive components and their chemoprevention mechanism in cervical, breast, and liver cancers: A systematic review. *Functional Foods in Health and Disease*, 11(11), 562–589. <https://doi.org/10.31989/ffhd.v11i11.818>
20. Tiwari, P., Ranjan, P., & Verma, R. (2021). Mechanisms of action of bioactive compounds in the prevention of breast cancer. *Phytochemistry Reviews*, 20(4), 809-833. <https://doi.org/10.1007/s11101-021-09721-w>
21. Wang, P., Long, F., Lin, H., & Wang, T. (2022). Dietary phytochemicals targeting Nrf2 for chemoprevention in breast cancer. *Food & Function*, 13(8), 4273–4285. <https://doi.org/10.1039/D2FO00186A>
22. Wang, S., Yang, T., Qiang, W., Zhao, Z., Shen, A., & Zhang, F. (2022). Benefits of weight loss programs for breast cancer survivors: A systematic review and meta-analysis of randomized controlled trials. *Supportive Care in Cancer*, 30(5), 3745–3760. <https://doi.org/10.1007/s00520-022-06888-0>
23. Yip, C. H., & Lee, M. C. (2020). Functional foods and their role in cancer prevention: The case of breast cancer. *European Journal of Cancer Prevention*, 29(3), 240-251. <https://doi.org/10.1097/CEJ.0000000000000561>
24. Zuniga, K. E., Parma, D. L., Muñoz, E., Spaniol, M., Wargovich, M., & Ramirez, A. G. (2019). Dietary intervention among breast cancer survivors increased adherence to a Mediterranean-style, anti-inflammatory dietary pattern: The Rx for Better Breast Health randomized controlled trial. *Breast Cancer Research and Treatment*, 173(1), 145–154. <https://doi.org/10.1007/s10549-018-4981-2>

EMPHASIZING ON THE SOCIAL FACTOR OF ESG FOR GENDER EQUALITY – A CASE STUDY OF TATA STEEL NOAMUNDI IRON ORE MINE

****Shaheera Banu Z, **Dr. V. Vimala***

**Research Scholar, Junior Research Fellow, **Assistant Professor (SG), Department of Commerce, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 43.*

Abstract

The Environmental, Social, and Governance (ESG) framework has become a crucial benchmark for evaluating corporate responsibility, influencing how businesses integrate sustainability and ethical practices into their operations. While environmental and governance factors often receive significant attention due to their measurable impact on corporate performance and compliance, the social factor, particularly gender equality, remains relatively underexplored. Addressing gender equality within the ESG framework is crucial for fostering a more inclusive and equitable workplace, particularly in traditionally male-dominated industries such as mining. This case-study examines the gender-inclusive initiatives undertaken by Tata Steel at its Noamundi iron ore mine in India, highlighting how the company has integrated gender diversity into its corporate sustainability strategy. By analyzing company policies, workplace culture, and the impact of corporate social responsibility (CSR) programs, this research underscores the role of proactive gender inclusion measures in enhancing workforce diversity. Furthermore, the study identifies key challenges and opportunities associated with gender equality in the mining sector, providing insights into best practices that can be replicated in similar industries. The findings contribute to the broader discourse on corporate sustainability, demonstrating that gender diversity is not just a social responsibility but also a strategic advantage. By fostering an inclusive workforce, companies can drive innovation, improve employee engagement, and enhance their ESG performance. The study emphasizes the need for continued efforts in breaking gender barriers and shaping policies that create sustainable and diverse workplaces.

Keywords: ESG, Corporate Sustainability, Gender diversity, Gender equality, Mining industries.

Introduction

In the contemporary business landscape, the integration of sustainable business practices is paramount. Since the global economy has experienced significant changes over the past few years, so too have the methods in which businesses operate (Moore & Manring, 2009). A company that considers sustainability practices and Environmental, Social and Governance (ESG) factors while making business decisions and assess the related risks, typically outperforms its competitors (Yu et al., 2024). The companies should adopt and implement sustainable business strategies to project a positive image of itself as an ESG-responsible enterprise (Sujanska & Nadanyiova, 2023). Businesses implementing ESG strategies can boost financial performance and investor loyalty (Singh et al., 2024). In

addition, prospective investors can use this information to assess business and develop investment strategies that take non-financial aspects into account when making investment decisions (Naveed et al., 2020).

Institutional investors and asset managers are increasingly considering ESG factors in their investment decisions (Eccles et al., 2017; McCahery et al., 2022). As more investors prioritize sustainability, companies need experts who can help them align their practices with ESG criteria to attract investment and enhance their market reputation. ESG considerations are becoming integral to risk management strategies (Kotsantonis et al., 2016). Companies are recognizing that poor ESG performance can lead to reputational damage, legal issues, and financial losses (Murè et al., 2021). ESG factors are vital for maintaining positive relationships with various stakeholders, including customers, employees, communities, and regulators. Companies are increasingly realizing that sustainable practices and innovation go hand in hand. Access to capital is increasingly linked to ESG performance (Campanella et al., 2025). Many financial institutions are integrating ESG criteria into their lending and investment decisions. Companies with strong ESG profiles are better positioned to secure financing and investments (Kotsantonis et al., 2016). Companies are now more accountable for their impact on the environment and society, leading to a need for experts who can navigate and implement compliance measures. This research delves into the critical role women play in advancing ESG initiatives, highlighting the growing recognition of gender equality as an essential component of sustainable business practices.

Mining has traditionally been a male-dominated sector due to physical labor requirements, safety concerns and socio-cultural perceptions (Kansake et al., 2021). The demanding nature of mining operations, coupled with societal norms, has historically restricted women's participation in the industry. However, the increasing emphasis on ESG principles has driven companies to adopt more innovative and inclusive strategies that actively challenge these gender barriers (Lange & Banadaki, 2024). Companies are now recognizing the benefits of a diverse workforce, including improved decision-making, innovation, and enhanced corporate reputation (Robinson, 2004). The growing awareness around gender equality has led to the implementation of policies focused on creating more inclusive work environments (Fernández et al., 2021). Governments and industry leaders have introduced regulatory changes, such as allowing women to work in underground mines and providing gender-sensitive workplace facilities. Organizations are also investing in up-skilling programs, leadership initiatives, and technological advancements that reduce the physical strain of mining tasks, thereby making the industry more accessible to women (Weldegiorgis, 2022).

Furthermore, corporate social responsibility (CSR) initiatives are playing a pivotal role in empowering women in mining communities by offering education, vocational training, and entrepreneurial support (Pimpa, 2019, 2020). These efforts not only contribute to gender equality but also drive socio-economic development. By integrating gender-inclusive strategies, mining companies can ensure long-term sustainability and set a precedent for other industries to follow (Kincaid, 2021). Despite these progressive measures, challenges remain, including cultural biases, safety concerns, and retention issues for female employees. Addressing these obstacles requires a multi-faceted approach

that includes stronger policy frameworks, mentorship programs, and industry-wide collaboration. As the sector continues to evolve, mining companies that proactively embrace gender diversity will be better positioned to thrive in a competitive and socially responsible business landscape (Eftimi et al., 2009). This paper explores the role of gender equality as a core component of the social factor in ESG, with a focus on Tata Steel's Noamundi iron ore mine.

ESG and Gender Equality

The integration of ESG principles in corporate decision-making has gained momentum in recent years. While environmental concerns like carbon emissions and governance issues such as ethical leadership are widely discussed, social factors, including diversity, inclusion and human rights, are equally critical (von Rosing et al., 2025). Gender equality, as part of the "S" factor, enhances workplace equity, improves employee satisfaction, and contributes to sustainable development (Hossain et al., 2024). Companies that actively promote gender diversity experience numerous advantages, including higher employee engagement, increased productivity, and improved corporate reputation (Adam & Alfawaz, 2025). Gender-inclusive workplaces also benefit from diverse perspectives that foster innovation and better decision-making. Research has shown that organizations with a balanced gender representation in leadership roles tend to perform better financially and have a stronger commitment to ethical business practices (Galbreath, 2011).

Many companies are now recognizing the need to address the gender disparities (Williams et al., 2014) by implementing policies that promote women's empowerment, such as targeted hiring initiatives, leadership training, and inclusive workplace infrastructure. In addition, governments and regulatory bodies are playing a crucial role in advancing gender equality through legal mandates, incentives for diversity, and support programs for female employees. For example, international frameworks such as the United Nations' Sustainable Development Goals (SDGs) emphasize gender equality as a fundamental aspect of economic and social progress (UN Women, 2018).

Women in the Mining Sector

Globally, women make up a small fraction of the mining workforce, with their participation often hindered by systemic and structural challenges (Hinton et al., 2003). Women are often overlooked for technical and leadership roles due to entrenched perceptions about their capabilities in physically demanding environments (Lyness & Grotto, 2018). Many mining sites are designed with male workers in mind, lacking adequate facilities to support female employees. Concerns over physical security, inadequate protective equipment tailored for women, and harsh working conditions deter female participation in certain mining roles (Hentschel et al., 2002).

In India, the Mines Act of 1952 historically restricted women's participation in underground mining, reflecting societal norms that deemed mining unsuitable for women. However, in recent years, policy reforms and industry-led initiatives have aimed to increase female representation (Taffard & Murray, 2022). The government's amendments to mining regulations, allowing women to work in all shifts and in various roles, have opened new avenues for gender inclusion. Companies like Tata Steel have responded by implementing

targeted recruitment strategies, infrastructure improvements, and workplace safety measures to encourage female participation in the sector (Tata Steel, 2024). These shifts signify a broader movement toward gender equality in mining, demonstrating that with the right policies and support systems, women can thrive in traditionally male-dominated industries.

Tata Steel's approach to gender inclusion at ore mine serves as a case study in how mining companies can integrate ESG-driven social strategies. By prioritizing diversity and inclusion, the company is not only setting industry benchmarks but also contributing to broader discussions on gender equity in traditionally male-dominated fields. The impact of these initiatives extends beyond workplace policies, influencing community development and encouraging more women to pursue careers in the mining sector. As gender equality continues to be a focal point within the ESG framework, companies must take proactive steps to address challenges, create supportive work environments, and build a culture of inclusion that ensures long-term sustainability and business success (Khare et al., 2025).

Tata Steel's Gender Equality Initiatives at Noamundi

This study employs a qualitative case study approach, utilizing secondary data from Tata Steel's sustainability reports, policies, press releases and analysis of corporate and government documents on gender inclusion in mining. Tata Steel has actively promoted gender diversity through targeted recruitment. It has introduced policies to increase female participation in technical and managerial roles, provide mentorship programs to support career growth, offer flexible working arrangements to accommodate diverse needs. Recently, Tata Steel has taken a historic step in advancing gender inclusivity through its flagship initiatives, "Women@Mines" and "Tejaswini." These programs focus on training and empowering women to take on diverse roles within the mining ecosystem, ensuring their participation in technical, operational, and leadership positions. The "Tejaswini" initiative specifically aims at recruiting and training women from local communities to operate Heavy Earth Moving Machinery (HEMM), providing them with extensive technical and safety training. Under "Tejaswini 2.0," launched in 2021, women from surrounding communities were inducted as HEMM operators, with rigorous training in operational skills, simulator sessions, and safety protocols before officially joining the workforce in April 2022. The success of this initiative led to "Tejaswini 2.1," which received over 2,100 applications, resulting in the selection of 24 operators. These programs have contributed significantly to workforce diversity and have created new opportunities for women in the mining sector.

India's First All-Women Shift at Noamundi

Tata Steel set a new benchmark by operationalizing India's first all-women shift at the Noamundi Iron Mine, marking a bold step towards breaking gender barriers in a traditionally male-dominated industry. Officially launched on December 16, 2024, the initiative underscores the company's commitment to fostering an equitable workplace. The shift includes women employees in all mining activities such as HEMM operation, drilling, dozing, shoveling, and shift supervision. The all-women shift was flagged off by Shri Shyam Sundar Prasad, Deputy Director General, Mines Safety, SE Region, Ranchi, who commended Tata Steel for leading the way in gender inclusivity. He also acknowledged the role of the

Directorate General of Mines Safety (DGMS) in permitting women's deployment across all shifts in 2019, which paved the way for such transformative initiatives. D B Sundara Ramam, Vice President, Raw Material, Tata Steel, highlighted that this initiative not only represents a milestone for Tata Steel but also serves as a catalyst for change within the Indian mining industry. He emphasized that diversity and inclusion drive innovation, operational excellence, and long-term sustainability.

Inclusive Workforce and Infrastructure Enhancements

To support its gender diversity initiatives, Tata Steel has implemented infrastructure and policy enhancements at Noamundi, including dedicated facilities for women, such as restrooms, changing areas and secured transportation. Comprehensive training programs are provided focusing on technical expertise, safety awareness, and leadership development. Additionally, in a groundbreaking move, Tata Steel has extended its commitment to inclusivity by inducting transgender HEMM operators at Noamundi, reinforcing its stance on equitable employment opportunities. This groundbreaking move underscores the company's broader strategy of fostering a workplace that embraces diversity beyond gender, reflecting its commitment to equal opportunity employment and social sustainability. The company's gender inclusion efforts at Noamundi not only enhance workforce diversity but also contribute to overall employee morale and productivity. By actively supporting underrepresented groups, Tata Steel sets a progressive benchmark within the mining sector, demonstrating that sustainable business practices and social responsibility can go hand in hand.

Recognition and Industry Impact

Tata Steel's efforts in promoting workplace diversity have garnered national and international recognition. The company received the World Economic Forum's Global Diversity Equity & Inclusion Lighthouse 2023 award and was named a Gold Employer by the India Workplace Equality Index (IWEI) 2024 for the fourth consecutive year. With 20% diversity in its Indian workforce, Tata Steel is setting a strong precedent for other industries to follow. Through its gender-inclusive policies and initiatives, Tata Steel is not only transforming workplace culture in mining but also influencing broader industry standards, proving that gender equality is an essential pillar of corporate sustainability and ESG frameworks.

Workplace Infrastructure and Safety Measures

Tata Steel has placed a strong emphasis on workplace infrastructure and safety measures to ensure an inclusive and secure work environment for women employees at Noamundi. The company has established well-monitored workspaces equipped with safety gear and ergonomic machinery to facilitate seamless operations. Dedicated health and wellness centers provide essential medical support, including regular health check-ups and emergency response systems. Advanced training programs covering occupational safety, hazard identification, and crisis management are conducted to prepare employees for challenging mining conditions. Additionally, security personnel and surveillance systems ensure that female workers can operate without fear of harassment or discrimination. Tata

Steel has also adopted international best practices, such as gender-sensitive work policies, flexible shift arrangements, and grievance redressal mechanisms, reinforcing its commitment to a safe and equitable workplace. These comprehensive measures contribute to a supportive work culture, enabling women to thrive in mining roles and paving the way for a more gender-inclusive industry.

Skill Development and Capacity Building

Tata Steel has prioritized skill development and capacity-building programs to ensure the successful integration of women into mining roles. The "Tejaswini" initiative is a prime example, providing women with extensive technical training to operate Heavy Earth Moving Machinery (HEMM) such as dumpers, shovels, and drills. The program includes rigorous hands-on training, simulator sessions, and theoretical coursework on mining operations, equipment handling, and safety protocols. In addition, soft skills training, leadership development, and mentorship programs are provided to enhance career progression opportunities for women employees. Tata Steel collaborates with technical institutions, industry experts, and government agencies to create a robust training framework, ensuring that women are equipped with the necessary skills to excel in mining careers. The company's commitment to continuous learning and professional growth empowers women to take on leadership roles and contribute meaningfully to the industry. These efforts not only strengthen workforce capabilities but also serve as a model for other organizations seeking to enhance gender diversity in technical fields.

Community Engagement and CSR Initiatives

Tata Steel's commitment to gender inclusion extends beyond workplace policies to impactful community engagement and corporate social responsibility (CSR) initiatives. The company actively engages with local communities to promote education, vocational training, and entrepreneurship among women. Through initiatives such as "Tejaswini," women from surrounding areas are provided with skills that enhance their employability in the mining sector. Additionally, Tata Steel collaborates with NGOs and government agencies to offer scholarships, healthcare support, and self-employment opportunities. These efforts not only improve the socio-economic conditions of the communities but also create a pipeline of skilled women professionals for the industry. By fostering community partnerships and investing in grassroots development, Tata Steel reinforces its role as a responsible corporate leader committed to gender equality and sustainable growth.

Conclusion

The ESG framework serves as a guiding principle for businesses striving for sustainability and ethical responsibility (Kandpal et al., 2024). While environmental and governance factors remain crucial, the social element, particularly gender equality, plays a fundamental role in shaping inclusive workplaces (von Rosing et al., 2025). By addressing gender disparity, companies can foster innovation, improve productivity, and enhance their corporate reputation (Robinson, 2004). The social pillar of ESG emphasizes fair labor practices, human rights, employee welfare, and inclusive growth. This component addresses workplace equality, employee well-being, diversity, and the ethical treatment of

workers across industries (Rombouts & Lafarre, 2020). Businesses that integrate strong social policies foster a more engaged workforce, experience improved productivity, and strengthen their reputation among stakeholders (Adam & Alfawaz, 2025). Gender diversity is a critical part of the social factor, influencing the overall inclusivity and sustainability of an organization. Companies that prioritize diversity initiatives, such as equal pay policies, leadership opportunities for women, and a discrimination-free work environment, tend to perform better and attract long-term investment (Galbreath, 2011).

Gender equality remains a crucial aspect of the social factor in ESG. It refers to providing equal opportunities for men and women in professional spaces, ensuring that no gender-based discrimination exists in hiring, promotion, or pay structures (Torres et al., 2023). Industries such as mining, construction, and manufacturing have traditionally been male-dominated due to societal norms and perceived physical barriers (Kansake et al., 2021). However, progressive companies are challenging these norms by introducing policies that encourage female participation in technical and operational roles (Terjesen et al., 2015). Women's inclusion in industries like mining contributes to economic growth, reduces workforce gender gaps, and enhances innovation. Organizations that prioritize gender equality benefit from improved employee morale, diverse leadership perspectives, and stronger financial performance (Dwyer et al., 2003). To achieve true gender inclusivity, businesses must implement targeted recruitment policies, skills development programs, and workplace safety measures that support female employees in challenging environments (Grosser & Moon, 2005). Tata Steel's pioneering efforts at Noamundi exemplify how companies can integrate gender diversity into their operations. Through its all-women shift, skill development initiatives, and inclusive workplace policies, Tata Steel (2024) has set a benchmark for gender inclusivity in the mining industry. These initiatives highlight the importance of long-term commitment to equity, proving that gender inclusion is not just a moral obligation but a strategic advantage for sustainable business growth.

References

1. Adam, N., & Alfawaz, A. (2025). Enhancing organizational performance: How gender diversity enhances employee engagement and commitment. *Humanities and Social Sciences Communications*, 12(1), 1–11.
2. Campanella, F., Ferri, L., Serino, L., & Zampella, A. (2025). Exploring the link between sustainable performance and credit access: The moderating role of intellectual capital. *Journal of Intellectual Capital*, 26(1), 205–228.
3. Dwyer, S., Richard, O. C., & Chadwick, K. (2003). Gender diversity in management and firm performance: The influence of growth orientation and organizational culture. *Journal of Business Research*, 56(12), 1009–1019.
4. Eccles, R. G., Kastropeli, M. D., & Potter, S. J. (2017). How to Integrate ESG into Investment Decision-Making: Results of a Global Survey of Institutional Investors. *Journal of Applied Corporate Finance*, 29(4), 125–133.
<https://doi.org/10.1111/jacf.12267>
5. Eftimi, A., Heller, K., & Strongman, J. (2009). *Gender dimensions of the extractive industries: Mining for equity*.

<https://openknowledge.worldbank.org/entities/publication/94c98480-fb4d-508c-9253-108be742199c>

6. Fernández, R., Isakova, A., Luna, F., & Rambousek, B. (2021). *Gender equality and inclusive growth*. International Monetary Fund.
https://books.google.com/books?hl=en&lr=&id=JrokEAAAQBAJ&oi=fnd&pg=PA4&dq=+The+growing+awareness+around+gender+equality+has+led+to+the+implementation+of+policies+focused+on+creating+more+inclusive+work+environments&ots=UUrjKyPLbv&sig=txgBekYZYxYhDqOhz_WbHhkX2bc
7. Galbreath, J. (2011). Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management & Organization*, 17(1), 17–38.
8. Grosser, K., & Moon, J. (2005). Gender Mainstreaming and Corporate Social Responsibility: Reporting Workplace Issues. *Journal of Business Ethics*, 62(4), 327–340.
<https://doi.org/10.1007/s10551-005-5334-3>
9. Hentschel, T., Hruschka, F., & Priester, M. (2002). Global report on artisanal and small-scale mining. *Mining, Minerals and Sustainable Development*, 70(1).
https://intranetua.uantof.cl/crea/cguerra/pdf/files/otros/070_globalasm.pdf
10. Hinton, J., Veiga, M. M., & Beinhoff, C. (2003). Women and artisanal mining: Gender roles and the road ahead. *The Socio-Economic Impacts of Artisanal and Small-Scale Mining in Developing Countries*, 2, 161–203.
11. Hossain, M., Tahat, Y. A., & AbuGhazaleh, N. (2024). Unlocking the Sustainable Workplace Equality Policy (SWEP): Evidence from an Emerging Country. *Sustainability*, 16(2), 662.
12. Kandpal, V., Jaswal, A., Santibanez Gonzalez, E. D. R., & Agarwal, N. (2024). Corporate Social Responsibility (C.S.R.) and E.S.G. Reporting: Redefining Business in the Twenty-First Century. In V. Kandpal, A. Jaswal, E. D. R. Santibanez Gonzalez, & N. Agarwal (Eds.), *Sustainable Energy Transition: Circular Economy and Sustainable Financing for Environmental, Social and Governance (ESG) Practices* (pp. 239–272). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-52943-6_8
13. Kansake, B. A., Sakyi-Addo, G. B., & Dumakor-Dupey, N. K. (2021). Creating a gender-inclusive mining industry: Uncovering the challenges of female mining stakeholders. *Resources Policy*, 70, 101962.
14. Khare, R., Singh, N., & Nagpal, M. (2025). Integrating sustainable HRM with SDGs: Capacity building and skill development for ESG implementation. In *Implementing ESG Frameworks Through Capacity Building and Skill Development* (pp. 261–280). IGI Global Scientific Publishing. <https://www.igi-global.com/chapter/integrating-sustainable-hrm-with-sdgs/363528>
15. Kincaid, C. (2021). *Diversity and Inclusion in Mining: An Analysis of Indicators in Sustainability Reporting* [Master's Thesis, Colorado School of Mines].
<https://search.proquest.com/openview/72f15d2684fa9d73b83c9cb2d6bfdad9/1?pq-origsite=gscholar&cbl=18750&diss=y>
16. Kotsantonis, S., Pinney, C., & Serafeim, G. (2016). ESG Integration in Investment Management: Myths and Realities. *Journal of Applied Corporate Finance*, 28(2), 10–16.
<https://doi.org/10.1111/jacf.12169>

17. Lange, E. M., & Banadaki, N. G. (2024). ESG consideration in venture capital: Drivers, strategies and barriers. *Studies in Economics and Finance*, 41(3), 724–739. <https://doi.org/10.1108/SEF-06-2023-0380>
18. Lyness, K. S., & Grotto, A. R. (2018). Women and Leadership in the United States: Are We Closing the Gender Gap? *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 227–265. <https://doi.org/10.1146/annurev-orgpsych-032117-104739>
19. McCahery, J. A., Pudschedl, P. C., & Steindl, M. (2022). Institutional Investors, Alternative Asset Managers, and ESG Preferences. *European Business Organization Law Review*, 23(4), 821–868. <https://doi.org/10.1007/s40804-022-00264-0>
20. Moore, S. B., & Manring, S. L. (2009). Strategy development in small and medium sized enterprises for sustainability and increased value creation. *Journal of Cleaner Production*, 17(2), 276–282. <https://doi.org/10.1016/j.jclepro.2008.06.004>
21. Murè, P., Spallone, M., Mango, F., Marzioni, S., & Bittucci, L. (2021). ESG and reputation: The case of sanctioned Italian banks. *Corporate Social Responsibility and Environmental Management*, 28(1), 265–277. <https://doi.org/10.1002/csr.2047>
22. Naveed, M., Ali, S., Iqbal, K., & Sohail, M. K. (2020). Role of financial and non-financial information in determining individual investor investment decision: A signaling perspective. *South Asian Journal of Business Studies*, 9(2), 261–278. <https://doi.org/10.1108/SAJBS-09-2019-0168>
23. Pimpa, N. (2019). How mining companies promote gender equality through sustainable development? *Cogent Business & Management*, 6(1), 1647590. <https://doi.org/10.1080/23311975.2019.1647590>
24. Pimpa, N. (2020). Sustainable development: Gender equality as corporate social responsibility by mining companies. *International Journal of Business Excellence*, 22(3), 367. <https://doi.org/10.1504/IJBEX.2020.110961>
25. Robinson, J. (2004). Squaring the circle? Some thoughts on the idea of sustainable development. *Ecological Economics*, 48(4), 369–384. <https://doi.org/10.1016/j.ecolecon.2003.10.017>
26. Rombouts, S. J., & Lafarre, A. J. F. (2020). Fundamental Labour Standards and Corporate Sustainability: An Analysis of the Regulatory Framework of Core Workers' Rights and Its Integration in Contemporary International Business Practice. *Intercultural Hum. Rts. L. Rev.*, 15, 1.
27. Singh, S., Verma, R., Fatima, A., & Kumar, M. (2024). Building Brand Reputation and Fostering Customer Loyalty Through ESG Practices: A Strategic Imperative for Competitive Advantage. In *ESG Frameworks for Sustainable Business Practices* (pp. 281–309). IGI Global. <https://www.igi-global.com/chapter/building-brand-reputation-and-fostering-customer-loyalty-through-esg-practices/354175>
28. Sujanska, L., & Nadanyiova, M. (2023). Sustainable Marketing and its Impact on the Image of the Company. *Marketing i Menedžment Inovacij*, 14(2), 51–57.
29. Taffard, K., & Murray, N. (2022). Women in Trades: Industry Training Organisations' (ITOs) Initiatives to Increase Participation. In S. Chan & N. Huntington (Eds.), *Reshaping Vocational Education and Training in Aotearoa New Zealand* (Vol. 34, pp. 131–147). Springer International Publishing. https://doi.org/10.1007/978-3-031-12168-5_8

30. Tata Steel. (2024). *Tata Steel Makes History with India's First-Ever All-Women Shift in an iron ore mine*. <http://www.tatasteel.com/newsroom/press-releases/india/2024/tata-steel-makes-history-with-india-s-first-ever-all-women-shift-in-an-iron-ore-mine/>
31. Terjesen, S., Aguilera, R. V., & Lorenz, R. (2015). Legislating a Woman's Seat on the Board: Institutional Factors Driving Gender Quotas for Boards of Directors. *Journal of Business Ethics*, 128(2), 233–251. <https://doi.org/10.1007/s10551-014-2083-1>
32. Torres, L., Ripa, D., Jain, A., Herrero, J., & Leka, S. (2023). The potential of responsible business to promote sustainable work—An analysis of CSR/ESG instruments. *Safety Science*, 164, 106151.
33. UN Women. (2018). *Women and the Sustainable Development Goals (SDGs)*. UN Women – Headquarters. <https://www.unwomen.org/en/news/in-focus/women-and-the-sdgs>
34. von Rosing, M., Shepperson, L., Foldager, U., Laurier, W., Czichos, H., Arnold, H., Yousaf, ., Fisseau, A., Pinto, J., & Spiegel, H. W. (2025). Environment, social and governance. In *The Sustainability Handbook, Volume 1* (pp. 31–41). Elsevier. <https://www.sciencedirect.com/science/article/pii/B9780323901109000490>
35. Weldegiorgis, F. S. (2022). *Women and the mine of the future: A gendered analysis of employment and skills in the large-scale mining sector of Australia*. <https://www.iisd.org/system/files/2023-04/women-mine-of-the-future-australia.pdf>
36. Williams, C. L., Kilanski, K., & Muller, C. (2014). Corporate Diversity Programs and Gender Inequality in the Oil and Gas Industry. *Work and Occupations*, 41(4), 440–476. <https://doi.org/10.1177/0730888414539172>
37. Yu, K., Wu, Q., Chen, X., Wang, W., & Mardani, A. (2024). An integrated MCDM framework for evaluating the environmental, social, and governance (ESG) sustainable business performance. *Annals of Operations Research*, 342(1), 987–1018. <https://doi.org/10.1007/s10479-023-05616-8>

AN OVERVIEW OF FINANCIAL INCLUSION OF WOMEN IN AFGHANISTAN

****Shujaullah, **Dharanipriya P***

**Research Scholar, School of Management, Cochin University of Science and Technology, Kochi, Kerala.*

***Research Scholar, Department of Economics, Avinashilingam Institute for Home science and Higher Education for Women, Coimbatore-43*

Abstract

Globally, 47 percent of women own or co-own a bank account, compared with 55 percent of men. The gender gap in financial inclusion manifest itself in emerging economies remains an empirical question. Financial inclusion is crucial for the empowerment and economic advancement of Afghan women, providing them with access to essential financial services such as savings accounts, credit, and insurance. Afghan women remain largely excluded from formal financial systems. This exclusion restricts their ability to access essential financial services. There are limited studies that explore the state of financial inclusion of Afghan women. Thus, the present study uniquely explores the current status of financial inclusion of Afghan women and the challenges in accessing financial services and proposes ways to build an inclusive financial system that incorporates women of Afghanistan. For quantitative household survey, a total of 40 respondents were selected from Kabul Capital of Afghanistan in the year 2025. Qualitative findings through focus group discussions and in-depth interviews supplemented the survey findings and helped to identify the financial status and challenges of Afghan women. The study reveals that financial inclusion among Afghan women remains significantly low due to cultural, social, and economic barriers, Traditional gender roles, limited financial literacy, and restricted mobility prevent women from accessing formal financial services.

Key Words: Financial inclusion, Challenges and barriers, Sustainable Solutions, Women empowerment.

Introduction

Financial inclusion means making affordable the banking services to the vast segment of the society whether they are poor or excluded (Kelkar, 2010). It helps to eliminate the problem of leakages from subsidy and welfare distribution, boosts saving, increases credit availability, and breaks the vicious circle of poverty of a nation (Ellis, Lemma, & Rud, 2010).

Financial inclusion entails several benefits for poor households. It provides them with opportunities to build savings, make investments and access to credit (Ellis et all 2010). The financial inclusion helps to ensure monetary stability of an economy by increasing the scope of savings, investment, and consumption decisions among the people. It is a basic understanding that widening financial inclusion reduces the cost of cash management, and shields the strengths of the local currency, while promoting a healthy financial system in the economy (Mbutor & Uba, 2013).

Financial inclusion is crucial for the empowerment and economic advancement of Afghan women, providing them with access to essential financial services such as savings

accounts, credit, and insurance. This access enables women to participate actively in economic activities, make informed financial decisions, and improve their overall quality of life. By facilitating entrepreneurial opportunities through microfinance initiatives, financial inclusion contributes to economic stability and poverty reduction. It also enhances household welfare by enabling women to manage resources more effectively, leading to better health, education, and nutrition outcomes for their families.

Moreover, financial inclusion promotes gender equality and social inclusion by challenging traditional gender roles and increasing women's autonomy and decision-making power. However, Afghan women face significant barriers to financial inclusion, including cultural constraints, limited financial literacy, and restricted mobility. Addressing these challenges is essential to creating an inclusive financial environment that empowers women and contributes to the country's broader economic development. Targeted policies and programs that reduce financial exclusion and expand access points can pave the way for a more inclusive and prosperous Afghan society.

Statement of the Problem

Financial inclusion as a key driver of economic growth and development, Afghan women remain largely excluded from formal financial systems. This exclusion restricts their ability to access essential financial services such as savings accounts, credit, and insurance, all of which are critical for economic empowerment and improved livelihoods. While the global gender gap in financial inclusion remains a significant challenge, the situation in Afghanistan is exacerbated by a combination of cultural, social, and economic barriers. Afghan women face unique challenges such as restricted mobility, limited financial literacy, and deeply rooted gender norms that prevent them from fully participating in the financial system. Financial exclusion not only hampers women's individual economic advancement but also negatively affects household welfare and broader national economic development.

There is a gap in the existing literature regarding the current state of financial inclusion for Afghan women, with most studies focusing on financial inclusion in Afghanistan in general, but without providing specific attention to gender disparities. This lack of understanding hinders the development of targeted policies and initiatives aimed at overcoming these barriers and creating a more inclusive financial system.

Background of the Study

Karini (2018) researched on the challenges of rural economy and women economic empowerment in Afghanistan ; Zahidi and Khan (2021) analysed the financial inclusion and its effect on alleviation of poverty in Afghanistan ; Aziz et al.,(2022) examined the female discouragement in formal financial system in south Asian countries including Afghanistan, Bangladesh, India, Pakistan, Sri Lanka, Maldives, Nepal, Bhutan; Wani et al., (2024) evaluated women empowerment experiences using self-help groups in Afghanistan; Rasuli (2024) reviewed the condition of women entrepreneurs in Afghanistan that discussed the ability to participate in economic activities in Bamyan province; Khawari et al.,(2024) analysed the impact of microfinance on women empowerment; Danishfar et al., (2024) provided an overview into the state of financial inclusion in Afghanistan. The past studies explicitly focused on the financial inclusion in Afghanistan in general. There are limited

studies that explores the state of financial inclusion of Afghan women. Thus, the present study uniquely explores the current status of financial inclusion of Afghan women and the challenges in accessing financial services and proposes ways to build a inclusive financial system that incorporates women of Afghanistan.

Need for the Study

Afghan women are underrepresented in the financial sector, and their exclusion from financial systems prevents them from making informed financial decisions, saving for the future, accessing credit, and investing in entrepreneurial activities. Addressing this exclusion is vital for achieving gender equality, improving household welfare, and promoting economic growth in Afghanistan. By exploring the barriers and challenges faced by Afghan women in accessing financial services, the study will contribute to understanding how financial inclusion can be a key tool for empowering women and reducing gender disparities in Afghanistan.

Addressing the gender gap in financial services is essential for promoting gender equality and advancing the socio-economic position of women in Afghan society. Understanding the specific challenges that Afghan women face will enable the development of targeted interventions that can enhance their access to financial services and foster an inclusive financial system that benefits all segments of the population.

Objectives of the study were

- To understand the current status of financial inclusion among Afghan women.
- To explore the challenges faced by Afghan women in accessing financial services and
- To suggest ways to improve financial status of Afghan women.

Methodology

The study adopted mixed method approach for data collection. For quantitative household survey, a total of 40 respondents were selected from Kabul Capital of Afghanistan in the year 2025. Qualitative findings through focus group discussions and in-depth interviews supplemented the survey findings and helped to identify the financial status and challenges of Afghan women. Kabul has an estimated population of around 4.5 to 5 million people. Women make up approximately 48-49 percent of the total Afghan population, the number of women in Kabul is likely between 2 to 2.5 million (world Bank open data, 2024). Thus the paper explores the primary data from Kabul due to its diverse and significant women population to make the results of the study reliable and viable.

The inclusion and exclusion criteria for data collection was determined and data was collected from literate women citizens only and illiterates were excluded.

Major Findings

In Afghanistan, a significant gender gap exists in financial inclusion, with a low percentage of women having access to formal financial services such as bank accounts, credit, and insurance. This gap is largely due to cultural and social barriers, including traditional gender roles, societal norms, and mobility restrictions that limit women's access to financial institutions. The financial inclusion among the Afghan women also pertained to

many factors related to their economic participation. Since women are excluded from the economic activities the need for them to be financial inclusive also declines at the same time. As women are not included in the financial inclusion process their opportunity to participate in economic activities also pertains to many challenges and barriers. In a way financial exclusion perpetuates a vicious cycle of poverty among Afghan women. Afghanistan financial system is generally exclusive women being excluded from the system exacerbates a system which leads to the feminisation of poverty. It is evident from the economic slowdown that any country that restricts the female labour force participation will suffer economically.

Additionally, limited financial literacy prevents many Afghan women from effectively utilizing financial products and services, further hindering their economic participation. As a result of these barriers, many women rely on informal financial systems, such as borrowing from family members, due to distrust of formal institutions.

Despite these challenges, financial inclusion presents substantial economic empowerment opportunities for Afghan women by enhancing their participation in entrepreneurial activities and improving household welfare. Digital financial services, particularly mobile banking, also show great potential for expanding financial access, especially in rural and remote areas. However, the lack of targeted policies and institutional support continues to impede progress in women's financial inclusion.

To bridge this gap, tailored financial products, such as microloans and savings schemes, are needed to address the unique financial needs of Afghan women. Financial inclusion not only enhances women's economic independence but also promotes gender equality by increasing their decision-making power and social status. Addressing cultural barriers, improving financial literacy, promoting digital financial services, and implementing supportive policies are essential steps toward achieving financial inclusion and fostering a more inclusive Afghan society.

Conclusion

The study reveals that financial inclusion among Afghan women remains significantly low due to cultural, social, and economic barriers. Traditional gender roles, limited financial literacy, and restricted mobility prevent women from accessing formal financial services such as bank accounts, credit, and insurance. Many women rely on informal financial systems due to distrust of formal institutions and a lack of tailored financial products that meet their unique needs. Despite these challenges, financial inclusion holds great potential to economically empower Afghan women, enhance household welfare, and promote gender equality.

To improve the financial status of Afghan women, targeted interventions are necessary. These include increasing financial literacy programs, promoting digital financial services, and designing customized financial products such as microloans and savings schemes. Additionally, supportive policies and community-based awareness campaigns can help address cultural barriers and encourage women's participation in the financial sector. By addressing these challenges, Afghanistan can create a more inclusive financial environment that empowers women and contributes to the country's overall economic development.

Suggestions

- Promote education and financial literacy of Women and girl children.
- Create awareness among Afghan men to Change the Patriarchal mindset.
- Afghan government must respect women choice in the development process of the Nation.
- The social stigma around Afghanistan should be discouraged globally to change the perspective on Afghanistan that encourages the international institutions and Global leaders to help in the process of making Afghanistan financial system inclusive
- Afghanistan government should ensure the reliability of the financial system and Corruption should be discouraged.
- Women should be encouraged to participate and contribute to the Economic progress of Afghanistan.

References

Books

- Elson, D. (1999). *Gender and development: Theory, practice, and policy*. Routledge
- Rao, A., & Kelleher, D. (2003). *Gender and economic development: A critical review of the evidence*. Zed Books

Journals

1. Danishfar, S., Meena, R. P., & Gahlawat, A. An Overview of the Financial Sector and the State of Financial Inclusion in Afghanistan: Issues and Hurdles.
2. Junussova, M., Hashim, N., Iamshchikova, M., Kakar, P., Khan, M. A., Rajabi, S., & Wardak, F. (2019). The Role of Women in the Economic Development of Afghanistan. University of Central Asia–Institute of Public Policy and Administration (IPPA) Working Paper(53).
3. Karimi, A. M. (2018). Challenges of Rural Economy and Women Economic Empowerment in Afghanistan: A Concept Note.
4. Khawari, B., Miskinyar, M. S., & Khawari, M. S. (2024). The Impact of Microfinance on Women Empowerment: A case study of Mazar-i-Sharif, Balkh, Afghanistan. *Journal of Research in Economics*, 8(1), 38-64.
5. Lyby, E. (2006). *Microfinance and gender roles in Afghanistan*. World Bank Washington DC.
6. Rasuli, J. (2024). A Review of Women Entrepreneurs conditions in Bamyan Province, Afghanistan. *Ciência & Trópico*, 48(1).
7. Wani, N. U. H., Majidi, B. S., Sidana, N., & Goel, R. (2024). Self-Help Groups in Afghanistan: A Ploy of Economic and Social Empowerment of Women for Sustainable Development. In *Understanding the Multi-Dimensional Nature of Poverty* (pp. 147-170). Emerald Publishing Limited.
8. Zahidi, S., & Khan, W. (2019). Financial Inclusion and its Effect on Alleviation of Poverty: A Case of Afghanistan. *Kardan Journal of Economics and Management Sciences*, 2(3), 15-26.

9. Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings papers on economic activity*, 2013(1), 279-340.
10. Demirgüç-Kunt, A., & Singer, D. (2017). Financial inclusion and inclusive growth: A review of recent empirical evidence. *World bank policy research working paper*, (8040).
11. Leyshon, A., & Thrift, N. (1995). Geographies of financial exclusion: financial abandonment in Britain and the United States. *Transactions of the Institute of British Geographers*, 312-341.
12. Mohammed, J. I., Mensah, L., & Gyeke-Dako, A. (2017). Financial inclusion and poverty reduction in Sub-Saharan Africa. *African Finance Journal*, 19(1), 1-22.
13. Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of economic structures*, 9(1), 37.
14. Ofori-Abebrese, G., Baidoo, S. T., & Essiam, E. (2020). Estimating the effects of financial inclusion on welfare in sub-Saharan Africa. *Cogent Business & Management*, 7(1), 1839164.
15. Peter, J., Morgan. (2022). 1. Central banks and financial inclusion. *Asia-Pacific sustainable development journal*.
16. Suprapti, I. A. P., Harsono, I., Sutanto, H., Chaidir, T., & Arini, G. A. (2024). Financial Inclusion Strategies (Exploring The Landscape Through Systematic Literatur Review). *Accounting Studies and Tax Journal (COUNT)*, 1(1), 101-110.
17. Minz, N. K., Bhardwaj, P., & Chaudhary, D. (2024). Financial Inclusion: Unlocking Economic Growth and Social Equity. In *Emerging Perspectives on Financial Well-Being* (pp. 175-191). IGI Global.
18. Azimi, M. N. (2020). Hypothesizing resurgence of financial inclusion to reduce poverty in Afghanistan. *Journal of Business and Management Revolution*, 1(1), 10-13.

Reports

1. Global gender development unit report 2013
2. World Bank report on women financial inclusion and law 2018
3. Asian Development Bank report 2018
4. International Monetary fund report 2019
5. USAID report 2020
6. World Bank open data report 2024.

ADDRESSING WASH AND MENSTRUAL HYGIENE MANAGEMENT: AN OVERVIEW

Dharanipriya P

Research Scholar, Department of Economics, Avinashilingam Institute for Home science and Higher Education for Women, Coimbatore-43

Abstract

Around 500 million women and girls worldwide lack access to adequate menstrual hygiene facilities, leading to negative health outcomes and social stigma. Only 58 percent of rural women in India uses sanitary pads, compared to 80 percent in urban areas. The objective of the study was to find out the status of WASH and Menstrual hygiene Management in India and highlights the research gap. By reviewing over 40 studies primarily sourced from online databases like PubMed, Google Scholar, Scopus, Science Direct and JSTOR the study noted that while significant progress has been made in improving sanitation infrastructure and menstrual hygiene practices, rural areas still face critical challenges such as inadequate facilities, cultural taboos, and limited access to sanitary products.

Key Words: WASH, Menstrual Hygiene, Women Health and Sustainable Solutions

Introduction

Menstrual Hygiene Management (MHM) is an essential aspect of health of Women Around 500 million women and girls Worldwide lack access to adequate menstrual hygiene facilities, leading to negative health outcomes and social stigma (UNICEF, 2020). The World Bank (2018) estimates that one in five girls in low-income countries misses school due to lack of menstrual hygiene products and inadequate sanitation facilities. Cultural taboos, lack of awareness, and financial constraints continue to hinder menstrual health worldwide. Due to combination of biological and cultural factors, women and girls are disproportionately affected by a lack of access to safe water and adequate sanitation and hygiene.

India has made substantial progress in WASH services, largely driven by Government initiatives such as the Swachh Bharat Mission (SBM) and the Jal Jeevan Mission (JJM). According to the National Family Health Survey (NFHS-5, 2021), 96 percent of Indian households now have access to an improved drinking water source, and 70 percent of households have access to sanitation facilities - a significant improvement from previous decades. India is one of the most water-stressed countries globally, ranking 13th in the world for baseline water stress (World Resources Institute, 2019). Over 21 major cities, including Delhi, Chennai, and Bengaluru, are projected to run out of groundwater by 2030 (NITI Aayog, 2018).

Statement of the Problem

Menstruation is a physiological process for women of reproductive age. Lack of knowledge, poor practices, Socio-cultural barriers, Poor access to products and their

improper disposal have significant consequences on health, dignity and well-being of women and adolescent girls. Poor menstrual hygiene practices not only increase the risk of reproductive tract infections but also lead to various negative health outcomes, including discomfort and potential complications.

Good menstrual hygiene management (MHM) is defined as women and adolescent girls using clean MHM to absorb or collect blood as frequently as necessary in privacy for the duration of the menstruation period, with effective cleansing and with access to disposal facilities for used materials. However, globally, at least 500 million young girls lack access to proper menstrual hygiene facilities.

Background of the Study

Menstrual hygiene is a critical yet neglected aspect of sanitation. According to NFHS-5 (2021), only 58 percent of rural women in India use sanitary pads, compared to 80 percent in urban areas. Many women in low-income settings rely on cloth, ash, or other unhygienic materials, leading to infections and reproductive health issues (Kumari et al., 2020). Government initiatives like the Menstrual Hygiene Scheme (MHS) and NGO-led programs have improved awareness, but affordability and accessibility of sanitary products remain significant challenges. The National Health Mission (2020) reports that 70 percent of girls in rural India lack knowledge about menstruation before their first period, leading to misconceptions and stigma.

Tamil Nadu has higher MHM awareness compared to national averages, yet gaps remain. The National Family Health Survey (NFHS-5, 2021) states that 72 percent of rural women in Tamil Nadu use sanitary napkins, but affordability issues persist. The Sujala Scheme and NGO interventions have increased access, yet proper disposal of sanitary waste remains a major environmental issue, with 1.2 billion pads disposed of annually in Tamil Nadu (Tamil Nadu Pollution Control Board, 2020).

Need for the Study

The need for this study arises from the persistent challenges in ensuring universal access to safe water, sanitation, hygiene (WASH), and effective menstrual hygiene management (MHM), particularly in developing countries like India. Despite significant policy interventions such as the Swachh Bharat Mission (SBM) and Jal Jeevan Mission (JJM), disparities in WASH infrastructure and behavioural adoption continue to affect public health outcomes.

Menstrual hygiene remains a neglected issue, with only 58 percent of rural women using sanitary products, while stigma and lack of awareness hinder proper menstrual health management (UNICEF, 2020; NFHS-5, 2021). Poor sanitation and inadequate menstrual hygiene facilities contribute to high dropout rates among adolescent girls, increasing gender disparities in education and workforce participation. Additionally, the environmental impact of improper disposal of menstrual products and water pollution due to poor sanitation infrastructure pose long-term sustainability challenges. The current study is crucial to understanding the progress, gaps, and policy recommendations needed to achieve equitable access to WASH and MHM services.

Objectives

- To understand the status of WASH and Menstrual hygiene Management in India
- To highlight the existing findings from research studies on WASH and Menstrual hygiene Management in India and to identify the research gap and
- To provide comprehensive policy recommendations.

Methodology

This study is purely based on secondary sources and considered 40 sources from PubMed, Scopus, Google Scholar, Science Direct, JSTOR, Government and NGO reports for the bibliometric overview and adopted following criteria for the selection of the literary sources. The following inclusion and exclusion criteria were used for the selection of the studies

Only studies published from 2010 to 2024 were included to ensure the most recent and relevant data. Peer-reviewed articles, government reports, NGO studies, and grey literature were considered, including qualitative, quantitative, and mixed-methods research. Keywords such as “Water, Sanitation, Hygiene,” “Menstrual Hygiene Management,” “Sanitation Infrastructure,” “Waterborne Diseases,” “Menstrual Health,” “Sanitary Napkins,” “Public Health,” and “India” were used for database searches.

Studies that did not focus on WASH or MHM, or those primarily about other countries were excluded. Non-peer-reviewed literature and unreliable sources (e.g., blogs, non-credible reports) were excluded. Studies published prior to 2010 were excluded to maintain the relevance of the review in the current context.

Data Collection Sources

- Database Search: Studies were primarily sourced from online databases like PubMed, Google Scholar, Scopus, Science Direct and JSTOR.
- Government Reports: Reports from the Ministry of Jal Shakti, Ministry of Health and Family Welfare, and WHO were considered.
- NGO Publications: Research and reports from NGOs focusing on WASH and MHM, such as UNICEF, WaterAid, and MHA.

Major Findings

A. Overview of WASH in India

Water, sanitation, and hygiene (WASH) services in India have seen significant improvements in recent years, particularly due to government initiatives like the Swachh Bharat Mission (SBM). However, regional disparities in infrastructure and behaviour, combined with socio-economic barriers, continue to undermine efforts for universal WASH access.

B. Government Programs and Policies

Swachh Bharat Mission (SBM): SBM has made substantial progress in promoting sanitation, with over 100 million toilets built since its inception. Yet, sustaining toilet use, especially in rural areas, remains a challenge (Govt. of India, 2014). Sanitation access remains uneven, with rural India lagging significantly behind urban areas, where sanitation coverage is nearly universal (World Bank, 2019). National Rural Drinking Water Programme

(NRDWP): Ensures safe drinking water access in rural areas, but access and water quality issues persist in many states, especially in regions affected by contamination like arsenic and fluoride (Ministry of Jal Shakti, 2021). Access to drinking water has significantly improved, with 96 percent of Indian households having access to a drinking water source (NFHS-5, 2021).

C. Hygiene Practices and Behavioural Change

- Handwashing: While handwashing with soap is a key hygiene practice for preventing diseases, its adoption remains low, particularly in rural India (Singh et al., 2019).
- Handwashing rates in rural areas remain low, which contributes to the persistence of waterborne diseases like diarrhea and cholera (Sengupta et al., 2018).
- Behavioural Change Campaigns: Efforts to change hygiene behaviours through government and NGO-led programs have had varying degrees of success, with the effectiveness being higher in urban areas due to better access to education and resources (UNICEF, 2020).
- Campaigns focused on hygiene behaviour change have had mixed success, highlighting the need for more localized, community-driven interventions (World Bank, 2019).
- There is a need for better sanitation infrastructure, especially in rural and peri-urban areas (Reddy & Suresh, 2018).
- Water scarcity is a major concern in states like Rajasthan and Gujarat, where groundwater levels are depleting rapidly (Ravindra et al., 2020).
- A clear disparity exists in WASH access between urban and rural areas, and between different states, with regions like Uttar Pradesh, Bihar, and Madhya Pradesh facing significant challenges (Kapur et al., 2019).
- Despite significant government efforts, there is an ongoing need to focus on regional disparities and ensure equitable access to WASH services across all states and communities (Berman et al., 2018).
- Targeted policies and investments are necessary to address the challenges posed by water scarcity and poor sanitation infrastructure (Pandey et al., 2019).

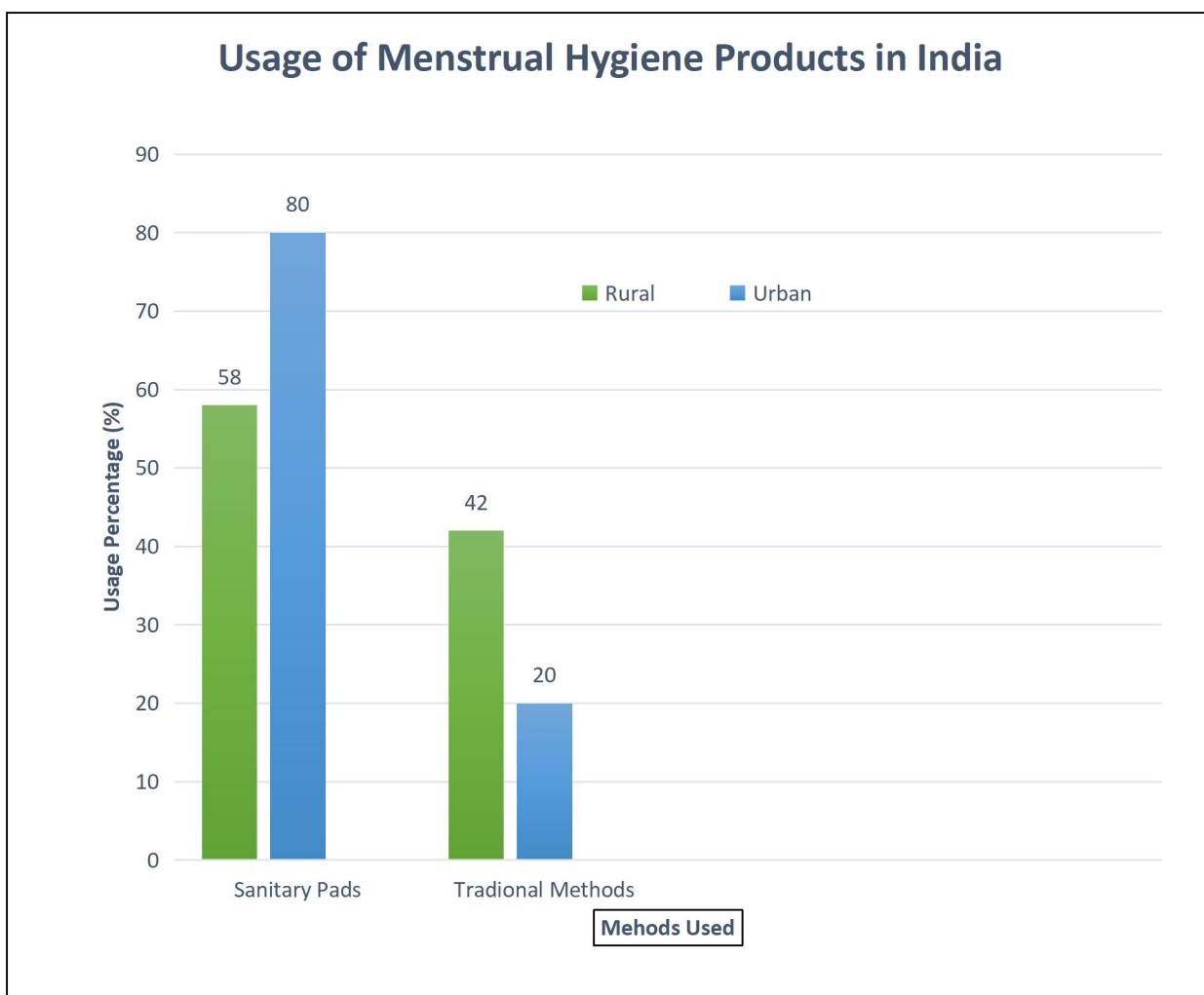
Menstrual Hygiene Management (MHM) in India

1. Status of Menstrual Hygiene in India

Menstrual hygiene practices in India vary widely based on geography, socio-economic status, and cultural norms. A significant portion of women, particularly in rural areas, still use unhygienic methods like cloth, ash, and sand during menstruation due to economic constraints or lack of access to sanitary products. Only 58 percent of rural women use sanitary pads, while in urban areas, this number rises to 80 percent (NFHS-5, 2021).

Figure -1 represents usage of Menstrual Hygiene Products in India

Figure 1
Usage of Menstrual Hygiene Products in India



Source: Compiled Data, (NFHS 5- 2021)

A significant proportion of women in rural India rely on traditional materials for menstrual hygiene, which increases the risk of infections and poor menstrual health (Kumari et al., 2020).

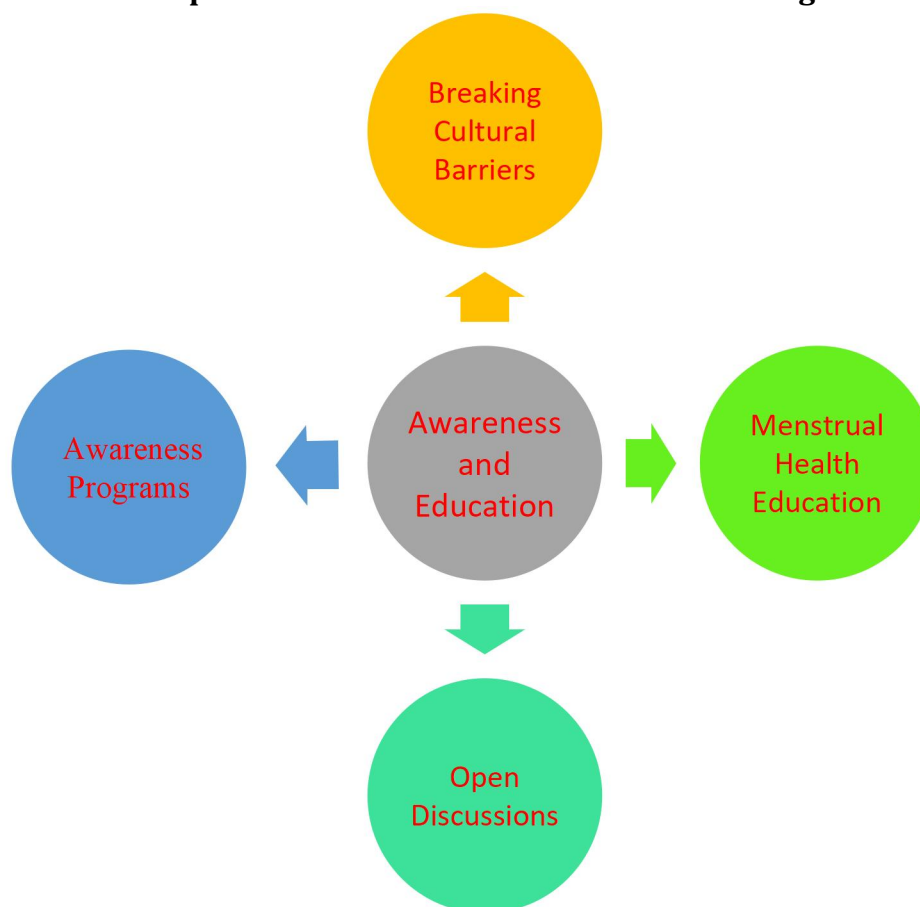
2. Government and NGO Initiatives

Sujala Scheme: This government initiative has aimed to provide free sanitary napkins to rural girls, although challenges related to distribution and sustainability remain (Ministry of Health and Family Welfare, 2019). **NGOs and Community-Based Initiatives:** Various NGOs have played a pivotal role in raising awareness, distributing sanitary products, and providing menstrual health education, with notable success in improving menstrual hygiene knowledge (MHAI, 2020). **Government programs** have made sanitary products more accessible, but challenges remain in ensuring consistent supply and addressing affordability issues in remote areas (Gupta et al., 2019). **NGO efforts** have been effective in rural areas, especially where government interventions have been limited (Adhikari et al., 2021).

3. Awareness and Education

Figure -2 represents different aspects on awareness and education relating to WASH

Figure 2
Different aspects on awareness and education relating to WASH



Menstrual health education is not consistently included in school curricula, and many girls are unaware of basic menstrual hygiene practices. When education is provided, it leads to significant improvements in hygiene management (Thakur et al., 2019). Cultural Barriers: In many parts of India, menstruation remains a taboo subject, and girls are often kept in the dark about menstruation until they experience it, leading to confusion and poor hygiene practices (Sarkar et al., 2019). Lack of comprehensive education on menstruation continues to be a significant barrier, and many adolescent girls drop out of school due to menstrual-related issues (Sinha et al., 2021). Stigma surrounding menstruation prevents open discussions, and menstrual health education needs to be integrated into both school and community settings (Reddy et al., 2018).

4. Accessibility and Affordability of Sanitary Products

Product Availability: Many rural women cannot afford sanitary products or have limited access to them. As a result, they use alternatives such as cloth, which are not as hygienic (Kaur et al., 2020). **Cost Barriers:** Sanitary napkins remain unaffordable for a significant portion of the population. The high cost of products, coupled with limited access in remote areas, exacerbates the problem (Puri et al., 2020). The availability of eco-friendly and affordable sanitary products is critical for improving menstrual hygiene in low-income communities (Bhattacharya et al., 2019).

5. Environmental Impact of Menstrual Products

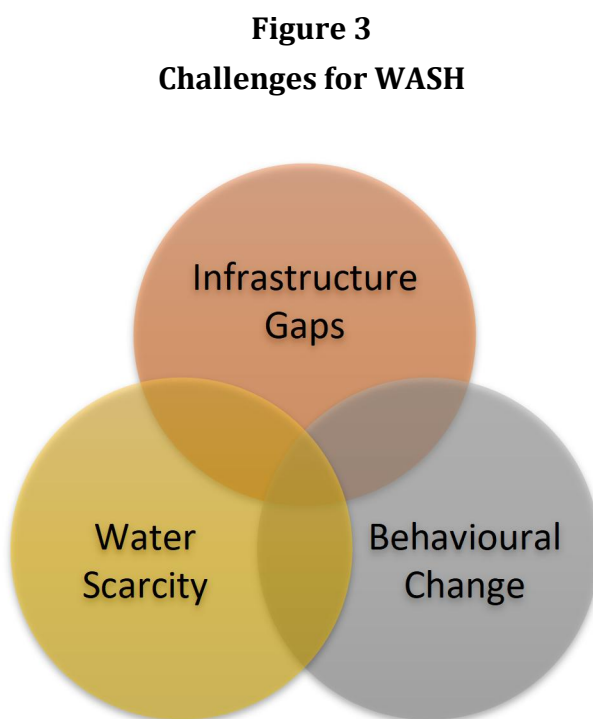
Sanitary Napkin Disposal: Improper disposal of sanitary products is a major environmental issue. Many women dispose of products inappropriately, contributing to waste and pollution (Bhattacharya et al., 2019).

Sustainable Alternatives: There is growing interest in eco-friendly and reusable menstrual products, but their adoption has been slow due to cost and cultural barriers (Das & Agarwal, 2020). Improper disposal of sanitary products poses a significant environmental challenge, and education on proper disposal practices is needed (Sharma & Sahu, 2020). Sustainable menstrual products need to be made more accessible and affordable to reduce environmental waste (Patil & Patil, 2021).

Key Challenges and Recommendations for WASH and MHM

Challenges for WASH

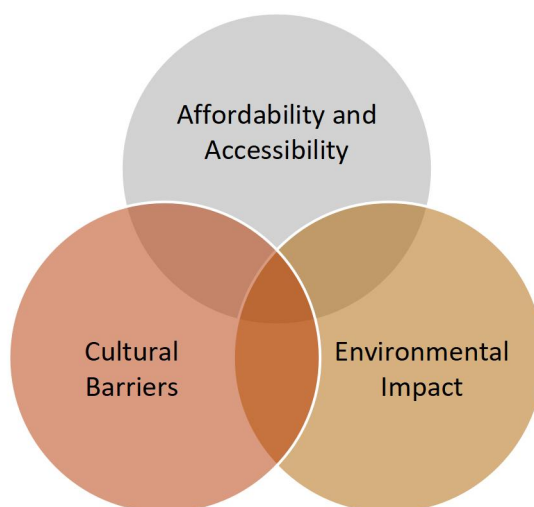
Figure -3 represents the Challenges for WASH



- **Infrastructure Gaps:** Insufficient sanitation infrastructure, especially in rural areas, remains a major barrier to achieving universal menstrual hygiene (Reddy & Suresh, 2018).
- **Water Scarcity:** Water Scarcity remains a threat to the overall menstrual hygiene management of women (Gupta et al., 2020).
- **Behaviour Change:** Campaigns to promote hygiene behaviour change need to be more localized and community-focused for better outcomes (World Bank, 2019).
- **Challenges for MHM**

Figure -4 represents the Challenges for MHM

Figure 4
Challenges for MHM



- **Affordability and Accessibility:** The high cost of sanitary products remains a significant barrier, especially in rural and low-income communities (Puri et al., 2020).
- **Cultural Barriers:** Stigma surrounding menstruation continues to hinder progress, and menstrual health education is essential for overcoming these barriers (Sarkar et al., 2019).
- **Environmental Impact:** The improper disposal of sanitary products is contributing to environmental degradation, requiring sustainable alternatives (Das & Agarwal, 2020).

Conclusion

This review paper highlights several key findings and research gaps in the areas of Water, Sanitation, and Hygiene (WASH) and Menstrual Hygiene Management (MHM) in India by reviewing over 40 studies primarily sourced from online databases like PubMed, Google Scholar, Scopus, Science Direct and JSTOR. The major findings reveal that while significant progress has been made in improving sanitation infrastructure and menstrual hygiene practices, rural areas still face critical challenges such as inadequate facilities, cultural taboos, and limited access to sanitary products. Research gaps include lack of long-term impact studies, integration of WASH and MHM interventions and insufficient focus on rural-urban disparities.

Suggestions

- There is need for improving Rural WASH infrastructure through investment in sustainable sanitation systems and safe water access in underserved areas.
- It is essential for monitoring and enforcement of government programs to ensure long-term impact.
- To promote behavioural change localized awareness campaigns focusing on hygiene and menstrual health education need to be implemented and

- Public-Private Partnerships by Collaborating with NGOs and private enterprises to improve WASH and MHM accessibility and sustainability need to be enhanced.

References

Journals

1. Gupta, A., & Patel, J. (2020). Menstrual hygiene practices in rural India: Insights and challenges. *International Journal of Hygiene and Environmental Health*, 230, 113-120.
2. Kaur, S., & Gupta, S. (2019). Menstrual health education in rural India: The need for awareness. *Asian Journal of Public Health*, 10(3), 204-211.
3. MHA. (2020). Menstrual Hygiene Management in India: Progress and Challenges. Menstrual Hygiene Alliance India.
4. Kaur, R., et al. (2020). The socio-economic barriers to menstrual health in rural India. *BMC Women's Health*, 20, 119.
5. Patel, N., & Mehta, A. (2021). Menstrual health education in rural schools: Challenges and opportunities. *Indian Journal of Public Health*, 65(2), 140-145.
6. Pandey, M., & Yadav, A. (2019). Waterborne diseases and sanitation: The need for sustainable solutions in rural India. *Indian Journal of Environmental Protection*, 39(12), 1104-1110.
7. Thakur, H., & Bansal, R. (2019). Understanding the role of menstrual hygiene education in school absenteeism. *Journal of Adolescent Health*, 64(6), 715-723.
8. Sharma, R., & Sahu, P. (2020). Disposal of sanitary products and its environmental impact. *Sustainable Environment Journal*, 35(4), 379-385.
9. Sinha, V., Singh, R., & Agarwal, N. (2021). Improving menstrual hygiene management: A community-based approach in Uttar Pradesh. *Journal of Public Health*, 43(3), 339-347.
10. Bhattacharya, R., et al. (2019). Environmental impact of menstrual product disposal in rural India. *Environmental Science & Technology*, 53(22), 13471-13477.
11. Hutton, G., & Bartram, J. (2016). Economic impacts of improved sanitation and hygiene in India. *Water Supply Journal*, 16(2), 269-276.
12. Sarkar, S., et al. (2019). Cultural barriers and taboos surrounding menstruation in rural India. *Social Science & Medicine*, 232, 23-32.
13. Gupta, P., & Sharma, S. (2019). Sanitary napkin affordability and its impact on menstrual hygiene. *Journal of Public Health Research*, 38(7), 115-120.
14. Sharma, K., & Tiwari, S. (2018). Menstrual health education in rural India: Importance and challenges. *International Journal of Environmental Health Research*, 28(5), 487-495.
15. Adhikari, R., & Yadav, S. (2021). The role of community-based interventions in improving menstrual hygiene. *Global Health Action*, 14(1), 1910011.
16. Puri, S., & Srivastava, A. (2020). Accessibility and affordability of menstrual products in rural India. *BMC Public Health*, 20, 462.
17. Narayan, S., et al. (2020). Menstrual hygiene management in urban slums: Challenges and interventions. *Global Public Health*, 15(3), 322-331.
18. Das, M., & Agarwal, R. (2020). The environmental burden of menstrual products and the need for sustainable alternatives. *Environmental Research Letters*, 15(8), 084019.

19. Reddy, A., & Suresh, P. (2018). Menstrual health education and behaviour change in rural India. *Health Education Journal*, 77(4), 463-470.
20. Alam, S., et al. (2020). Sustainable menstrual health management: The role of biodegradable sanitary products in rural India. *Journal of Cleaner Production*, 247, 119145.
21. Khanna, M., & Jain, S. (2017). The role of NGOs in promoting menstrual hygiene in rural India. *Community Health Journal*, 25(3), 204-210.
22. Puri, R., & Sharma, S. (2020). Menstrual hygiene in rural India: An evolving landscape. *Indian Journal of Public Health*, 64(2), 132-139.
23. Reddy, N., et al. (2019). Menstrual health and school absenteeism: An analysis of rural adolescent girls in India. *Adolescent Health*, 61(2), 204-211.
24. Thakur, P., & Pradhan, A. (2020). Menstrual hygiene management in rural schools: A review of current practices. *Education for Health*, 33(3), 239-246
25. Patil, S., & Patil, V. (2021). The role of private sector in menstrual hygiene management in India. *Public Health*, 188, 165-171.
26. Sharma, S., & Sahu, R. (2020). Eco-friendly menstrual products in India: Benefits and adoption barriers. *Journal of Environmental Economics*, 45(4), 212-219.

Reports

- NITI Aayog Report 2018
- World Bank Report 2019
- Ministry of Health and Family Welfare Report 2019
- UNICEF Report 2020
- Menstrual Health Action for impact Report 2020
- Ministry of Jal Sakti Report 2021
- National Family Health Survey (5) 2021
- Tamil Nadu Water Supply and Drainage Board Report 2021

MATERNAL HEALTH FOR SUSTAINABLE DEVELOPMENT

*** K. Deepika, & ** Dr. M. Shanthi**

*Research Scholar, **Assistant Professor (SS), Department of Economics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 43.

ABSTRACT

As defined by the Brundtland Commission (1992), “Sustainable development is the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs”. Health is an important component of human development and it constitutes a major part of nation’s economic development which relies on various factors, with health being a key one. The health of vulnerable populations, particularly women and children, is indirectly impacted by this. The growing incidence of maternal and infant deaths in impoverished and developing nations serves as compelling evidence that the availability and accessibility of health care (Universal Health Coverage) is essential for nation-building. The present paper focuses on maternal health and the schemes that are implemented across the nation and in Tamil Nadu.

Keywords: MMR, Women's health, SDG, Maternal health, life expectancy, economic development, initiatives and Schemes, welfare, PIB, WHO, UNICEF.

INTRODUCTION

Women’s development is crucial for both human rights and sustainable advancement in society. The condition of an individual’s health is a critical determinant of the overall welfare of the human species and a prerequisite for human progress. When considering the condition of health, women are significantly more hazardous and unfavorable than men. In contrast to males, females exhibit a higher propensity for experiencing menstrual cycles of illness. However, their propensity to promptly seek medical attention before the onset of a grievous condition is diminished (Aditi Mishra and Upendra Singh, 2023).

The modern era is considered to be the most advanced period in terms of health care and economic capacity. However, not all individuals can benefit from these opportunities (Derose, et al., 2011). Health encompasses more than just health care: it also involves the holistic advancement of society in cultural, economic, educational, social, and Political aspects. Thus, to maintain good health, it is essential to consider other contributing elements as well (Saina Begum, 2018).

Women and girls face greater challenges than men and boys in accessing health information and services due to factors such as limited access to resources, lack of decision-making authority, mobility restrictions. Moreover, women face distinct health challenges and conditions, ranging from pregnancy and menopause to gynecological issues. Another challenge is lack of awareness among healthcare providers and health systems regarding the specific health needs of women and girls. As a result, women and girls are at elevated risk of experiencing unintended pregnancies, cervical cancer, malnutrition, child marriage, adolescent fertility, and other issues. Women’s health is essential to societal well-being and serves as a key indicator of national advancement.

The Sustainable Development Goals (SDGs) were launched on 25 September 2015 with the adoption of the United Nations General Assembly Resolution. They came into force on 1st January 2016 for the 15 years until 31 December 2030. Among the 17 SDGs, the direct health-related targets come under SDG 3: Ensure healthy lives and promote well-being for all at all ages. (UN-SDGs, 2022)

In 2014, in anticipation of the launch of the SDGs, the World Health Organization (WHO) released a consensus statement on Targets and strategies for Ending Preventable Maternal Mortality (EPMM). (WHO, 2014)

One of the key indicators of maternal mortality is the Maternal Mortality Ratio (MMR) which is defined as the number of maternal deaths during a given period per 100,000 live births during the same period. Target 3.1 of Sustainable Development Goals (SDG) set by the United Nations aims at reducing the global maternal mortality ratio to less than 70 per 100,000 live births. (SRS, 2022)

According to the World Health Organization, “Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes”.

Women worldwide, especially in developing countries such as India, encounter distinctive health challenges rooted in biological, social, and cultural factors. These challenges can encompass a wide array of issues, including maternal health problems, nutritional deficiencies, limited healthcare access, gender-based violence, and the prevalence of non-communicable diseases.

Governments and organizations around the globe have initiated a range of schemes and programs to meet the specific needs of women and enhance their health outcomes, acknowledging the crucial importance of women's health.

UNICEF works with the Ministry of Health and Family Welfare (MoHFW), Ministry of Women and Child Development (MWCD), NITI Aayog, and state governments to support planning, budgeting, policy formulation, capacity building, monitoring, and demand generation. It supports the capacities of health managers and supervisors at the district and block level to plan, implement, monitor, and supervise effective maternal health care services with a focus on high-risk pregnant women and those in hard-to-reach, vulnerable, and socially disadvantaged communities. UNICEF supports the implementation of various interventions by the Government of India, they are:

- **Reaching every mother:** UNICEF supports the implementation of the MoHFW policy that every delivery should be attended by a skilled health care provider in a health care facility.
- **Continuum of Care:** Improving the health and nutrition of mothers-to-be and providing quality maternal and newborn health services through a continuum of care approach. This includes improving access to family planning, antenatal care during pregnancy, improved management of normal delivery by skilled attendants, access to emergency obstetric and neonatal care when needed, and timely post-natal care for both mothers and newborns.
- **Antenatal care:** All pregnant mothers must register for antenatal care at the nearest health facility as soon as aware of the pregnancy to ensure the healthy

progress of their pregnancy and timely identify high-risk issues affecting their health or their baby's well-being.

- **The Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** launched by MoHFW, provides a fixed day for assured, comprehensive, and quality antenatal care free of cost to pregnant women on the 9th of every month. This Programme strengthens antenatal care detection and follow-up of high-risk pregnancies, contributes towards the reduction of maternal deaths, and reduces the MMR of India.
- **Janani Shishu Suraksha Karyakram (JSSK):** this scheme encompasses free maternity services for women and children, a nationwide scale-up of emergency referral systems and maternal death audits, and improvements in the governance and management of health services at all levels. To achieve the global goal of improving maternal health and saving women's lives we need to do more to reach those who are most at risk, such as women in rural areas, urban slums, poorer households, adolescent mothers, women from minorities, and tribal, Scheduled Caste and Scheduled Tribe groups. The present study attempts to discuss the policy measure initiatives for pregnant women in India and Tamil Nadu.

EARLIER STUDIES

Padmanaban et al., (2009) in their paper on “Innovations and challenges in Reducing Maternal mortality in Tamil Nadu”, highlighted the government's initiatives to efforts for maternal health services, particularly for mortality. The paper set up an example for other states and countries in the region to overcome maternal mortality by implementing initiatives.

Varadan (2018) examined a study entitled “Development of health infrastructure in Tamil Nadu”. The study covered the areas of contribution by the government towards health like increasing the productivity of labor, life expectancy, labor participation rate, and so on. Efforts have been taken by the government to give more importance to the health condition of people. After the implementation of initiatives, a few diseases have completely vanished in India and it on the other side increased the longevity of the people. The study concluded with the findings that positive correlation between the expenditure of the state government on the health sector and the creation of health infrastructure in Tamil Nadu.

Ganesan (2020), did a brief study on the maternity benefit scheme in the Tiruchirapalli district of Tamil Nadu where the study focused only on the benefits for women. The study consisted of three main objectives and they were to analyze the beneficiaries of Dr. Muthulakashmi Reddy Maternity Scheme, secondly to concentrate on health infrastructure, and thirdly, to know the women eligible for the particular scheme, and lastly to find out the success rate in the selected area. Around 112 respondents were selected and the study revealed that after the implementation of the scheme, the infant mortality rate was found to be low in the selected area.

Ranjithkumar and Manimekalai (2021) highlighted “Women's Health in Rural Tamil Nadu.” The primary objectives of the study were to know whether there is key awareness towards health issues related to women and children, and the secondary objective was to find the perception of women on various government schemes and tackling them in rural

areas. The study concluded with a recommendation that providing formal education to women might reduce rural women's health problems.

Singh (2021) did a brief study under the title “Health Status of Women in India,” where the researcher focused on the issues and factors that influenced women's health.

Mishra and Singh (2023) explored the status of Women's Health in Bihar and Jharkhand States in India. The study made a comparative analysis between the two states based on the indicators related to aspects of nutrition and maternal and reproductive health. The study concluded that Bihar was noticed with poor in terms of the national average.

Adenigbagbe et al., (2024), assessed the impact of healthcare infrastructure on maternal mortality especially on the quality of care, healthcare availability, and capacity of the institutions in Nigeria. Multiple regression analysis was used by the researcher and the researcher found that healthcare availability significantly influenced the maternal mortality rates and the capacity of the institution did not have any impact. The paper suggested a handful of recommendations for the policymakers of Nigeria to have a better outcome to improve maternal health outcomes.

OBJECTIVES OF THE STUDY

- To analyse the government schemes formulated for pregnant women in India and Tamil Nadu and
- To highlight the trends in maternal mortality rate in India

METHODOLOGY

The study was related to the period 2000-2020. The data and information for the study were collected from various Government reports like PIB (Press Information Bureau), WHO (World Health Organisation), UNICEF (United Nations Children's Fund), UNFPA (United Nations Population Fund), and UNDESA (United Nations Department of Economics and Social Affairs) and NFHS (National Family Health Survey).

FINDINGS OF THE STUDY

A. GOVERNMENT SCHEMES FORMULATED FOR PREGNANT WOMEN IN INDIA AND TAMIL NADU

- Government of India launched “**Pradhan Mantri Surakshit Matritva Abhiyan**” (**PMSMA**) to provide fixed-day, free-of-cost, assured, comprehensive, and quality antenatal care on the 9th day of every month, universally to all pregnant women in their 2nd / 3rd trimesters of pregnancy.
- **An extended PMSMA strategy** was launched to ensure quality ANC to pregnant women, especially to high-risk pregnancy (HRP) women, and individual HRP tracking till a safe delivery is achieved using financial incentivization for the identified high-risk pregnant women and accompanying ASHA for an extra 3 visits over and above the PMSMA visit.
- **Surakshit Matritva Aashwasan (SUMAN)** aims to provide assured, dignified, respectful, and quality healthcare at no cost and zero tolerance for denial of services for every woman and newborn visiting the public health facility.

- **Janani Shishu Suraksha Karyakaram (JSSK)** entitles every pregnant woman to free delivery including for cesarean section, in public health institutions along with the provision of free transport, diagnostics, medicines, other consumables, diet, and blood (if required). Similar entitlements have been put in place for all sick infants accessing public health institutions for treatment.
- **LaQshya (Quality Improvement Initiatives)** The Government of India launched the LaQshya program in 2011 to improve the quality of care in labor rooms and Maternity Operation Theatres.
- **Monthly Village Health, Sanitation, and Nutrition Day (VHSND)** is an outreach activity at Anganwadi centers for the provision of maternal and child care including nutrition in convergence with the ICDS.
- **Outreach camps in rural** are also provisioned for improving the reach of health care services, especially in tribal and hard-to-reach areas. This platform is used to increase awareness for Maternal and Child health services, and community mobilization as well as to track high-risk pregnancies.
- **Health and wellness center**-The HWC team organizes camps periodically, reaching the marginalized, supporting treatment compliance, and following pregnant women and newborns, etc.
- **MCP Card and Safe Motherhood Booklet** are distributed to pregnant women to educate them on diet, rest, danger signs of pregnancy, benefit schemes, and institutional deliveries.
- **IEC/BCC campaigns:** One of the key focus areas of Maternal Health is to generate demand through Information Education & Communication (IEC), interpersonal communication (IPC), and Behaviour Change Communication (BCC) activities.

In addition, the Ministry of Women and Child Development implements the following schemes:

- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** Normally, the pregnancy of a woman exposes her to new kinds of challenges and stress factors. Hence, the scheme provides support to the mother for safe delivery and addresses partial compensation for wage loss and immunization of her first living child. In the revamped PMMVY maternity benefit is also to be provided for the second child, but only if, the second child is a girl child, to discourage pre-birth sex selection and to promote and celebrate the girl child.
- **Mission Saksham Anganwadi and Poshan 2.0:** Under this scheme, supplementary nutrition is provided to Pregnant women and lactating mothers with a focus on strengthening nutritional content, delivery, outreach, and outcomes with a focus on developing practices that nurture health, wellness, and immunity to disease and malnutrition.

Tamil Nadu offers schemes and policies for pregnant women, including Janani Shishu Suraksha Karyakram (JSSK), Dr. Muthulakshmi Reddy Maternity Benefit Scheme, and the Amma Maternity Nutrition Kit Scheme.

Janani Shishu Suraksha Karyakram (JSSK)

- Provides free drugs, diagnostics, and transport to and from government health facilities
- Includes free delivery, including C-sections, for pregnant women who deliver in public health institutions.
- Also provides free diet and blood for sick infants up to one year old.

Dr. Muthulakshmi Reddy Maternity Benefit Scheme

- Provides financial assistance and a nutrition kit to pregnant and lactating women
- The scheme aims to reduce maternal and infant mortality and improve nutrition.

Amma Maternity Nutrition Kit Scheme

- Provides a nutrition kit to pregnant women
- To apply, applicants need to provide identity proof, address proof, and pregnancy details from a hospital.

Pradhan Mantri Matru Vandana Yojana (PMMVY)

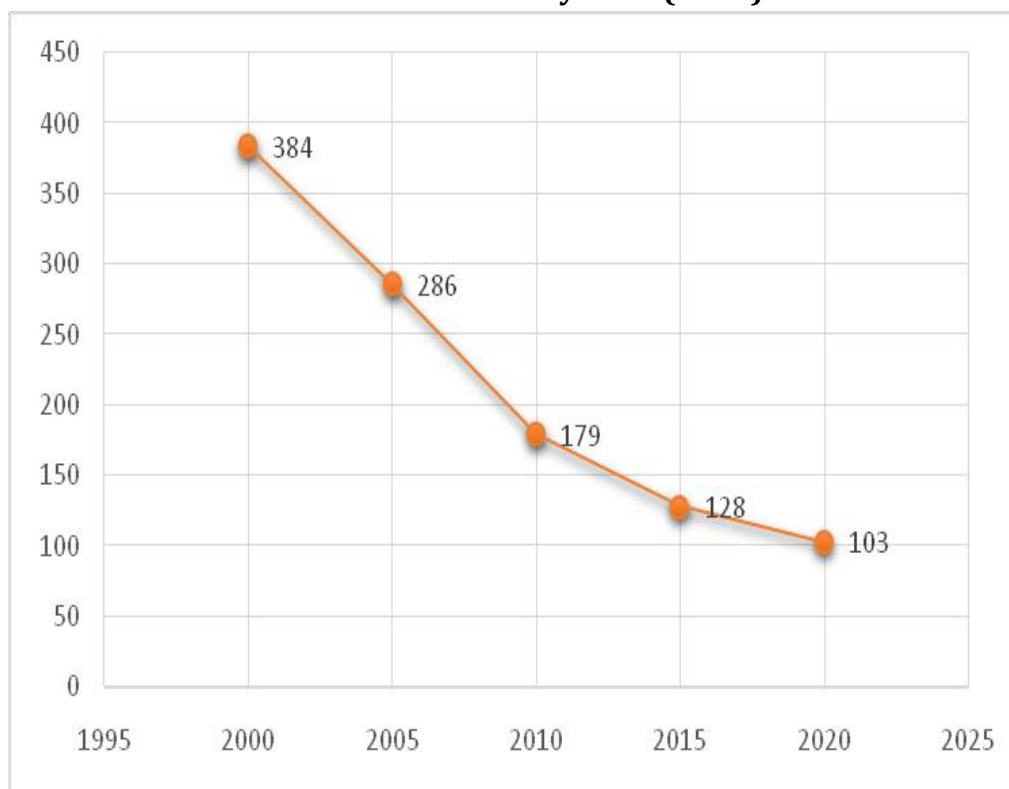
- Provides cash assistance to eligible pregnant and lactating women for their first live birth
- The amount is transferred in three instalments through the Pradhan Mantri Matru Vandana Yojana ESCROW account.

B. TRENDS IN MATERNAL MORTALITY RATE FOR THE PERIOD 2000-2020 IN INDIA

The following figure shows the trends in the maternal mortality rate in India from 2000 to 2020.

Figure - 1

Trends in estimates of maternal mortality ratio (MMR) in India 2000 – 2020



Data source: WHO-February, 2023

The MMR of India has declined from 384 in 2000, followed by 286 in 2005, 179 in 2010, 128 in 2015 to 103 in 2020, which indicates the country's success in achieving the Sustainable Development Goal (SDG) of an MMR below 70 before 2030.

CONCLUSION

The relation between maternal health and sustainable development can't be overstated but the investment in maternal health is a challenging intervention for the future. It is a key component of SDG and it should be prioritized to build healthier, equitable, and sustainable societies. Maternal health constitutes public health that includes the well-being of women at all stages such as childbirth, pregnancy, and postpartum period. Global efforts are taken jointly to focus on strengthening the capacity of women's health that will raise the economic development of a Country. The government has highly concentrated on maternal health in India by introducing and implementing schemes mainly for women. The initiatives have boosted the betterment and longevity of women that states positive flagship towards maternal health.

REFERENCES

1. Aditi Mishra, Dr.Umendra Singh (2023), "Status of Women Health in India: A Comparative Study of Bihar and Jharkhand States", International Journal of Scientific and Development and Research (IJSDR), Vol: 8, Issue: 12, ISSN: 2455- 2631, Pp: 984-993.
2. Dr. R. Varadan (2018), "Development of Health Infrastructure in Tamil Nadu", Journal of Emerging Technologies and Innovative Research (JETIR), Vol:5, Issue:12, ISSN: 2349-5162, Pp: 1194-1202.
3. Dr. S. Ganesan (2020), "A Study on Maternity Benefit Scheme in Tiruchirapalli District, Tamil Nadu", International Journal of Management (IJM), IAEME publication, Vol:11. Issue: 8, ISSN: 0976-6510, Pp: 2378-2390.
4. Kaur, Manmeet; Gupta, Madhu; Purayil, VijinPandara; Rana, Monica; Chakrapani, Venkatesan (2018-10-09). "Contribution of social factors to maternal deaths in urban India: Use of care pathway and delay models". PLOS ONE. 13 (10): e0203209. Bibcode: 2018PLoS.1303209K. doi:10.1371/journal.pone.0203209. PMC 6177129. PMID 30300352.
5. Kofoworola Atinuke Adeingbagbe, Patience Peter Izang, Nasamu Gambo, Yusrahbala Kaoje, Ifeoluwapo Adedamola Adeingbagbe (2024), "Impact of Healthcare Infrastructure on Maternal mortality in Nigeria", European Journal of Business and Innovative Research, Publication of the European Center for Research Training and Development – UK, Vol:12, Issue:5, ISSN: 2053-4027, Pp: 1-23.
6. Lakshmi S, Rajkumar S (2019), "Awareness Regarding Maternity Benefit Schemes among antenatal women in Rural Tamil Nadu", International Journal of Clinical Obstetrics and Gynaecology, no: 3(5), ISSN: 2522-6614, Pp: 220-223.
7. Laura M. DeRose, Mariya Shiyko Simone Levey, Jonathan Helm, Paul D. Hastings (2014), "Early maternal Depression and Social Skills in Adolescence: A Marginal Structural Modelling Approach", Social Development, Vol: 23, Issue; 04, Pp: 753-769.

8. Monica Singh (2021), "Health Status of Women in India", International Journal of Creative Research Thoughts (IJCRT), An International Open Access, Peer reviewed, Referred Journal, Vol:9, Issue: 1, ISSN: 2320-2882, Pp: 3086- 3090.
9. P.Padmanaban, ParvathySankara Raman, Dileep V. Mavalankar (2009), "Innovations and Challenges in Reducing Maternal Mortality in Tamil Nadu, India", International Center for Diarrhoeal Disease Research, Bangladesh, Vol: 27 (2), ISSN: 1606-0997, Pp: 202-219.
10. Ranjithkumar A, Manimekalai K (2020), "Women's Health in Rural Tamil Nadu", Women's Health Science Journal, Medwin publishers, ISSN: 2639-2526.
11. Sample Registration System Statistical Report (2020)
12. Special Bulletin on Maternal Mortality in India (2018-2020), November 2022.
13. Status of Women In India, Economic Advisory Council to the Prime Minister, October 2022.

ECONOMIC ADVANTAGE OF EMPOWERING WOMEN IN AGRIBUSINESS

***Maya S J, **Dr. T. Amutha**

*Research Scholar & **Assistant Professor (SG), Department of Business Administration, Avinashilingam Institute of Home Science & Higher Education for Women, Coimbatore-43

ABSTRACT

Empowering women in agriculture and agribusiness has emerged as a critical strategy for enhancing productivity, sustainability, and social equity in food systems Worldwide. While interventions targeting female farmers and entrepreneurs have garnered attention, comprehensive assessments of the underlying assumptions and theoretical pathways linking empowerment to economic benefits remain scarce. This paper delves into the hypothetical case for empowering female farmers and agribusiness entrepreneurs, focusing on interventions aimed at increasing women's decision-making authority and resource access. Specifically, the explore two potential avenues through which empowerment may yield productivity or health benefits: (i) by addressing gender disparities in resource access, and (ii) by leveraging gender-specific risk, time, and social preferences in resource allocation. Through a systematic review of evidence, the study try to assess the support for the baseline assumptions, behaviour change mechanisms, and economic benefits associated with these hypothesized pathways. The findings of the significant potential returns from investing in female farmers and female entrepreneurs across diverse agricultural contexts. By elucidating the theoretical foundations and evidence gaps, this review offers insights for policymakers, practitioners, and researchers seeking to unlock the economic advantage of gender empowerment in agribusiness, thereby fostering inclusive and sustainable agricultural development.

Keywords: Empowerment, sustainable agricultural development, gender disparities, resource allocation.

INTRODUCTION

Women empowerment in India has got a long history. Women empowerment is the most critical need that is to be accomplished. The freedom that women are now enjoying is the result of the fights made by the empowered women's in the society. It encompasses initiatives aimed at enhancing the socio-economic status of women and granting them increased decision-making authority. In India, women empowerment signifies a rise in their participation in high-growth industries, currently standing at only 8%. However, numerous barriers impede women's full participation and empowerment. Women's are able to do multiple tasks, can handle multiple responsibilities and is capable of handling risk and are able to overcome any difficulties. They are rational thinkers and intelligent decision makers. One of the objectives of women empowerment is to influence the socio-economic changes in the society. For making a socio-economic change in the society what is more important than anything is making her understand her capabilities. Making her an earning member of the family, Making her financially independent. In a country like India where majority of the population is depending on agriculture or allied sectors, it is very much possible to

empower women through agriculture and allied business (C.L.Anderson et.al,2020). Women can outshine in the field of agripreneurship. Therefore, more attention needs to be paid for the development of women entrepreneurship in agri business. Agripreneurship brings a wider range of benefits to enterprising rural women. It ranges from selling agriculture produce to adding value to the basic agriculture produce. Women agri entrepreneurship can contribute more to the economy because it helps them to serve good food to their family and society and eventually and also improved use and control of local resources and can create more employment opportunity.

BACKGROUND OF THE STUDY

Improving the participation of women in agribusiness brings notable economic advantages, yet there is a shortage of extensive national-level data on their empowerment. The available information often stems from individual initiatives or is restricted to regional contexts, which hinders our comprehension. Assessing empowerment, particularly agency, presents measurement challenges. Measuring decision-making proves complex due to its various forms such as negotiation, manipulation, or resistance. Even the prevalent method of evaluating participation in household decisions has limitations. Typically, women self-report their involvement, categorized as either autonomous or joint decision-making. However, the significance of joint decision-making in terms of agency remains uncertain.

The significance of joint decision-making regarding agency remains unclear. In certain cases, joint decisions may signify women's empowerment as they actively participate in decision-making and pursue their objectives. Conversely, joint decisions could indicate constraints, where external influences or limitations affect women's choices. The capacity to make strategic life choices implies both a transformative journey and a focus on personal aspirations. Therefore, empowering women in agribusiness should not solely target enhancing their decision-making power but also facilitating their pursuit of strategic life choices aligned with their ambitions, thereby unlocking their full economic potential in the agricultural sector.

Objectives Of The Study

- To evaluate the role of agripreneurs in economic development
- To acknowledge the challenges faced by the agripreneurs and
- To know the opportunities available for the entrepreneur

Scope of the Study

Ensuring women's economic empowerment and gender equality is essential as they are fundamental human rights outlined in international labour standards, laws, and norms. Consequently, advocating for gender equality and women's economic empowerment are intertwined, both vital for guaranteeing women's rights and enabling their participation in fostering a robust rural economy conducive to inclusive and sustainable development.

The empowerment of women in agribusiness refers to their capacity, equivalent to men, to engage in, contribute to, and enjoy the fruits of economic advancement, while respecting their value and promoting fair distribution of benefits. This empowerment involves increasing women's access to diverse economic resources and opportunities within the

agricultural sector, including employment, financial services, property rights, skill development, and market knowledge. By facilitating women's active participation and empowerment in agribusiness, we not only uphold their rights but also empower them to take ownership of their lives and exert influence within the agricultural sphere and wider society.

Empowering women in agribusiness necessitates a concerted effort to enhance decent work opportunities, particularly for young women. The majority of young individuals in developing countries reside in rural areas, with approximately 85% of them comprising the rural population. Alarming, about 23.5% of these young people constitute the working poor. Within rural economies, a staggering 93% of available jobs for young adults aged 15 to 24 are in the informal sector, with agriculture being a prominent sector. Unfortunately, this informal employment often comes with low wages, challenging working conditions, and lack of social protection measures.

The economic advancement of rural women, particularly young women, in agribusiness faces several challenges. These hurdles include inadequate infrastructure, lack of targeted programs tailored to rural youths, and minimal representation at local and national decision-making levels. Gender biases and discrimination further impede young women's access to skill development, land ownership, financial services, formal employment, and involvement in decision-making processes.

Review of Literature

Several studies have explored the impact of women's empowerment in agriculture on various farm performance metrics, albeit with a particular focus on farm productivity change remaining relatively underexamined. Bozoğlu and Ceyhan (7) and Seymour (8) are notable examples, investigating the influence of women's empowerment on farm technical efficiency. Bozoğlu and Ceyhan (7) discovered that increased involvement of women in decision-making and labor tasks correlated with heightened levels of farm technical efficiency. Although the term "women's empowerment" wasn't explicitly used by Bozoğlu and Ceyhan (7), their assessment of women's participation in farm decision-making can be construed as indicative of women's empowerment. Conversely, Seymour (8) observed modest positive correlation between women's empowerment, measured using the women's Empowerment in Agriculture Index developed by Alkire et al.(9) and technical efficiency.

Apart from studies on technical efficiency, another branch of literature has investigated the impact of women's empowerment on crop output quantity. For instance, Diiro et al. (10) utilized a condensed version of WEAI to analyze the effects of women's overall empowerment and its individual indicators on maize yield in farm households in western Kenya, reporting a favorable impact on yield. Similarly, a study by (11) utilized WEAI to scrutinize the association between women's empowerment and crop output quantity among rural households in Niger, revealing a positive relationship between these variables.

Boosting agricultural productivity is crucial for fostering sustainable economic development, as it lays the groundwork for effective industrialization. Inadequate agricultural productivity can significantly impede progress in this regard, impacting the poorest segments of society the hardest.

In Bangladesh, studies evaluating agricultural productivity change have primarily been conducted at the regional level, focusing on districts. Rahman and Salim (18), alongside Hossain et al. (19), employed non-parametric methods to assess regional productivity change, reporting growth rates of 0.57% and 2.95%, respectively. Conversely, Coelli et al. (20) utilized a parametric approach, specifically stochastic frontier analysis, uncovering a slight decline of 0.23% in regional productivity. These studies have identified various factors influencing productivity change at the regional level, including farm size, crop specialization, investment in agricultural research and development, engagement with extension services, and expenditure on extension activities.

Despite some research utilizing farm-level survey data to analyze household technical efficiency, there remains a gap in understanding changes in farm-level productivity and its components within Bangladesh's agricultural sector

Conceptual Framework

Empowering women within agricultural households can be economically advantageous, particularly when considering households as collective units with diverse preferences among members. Unlike the unitary model, which assumes a single set of household preferences, the cooperative model acknowledges varied preferences and bargaining power among household members. In this context, women's empowerment influences household decision-making, thereby impacting resource allocation and ultimately productivity.

In India rice-producing households, empowering women could enhance productivity through various channels. Women's increased say in decision-making may lead to more efficient resource allocation, such as better land use, increased labour input, or optimized input purchasing. Studies suggest that empowered women contribute positively to household outcomes like food security, children's education, and health, all of which can bolster workforce productivity in agricultural activities. Moreover, empowered women participating in economic or social groups may introduce innovative farm practices and technologies, enhancing productivity through resource optimization.

While there's theoretical speculation that shifting bargaining power might redirect resources away from agricultural output, empirical evidence supporting such claims is scarce. Nevertheless, empowering women in agribusiness holds the potential to not only enhance agricultural productivity but also contribute to broader household economic well-being and community development.

Findings of the Study

Empowering women in agribusiness by granting them greater control over agricultural management and production decisions presents significant economic benefits. Currently, women have less influence in these areas compared to men, resulting in crop choices that are typically less diverse and nutritious. However, by allowing women to make decisions about planting a wider variety of crops, including more nutrient-rich options such as vegetables and legumes, household nutrition can be significantly improved. This, in turn, leads to higher returns on investment in terms of improved health outcomes and increased productivity within the household, ultimately contributing to greater economic prosperity.

Empowering women to have greater control over agricultural income has the potential to reshape household expenditure patterns, leading to improvements in both nutritional and educational outcomes. Currently, women typically have less influence over agricultural income compared to men, resulting in spending choices that often prioritize other areas over food and education. However, by increasing women's involvement in financial decision-making, there is a likelihood of more resources being allocated towards food and education, especially for children. This shift in spending patterns is expected to yield higher returns in terms of improved household nutrition and educational achievements. Ultimately, this empowerment can lead to enhanced economic prosperity and well-being for the entire household.

- **Support for Baseline Assumptions:** There was substantial evidence supporting the baseline assumptions regarding gender disparities in resource access among female farmers and entrepreneurs. Studies consistently highlighted inequalities in land ownership, access to credit, extension services, and technology adoption, which hindered women's productivity and decision-making authority in agribusiness.
- **Behavior Change Mechanisms:** Interventions aimed at empowering women in agribusiness led to notable behavior changes. By providing women with access to resources, training, and decision-making roles, interventions effectively challenged traditional gender norms and social hierarchies within farming communities and entrepreneurs. This behavioral shift was critical in facilitating women's increased participation in agricultural and allied activities and decision-making process.
- **Economic Benefits:** While the theoretical linking of empowerment to economic benefits were well-established, the review revealed a dearth of robust estimates regarding the actual economic returns. Few studies provided quantitative assessments of the economic gains associated with empowering women in agriculture, limiting the ability to ascertain the magnitude of these benefits across different context.

Factors Influencing Economic Returns: The variability in economic returns observed across different contexts underscores the importance of considering contextual factors such as agroecological conditions, market dynamics, and socio-cultural norms. Interventions tailored to specific contexts are more likely to yield substantial economic benefits by effectively leveraging women's empowerment in agriculture and allied sectors.

Measurement Challenges and Data Gaps: The lack of comprehensive data and standardized methodologies for assessing the economic returns to empowering women in agriculture and allied sectors poses significant challenges. There is a need for rigorous impact evaluations that employ robust econometric techniques to accurately quantify the economic gains associated with gender empowerment interventions.

Beyond Productivity: While productivity gains are often emphasized, it is essential to recognize that the economic benefits of empowering women in agriculture extend beyond increased yields. Women's empowerment can lead to improvements in household nutrition, income diversification, resilience to shocks, and overall household welfare, thereby contributing to broader development objectives.

CONCLUSION

The study underscores the imperative of empowering women in agriculture and agribusiness or allied sectors as a pathway to unlock economic advantages and foster inclusive and sustainable development. Contextual factors, measurement challenges, and data gaps pose notable challenges in quantifying the economic gains associated with gender empowerment interventions. Yet, it is evident that the economic benefits of empowering women in agribusiness extend beyond mere productivity gains, encompassing broader improvements in household welfare, nutrition, and resilience.

Addressing these gaps requires a concerted effort from policymakers, practitioners, and researchers. Gender-responsive policies and programs must be prioritized, focusing on dismantling structural barriers and promoting gender-transformative approaches. Rigorous research methodologies, interdisciplinary collaborations, and longitudinal studies are essential to generate robust evidence on the economic returns to empowering women in agriculture and allied sectors.

In essence, empowering women in agribusiness is not just a matter of social justice but also an imperative for economic growth and sustainable development. By prioritizing investments in women's empowerment and adopting gender-responsive strategies, we can harness the full potential of women as catalysts for positive change in agriculture and allied sectors and rural communities, thereby advancing towards more equitable and prosperous societies.

REFERENCES

1. C. Leigh Anderson & Travis W. Reynolds & Pierre Biscaye & Vedavati Patwardhan & Carly Schmidt, 2021. "Economic Benefits of Empowering Women in Agriculture: Assumptions and Evidence," *Journal of Development Studies*, Taylor & Francis Journals, vol. 57(2), pages 193-208, February.
2. Ahmed, A., Malapit, H., Pereira, A., Quisumbing, A., Rubin, D., Ghostlaw, J., Haque, Md L., Hossain, N. Z., and Tauseef, S. (2018). "Tracking empowerment along the value chain: Testing a modified WEAI in the Feed the Future Zone of Influence in Bangladesh." Dhaka, Bangladesh and Washington, DC: International Food Policy Research Institute (IFPRI).
3. Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G., & Vaz, A. (2013). The women's empowerment in agriculture index. *World Development*, 52, 71–91. 10.1016/j.worlddev.2013.06.007.
4. Ashby, J., Hartl, M., Lambrou, Y., Larson, G., Lubbock, A., Pehu, E., and Ragasa, C.. (2008). "Investing in women as drivers of agricultural growth."
5. Barrientos S, Dolan C, Tallontire A. A gendered value chain approach to codes of conduct in African horticulture. *World Development*. 2003;31(9):1511–1526. DOI: 10.1016/S0305-750X(03)00110-4. [CrossRef] [Google Scholar]
6. David, S. (2015). Getting a piece of the pie: An analysis of factors influencing women's production of sweetpotato in northern Nigeria. *Journal of Gender, Agriculture and Food Security*, 1(1), 1–19.
7. De Brauw, A., van den Berg, M., Brouwer, I., Snoek, H., Vignola, R., Melesse, M., Lochetti, G., van Wagenberg, C., Lundy, M., d'Hotel, E., & Ruben, R. (2019). *Food system*

- innovations for healthier diets in low and middle-income countries*. IFPRI discussion paper 1816. International Food Policy Research Institute.
8. Djurfeldt, A. A., Mawunyo Dzanku, F., & Cuthbert Isinika, A. (2018). Gender and rural livelihoods: Agricultural commercialization and farm/non-farm diversification. In *Agriculture, Diversification, and Gender in Rural Africa: Longitudinal Perspectives from Six Countries* (pp. 81–112). Oxford University Press.
 9. Fan, S., & Swinnen, J. (2020). Reshaping food systems: The imperative of inclusion. In *2020 Global Food Policy Report: Building inclusive food systems* (chapter 1, pp. 6–13). International Food Policy Research Institute (IFPRI).
 10. Forsythe L, Posthumus H, Martin A. A crop of one's own? Women's experiences of cassava commercialization in Nigeria and Malawi. *Journal of Gender, Agriculture and Food Security*. 2016;1(2):110–120. [[Google Scholar](#)]
 11. Gelli, A., Hawkes, C., Donovan, J., Harris, J., Allen, S., de Brauw, A., Henson, S., Johnson, N., Garrett, J., & Ryckembusch, D. (2015). *Value chains and nutrition: A framework to support the identification, design, and evaluation of interventions*. IFPRI discussion paper 1413. International Food Policy Research Institute.
 12. Getahun TD, Villanger E. Labour-intensive jobs for women and development: Intra-household welfare effects and its transmission channels. *Journal of Development Studies*. 2018;54(7):1232–1252. DOI: 10.1080/00220388.2017.1327661. [[CrossRef](#)] [[Google Scholar](#)]
 13. Graef F, Hernandez LEA, König HJ, Uckert G, Mnimbo MT. Systemising gender integration with rural stakeholders' sustainability impact assessments: A case study with three low-input upgrading strategies. *Environmental Impact Assessment Review*. 2018;68:81–89. doi: 10.1016/j.eiar.2017.10.004. [[CrossRef](#)] [[Google Scholar](#)]
 14. Handschuch, C., & Wollni, M. (2013). *Traditional food crop marketing in sub-Saharan Africa: Does gender matter?* Discussion Paper No. 142, Georg-August-Universität Göttingen, Courant Research Center - Poverty, Equity and Growth (CRC- PEG).
 15. Heckert, J., Malapit, H., Pereira, A., Seymour, G., Eissler, S., Dogui Diatta, A., Rubin, D., and Nordehn, C.. (2021). Developing the Women's empowerment in agriculture index for value chains (WEAI4VC): An application to the agricultural vocational education and training for women (ATVET4Women) program in Benin. Discussion paper, forthcoming. Washington, DC: International Food Policy Research Institute (IFPRI).
 16. Herens, M., Gabrielli, M., Peters, B., Brouwers, J., & Bosch, D. (2018). Farmers' adaptive strategies in balancing commercial farming and consumption of nutritious foods: Case study of Myanmar. *Sustainability (Switzerland)*, 10(12), 1–20.
 17. Johnson, N., Balagamwala, M., Pinkstaff, C., Theis, S., Meinzen-Dick, R., & Quisumbing, A. (2018). How do agricultural development projects empower women? Linking strategies with expected outcomes. *Journal of Gender, Agriculture, and Food Security (Agri-gender)*, 30(2).
 18. Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464. DOI: 10.1111/1467-7660.00125.
 19. Mahmud S, Shah NM, Becker S. Measurement of Women's empowerment in rural Bangladesh. *World Development*. 2012;40(3):610–619.

- DOI: 10.1016/j.worlddev.2011.08.003. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]
20. Malapit, H. J., Meinzen-Dick, R. S., Quisumbing, A. R., & Zselezky, L. (2020a). Women: Transforming food systems for empowerment and equity. *2020 Global Food Policy Report: Building inclusive food systems* (chapter 4, pp. 36–45). International Food Policy Research Institute. 10.2499/9780896293670_04.
 21. Malapit HJ, Ragasa C, Martinez EM, Rubin D, Seymour G, Quisumbing A. Empowerment in agricultural value chains: Mixed methods evidence from the Philippines. *Journal of Rural Studies*. 2020;76:240–253.
DOI: 10.1016/j.jrurstud.2020.04.003. [[CrossRef](#)] [[Google Scholar](#)]
 22. Malapit HJL, Sraboni E, Quisumbing AR, Ahmed AU. Intrahousehold empowerment gaps in agriculture and children's well-being in Bangladesh. *Development Policy Review*. 2019;37(2):176–203. doi: 10.1111/dpr.12374. [[CrossRef](#)] [[Google Scholar](#)]
 23. Mayoux L. Gender mainstreaming in value chain development: Experience with gender action learning system in Uganda. *Enterprise Development and Microfinance*. 2012;23(4):319–337.
DOI: 10.3362/1755-1986.2012.031. [[CrossRef](#)] [[Google Scholar](#)]
 24. Meinzen-Dick, R.S., Rubin, D., Elias, M., Mulema, A.A. and Myers, E. (2019). Women's empowerment in agriculture: Lessons from qualitative research. IFPRI Discussion Paper 1797. Washington, DC: International Food Policy Research Institute (IFPRI).
 25. Monteiro CA, Cannon G, Levy RB, Moubarac JC, Louzada ML, Rauber F, Khandpur N, Cediel G, Neri D, Martinez-Steele E, Baraldi LG, Jaime PC. Ultra-processed foods: What they are and how to identify them. *Public Health Nutrition*. 2019;22(5):936–941.
DOI: 10.1017/S1368980018003762. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]

EXPLORING EMOTIONAL INTELLIGENCE: A NURSE'S APPROACH TO CONFLICT MANAGEMENT

Nanma. V. V

Research Scholar, Department of Business Management Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore - 43

Abstract

In the fast-paced and emotionally charged atmosphere of healthcare, nurses are the backbone of patient care, often negotiating challenging situations with empathy, precision, and commitment. In this changing environment, the value of emotional intelligence (EI) in nursing cannot be underscored. Emotional intelligence is defined as the ability to recognise, believe, and control one's own emotions as well as those of others. In nursing, where human connection is at the centre of every activity and decision, EI plays a crucial role in promoting successful communication, building trust with patients and colleagues, and providing compassionate care. Furthermore, EI enables nurses to recognise and control the emotions of others, referred to as social awareness. Nurses may foster supportive and therapeutic environments in which people feel valued and understood by empathising with their patients, families, and colleagues. This capacity to connect on an emotional level increases patient confidence and contentment, ultimately leading to better health results. Furthermore, EI plays a vital part in conflict resolution as well as teamwork in healthcare contexts. Nurses with good relationship management abilities may navigate interpersonal problems with professionalism and sensitivity, resulting in a collaborative work atmosphere based on mutual respect and trust. Effective communication and conflict mediation are critical for preserving team unity in healthcare, which has a direct impact on patient care quality and safety. The objective of this research is to look into the function of emotional intelligence in the field of nursing, particularly in the field of conflict management. This study aims to improve our awareness of effective conflict resolution tactics in healthcare by examining how nurses use emotional intelligence abilities to negotiate conflicts. The study also aims to investigate the challenges that nurses encounter while dealing with conflicts, as well as the impact of emotional intelligence on patient care results. The study's goal is to provide insights and recommendations for developing emotional intelligence in nurses and enhancing conflict resolution methods in healthcare settings through empirical research and qualitative analysis. Finally, the purpose is to contribute to the advance of nursing practice and the delivery of high-quality, patient-centered care.

Keywords: Emotional intelligence, Conflict management, Nurse, Healthcare, Communication.

Introduction

Conflicts are an unavoidable part of nursing practice, and they occur frequently in healthcare settings due to the intricate nature of patient care and interprofessional discussions. Effective conflict resolution is essential for sustaining a healthy work

atmosphere and delivering high-quality patient outcomes. Nurses, as frontline carers, play a critical role in conflict resolution, drawing on their specific set of skills and emotional intelligence (EI) abilities. Interestingly, emotional intelligence influences not just nurses' conflict resolution strategies but also their job satisfaction. According to Soriano-Vázquez, Castro, and Morales-García (2023), emotional intelligence is associated with higher job satisfaction among nurses, with conflict management serving as a mediator in this relationship. Furthermore, Mohamed and Yousef (2014) discovered that nurse supervisors at Assiut University Hospitals adopt both forceful and smooth conflict management techniques, with emotional intelligence influencing their approach. Given the established impact of emotional intelligence on conflict management in nursing, there is an increasing understanding of the need for training programmes that focus on both conflict resolution and emotional intelligence abilities. Such programmes can provide nurses with the tools and competences they need to effectively handle disputes, thereby contributing to improved patient treatment and satisfaction among staff members. In this article, we will be looking at the complex connection which exists between emotional intelligence and conflict resolution in nursing, based on insights from previous studies. By analysing the outcomes of these research, we hope to gain a thorough knowledge of how emotional intelligence influences nurses' approaches to conflict resolution, as well as the broader implications for healthcare organisations. Through this investigation, we seek to highlight the significance of incorporating emotional intelligence training into nursing education and professional development activities in order to improve nurses' conflict resolution abilities and overall workplace outcomes.

2.Literture Review

2.1 Emotional intelligence

Mayer and Salovey (1993) define emotional intelligence as the ability to monitor one's own emotions as well as those of others. It entails the ability to distinguish between distinct emotions and use this awareness to guide one's thoughts and actions. Building on this foundation, Mayer, Roberts, and Barsade (2008) expound on emotional intelligence as a human capacity, emphasising its importance in accurate thinking about emotions and using emotional understanding to improve cognitive processes. This integrative perspective emphasises the efficacy of specific-ability and integrative-model approaches to conceptualising and testing emotional intelligence. Furthermore, Davis (2018) investigates the possible ability of emotional intelligence to mitigate the negative effects of stressors, while the precise processes by which it promotes adaptability are unknown. This discovery indicates at the intricate connection between emotional intelligence and stress response, indicating areas for future research and investigation. Furthermore, Cherry, Fletcher, O'Sullivan, and Dornan (2014) investigated the potential for transformation of emotional intelligence in medical education. Their critical study demonstrates how emotional intelligence can help doctors provide compassionate and safe care, benefiting both patients and the medical profession as a whole. These findings illustrate emotional intelligence's broad ramifications across multiple domains, from personal growth to professional practice, as well as its critical role in creating empathic and productive interpersonal relationships.

2.2 EI Models

Mayer and Salovey proposed the *Ability Model* in 1997, which considers emotional intelligence as a collection of cognitive abilities related to the processing of emotional information. It is divided into four branches: recognising emotions, using emotions to facilitate thought, understanding emotions, and controlling emotions. In addition, study by Olderbak, Semmler, and Doebler (2018) on the four-branch model of ability emotional intelligence shows that comprehending emotions has the largest link with both fluid and crystallised intelligence, with stimulus type modulating this effect. This meta-analysis sheds insight on the complex interplay between various aspects of mental abilities and cognitive capacities.

The *Mixed Model*, created by Daniel Goleman in the mid-1990s, popularised EI in mainstream discourse. Goleman's approach consists of five components: self-awareness, self-regulation, motivation, empathy, and social skills. Unlike the ability model, Goleman's paradigm emphasises both cognitive and behavioural dimensions of emotional intelligence. Furthermore, Joseph and Newman (2010) conducted an integrated meta-analysis that emphasises the evolving relevance of emotional intelligence components in job performance. Their research found that tests based on mixed models of emotional intelligence explain more variance in work performance than cognitive ability and personality factors. This research emphasises the need of taking emotional intelligence into account in addition to other criteria for understanding and predicting workplace success.

The *Trait Model* conceptualises EI as a set of personality traits relevant to emotional functioning. Self-esteem, optimism, and resilience are considered key to EI under this theory.

The *Bar-On Model*, created by Reuven Bar-On, views EI as a collection of emotional and social skills which affect total well-being. Bar-On's model prioritises intrapersonal and interpersonal skills, as well as adaptation and stress management.

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT): This evaluation tool is based on Mayer, Salovey, and Caruso's EI ability paradigm. It assesses an individual's capacity to recognise, use, comprehend, and regulate emotions.

The Schutte Emotional Intelligence Scale (SEIS), created by Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim, is a self-report questionnaire that assesses emotional intelligence based on self-perceptions of emotional abilities and behaviours.

Boyatzis and Goleman developed the *Emotional Competence Framework*, which defines 12 competencies related to emotional intelligence, organised into four clusters: self-awareness, self-management, social awareness, social awareness, and relationship management.

2.3 Conflict management

Conflict management is the art and science of negotiating conflicts, disputes, or opposing viewpoints in a constructive and productive manner. It entails a variety of strategies and techniques designed to resolve problems while maintaining relationships and increasing mutual understanding. Active listening, empathy, communication, negotiation, and problem-solving are all examples of effective conflict management abilities. Individuals and groups can avoid escalation, minimise negative effects, and promote positive outcomes

by resolving conflicts proactively and jointly. Furthermore, conflict resolution fosters growth and development by encouraging people to investigate opposing ideas, establish common ground, and seek mutually beneficial solutions. Finally, understanding conflict resolution improves interpersonal relationships while also contributing to a harmonious and productive environment in personal, professional, and social situations. Furthermore, peaceful methods such as mediation and negotiation are critical for long-term conflict resolution, whereas coercive measures such as military operations or economic penalties may be used for short-term objectives (Muriuki, 2022). Nurses' conflict management tactics differ depending on age, professional background, and managerial position, with cooperation emerging as the most effective approach in public sector nursing (Lahana et al., 2019). Effective conflict resolution is critical for high-performance teams since it can lead to beneficial outcomes and higher quality production (Thakore, 2013). Conflict management involves implementing strategies for positive outcomes, employing techniques such as integration, accommodation, dominance, avoidance, and compromise (Swann 2019). These varied opinions underline the need of utilising a variety of tactics adapted to the individual circumstances and goals of conflict resolution efforts.

Classification of conflict

Workplace conflicts are frequently divided into different groups depending on their specific characteristics and origins. These classifications helps in understanding the complex dynamics of interpersonal relationships, organisational systems, and cultural contexts in which conflicts develop. Role conflicts, goal conflicts, resource conflicts, and other forms of conflict range from interpersonal disputes caused by personality and communication style differences to structural tensions caused by organisational policies and resource distribution. Furthermore, disputes might manifest as power struggles, procedural disagreements, or ethical quandaries, each requiring a different method to settlement. Recognising the different nature of disputes allows organisations to adjust their conflict resolution tactics to successfully address specific core causes, enabling collaboration, productivity, and a happy work environment. Conflicts in healthcare settings can take on new dimensions due to the high stress atmosphere, ethical considerations, and complex interplay of varied healthcare personnel. These conflicts could include arguments about care for patients decisions, treatment options, or resource distribution within the healthcare system. Furthermore, confrontations between healthcare personnel and patients or their families might emerge as a result of different expectations, communication problems, or cultural differences. Ethical conflicts, such as those involving end-of-life care, medical treatments, and patient confidentiality, exacerbate the panorama of healthcare problems. Effective conflict resolution in healthcare necessitates a deep understanding of medical ethics, interdisciplinary collaboration, and patient-cantered communication tactics. By handling healthcare conflicts proactively and constructively, healthcare organisations may protect patient safety, quality of care, and professional integrity, eventually improving both patient. Organizational conflicts can be effectively managed through diagnosis and intervention strategies, aiming to maintain a moderate level of conflict while helping members learn effective conflict handling styles (Rahim & Bonoma, 1979). Conflict management strategies focus on strategic implementation for positive outcomes,

encompassing integration, accommodation, domination, avoidance, and compromise (Swann, 2019). Additionally, studies aim to generalize theoretical approaches to studying conflicts, classifying them based on causes, coverage, involvement of team members, degree of flow, and phase of development, underscoring the importance of managing and preventing conflict situations in organizations (Абдыжалиева, 2022). Teams that prioritize content focus, discuss decisions, and assign tasks based on expertise are more likely to sustain top performance over time, highlighting the critical role of conflict resolution in team dynamics (Behfar et al., 2008). Moreover, understanding negotiation models like mutual gains and concession-convergence is key, while recognizing the varied roles played by outside interveners in conflict management (Rubin, 1994). Integrating these insights into conflict management approaches equips organizations with comprehensive strategies to foster collaboration, productivity, and a harmonious work environment.

Conflict Management Styles

Conflict management styles are the various techniques that individuals and organisations take to confront and resolve problems. These styles differ in their focus on assertiveness (the extent to which one's own wants are supported) and cooperativeness (the extent to which others' needs are taken into account). There are five basic conflict management styles that are generally identified.

Competing (or Assertive-Aggressive): This style is characterised by a high level of assertiveness and low levels of cooperation. Individuals that adopt this approach prioritise their own interests and ambitions over those of others, aiming to win at whatever cost. Competing may be suitable when rapid, decisive action is required or when one's position is secure.

Collaborating (or assertive-cooperative): Individuals with this personality style prioritise both their own and others' needs. Collaboration entails openly addressing all parties' problems and cooperating to create mutually beneficial solutions. This method is effective when long-term connections and innovative solutions are valued.

Compromising: Entails a modest level of aggressiveness and cooperation. Individuals that use this style strive to reach a middle ground by making concessions and devising solutions that partially meet everyone's needs. When time is of the essence and a rapid conclusion is necessary, compromise may appropriate.

Avoiding: This type of conduct is characterised by a lack of aggressiveness and cooperation. Individuals who avoid disputes choose to bypass or dismiss them entirely, generally because they are afraid of confrontation or believe the subject is unimportant. Avoidance may be helpful when emotions are high and a break is required.

Accommodating (or Passive-Cooperative): This involves a high level of cooperation and low assertiveness. Individuals that utilise this style prioritise the needs of others over their own, often giving in to others' requests in order to keep harmony. When it comes to maintaining connections or demonstrating goodwill, accommodating may be appropriate.

The Link between Emotional Intelligence and Conflict Management Styles.

The relationship between emotional intelligence (EI) and conflict management styles is multifaceted and has significant implications for job performance across various organizational contexts. Research indicates that EI positively impacts job performance in

public organizations, with integrating conflict management styles directly contributing to improved performance (Shih & Susanto, 2010). Moreover, emotional intelligence abilities, such as problem-solving, social responsibility, and impulse control, significantly influence workplace conflict management styles, suggesting a link between EI competencies and effective conflict resolution strategies (Hopkins & Yonker, 2015). However, the impact of emotional intelligence on conflict management styles may vary depending on cultural factors, as evidenced by studies showing that in a Chinese cultural context, agreeable conflict management styles positively affect job performance, while active conflict styles have a negative moderating effect (Chen et al., 2016).

Furthermore, emotional intelligence plays a vital role in team dynamics, positively influencing team performance and the utilization of different conflict resolution methods (Jordan & Troth, 2004). Additionally, emotional intelligence acts as a full moderator in small and medium-sized enterprises (SMEs), where conflict management styles significantly impact employee performance, with leadership playing a moderating role (Wardana et al., 2023). Notably, emotional intelligence also influences employee performance through cooperative conflict management styles, such as integrating and compromising, underscoring its importance in fostering collaboration and achieving organizational goals (Noermijati et al., 2019). Moreover, personality traits, such as agreeableness and extraversion, interact with emotional intelligence to influence conflict perception and management styles, ultimately impacting job performance and the overall conflict experience in the workplace (Ayub et al., 2017). Finally, emotional intelligence, along with transformational leadership styles, correlates positively with job performance, suggesting that EI may enhance productivity through its influence on leadership behaviors and organizational culture (Shahhosseini et al., 2013). In conclusion, the interplay between emotional intelligence, conflict management styles, and job performance underscores the importance of developing EI competencies and adopting effective conflict resolution strategies for individual and organizational success.

Malmrud and Löf (2013) discovered a link between high levels of self-regulation and the adoption of enhanced conflict resolution strategies. Similarly, in a research of nurse managers, it was discovered that those with high emotional intelligence used integrating, compromising, and obliging conflict resolution strategies, whereas those who had low emotional intelligence used dominating and avoiding styles. Notably, the majority of studies on this association were undertaken in countries such as Australia (Jordan et al., 2004), India (Godse et al., 2010), or Taiwan (Shih et al., 2010), with minimal representation from the Middle East, where cultural norms and views differ dramatically. As a result, our initial theory was revised accordingly.

5. HYPOTHESES OF THE STUDY

H1: Conflict management style *Avoiding* is negatively correlated with EI.

Collaboration and competitive techniques for resolving conflicts are linked to an individual's emotional intelligence and their capacity to handle their own and others' emotions (Godse et al., 2010; Jordan et al., 2004). As per Goleman's renowned publication "Working with Emotional Intelligence" dating back to 1998, individuals with high emotional intelligence possess superior conflict resolution abilities and are more adept at effective

collaboration through emotion management to devise solutions that cater to the needs of all parties involved (cited in Jordan et al., 2004, p.209). For instance, studies conducted among both Chinese and Indian populations reveal a favorable correlation between emotional intelligence and the integration, compromise, and dominance strategies in conflict management (Zhang et al., 2015; Bhattacharya et al., 2016).

H2: Conflict management style collaborating is positively correlated with EI.

H3: Conflict management style competing is positively correlated with EI.

According to Shih et al. (2009), a compromise management style is linked to higher emotional intelligence. The study found inconsistencies in the data, indicating a need for further investigation of the links. Thus, the following:

H4: Conflict management style Compromising is positively correlated with EI.

H5: Conflict management style Accommodating is negatively correlated with EI.

Methodology

The study targeted nurses from private hospital based in Kerala. The sample consisted of 70 participants (40 males, 30 females) with a response rate of 53%. Participants' ages were divided into 4 categories: 48.6% were aged 21-30, 28.6% were aged 31-40, 15.7% were aged 41-50, and 7.1% were aged 51-60. 19.7% had postgraduate qualifications. The participants held various roles in nursing profession. However, due to the low response rate, significant statistical results for employees' positions could not be provided.

STATEMENT OF THE PROBLEM

Despite the importance of emotional intelligence (EI) in the field of nursing, there is a lack of understanding on how nurses engage EI in conflict resolution situations. While prior study has shown that EI has a favourable influence on conflict management methods among nurses, there has been little investigation into the specific EI competences that lead to effective conflict resolution. Furthermore, more research is needed to determine the impact of EI on other components of conflict resolution, such as communication, teamwork, and patient care results. Furthermore, the disparity in findings addressing the association between EI and conflict management among various levels of nursing personnel, such as nurses, nursing students, and nurse managers, necessitates further investigation. Addressing knowledge gaps is critical for establishing focused interventions and training programmes.

1. What specific emotional intelligence competencies do nurses utilize when managing conflicts in healthcare settings?
2. What are the conflict management strategies used by nurses in health care settings
3. What is the impact of nurses' emotional intelligence on patient care outcomes in the context of conflict management?
4. How can targeted interventions and training programs enhance nurses' emotional intelligence competencies and improve conflict resolution practices in healthcare settings?

The above research questions aim to investigate the complex relationship between emotional intelligence and conflict management in the field of nursing, focusing on competences, communication, outcomes, and solutions.

OBJECTIVES OF THE STUDY

The overall objective is to evaluate the effects of emotional intelligence on the conflict management of nurses.

- To identify the conflict management styles employed by nurses
- To examine the specific emotional intelligence competencies utilized by nurses in managing conflicts
- To explore the challenges faced by nurses in applying emotional intelligence to manage conflicts effectively

3.1 Results and discussions

The table 1 Demonstrates nurses reported that they either use avoiding or compromising conflict management style by higher mean calculated in below table.

Table 1
Means and Standard Deviations for the Conflict Management Styles

	Mean	Standard deviation
Avoiding	6.77	1.80
Compromising	6.59	1.69
Accommodating	5.90	2.11
Competing	5.55	2.60
Collaborating	4.85	1.64

The data on conflict management styles indicates that Avoiding (mean = 6.77, SD = 1.80) and Compromising (mean = 6.59, SD = 1.69) are the most frequently employed strategies, suggesting a general preference for avoiding direct confrontation or finding middle ground. Accommodating (mean = 5.90, SD = 2.11) is moderately used, showing that while some individuals prioritize others' needs over their own, this is not as common as avoiding or compromising. Competing (mean = 5.55, SD = 2.60) is less frequently used, with a high variability indicating differing individual preferences for assertive conflict resolution. Collaborating (mean = 4.85, SD = 1.64), the least used style, demonstrates a consistent but lower preference for cooperative conflict resolution. These findings suggest that while people generally avoid conflicts or seek compromises, assertive and cooperative strategies are less common and vary significantly among individuals.

	Competing	Collaborating	Compromising	Avoiding	Accommodating
Perception of Emotions	.36**	-.12	-.28*	-.09	-.28*
Managing of Emotions	.23	-.06	-.21	-.06	-.18
Managing Others' Emotions	.06	-.03	-.14	-.03	.14
Utilization of Emotions	.10	-.05	.14	-.14	-.16
Emotional Intelligence	.30*	-.10	-.21	-.09	-.21

This study found that individuals with high EI tend to choose the competitive conflict management technique over other approaches. The findings are consistent with Jordan and Troth's (2004) investigation Australia. Individuals that use the contending or dominating approach prioritize their demands and concerns. The study contradicts the findings of Godse et al. (2010) in India. The study found no association between emotional intelligence and competing management styles. The researchers attributed their findings to the collectivistic nature of Indian culture. Acceptable norms include respecting others' needs and concerns and avoiding conflict.

Despite the reported close averages of using other styles of conflict management (see Table 1); no associations were found between EI and these styles. The results contradict previous researches (Godse et al., 2010; Jordan et al., 2004; Shih et al., 2009). These findings may be attributed to Egyptian employees' low adoption of collaboration approaches in the workplace. For example, one study demonstrated that the flow of information between Egyptian employees is very slow due to the prevailing culture of high degree of power distance (based on Hofstede's cultural Framework) and the Egyptian people's tendency to move from collectivistic to individualistic culture post 2011, specifically in the workplace (Dennis et al., 2011). In addition, in a study of comparative analysis of conflict styles across cultures, the researchers argued that the Arab Middle Eastern employees prefer the avoiding style in handling interpersonal conflicts in the workplace (Elsayed-El Jiously et al., 1996).

Conclusion

In this study, the relationship between emotional intelligence and the different conflict management styles that employees may adopt during an interpersonal conflict was investigated. It is important to acknowledge the limitations of the present study. Primarily, the sample size was relatively small. Hence, our results must be interpreted with caution and could not be generalized. Second, the long questionnaire may have caused employees to answer the questions haphazardly or randomly out of boredom, fatigue, or time constraints. Third, no cause and effect relationships were examined. Our study revealed important associations that require further investigations.

References

1. Ahmed, S. S. S., Aal, M. H. a. E., Barakat, M. M., & Sabra, A. E. (2022). Effect of Emotional Intelligence Training Program on Burnout among Psychiatric Mental Health Nurses. *Journal of Nursing Science Benha University/Journal of Nursing Science Benha University*, 3(1), 595–609 <https://doi.org/10.21608/jnsbu.2022.215176>
2. Ali, Y. Y., Morad, A. D., & Sabri, P. R. (2019). Emotional intelligence dimensions as predictors of coping reactions to stress in nursing practitioners. *FUKUSHIMA JOURNAL OF MEDICAL SCIENCE*, 65(3), 99–108. <https://doi.org/10.5387/fms.2019-11>
3. Alsufyani, A. M., Aboshaiqah, A. E., Alshehri, F. A., & Alsufyani, Y. M. (2022). Impact of emotional intelligence on work performance: The mediating role of occupational stress among nurses. *Journal of Nursing Scholarship*, 54(6), 738–749. <https://doi.org/10.1111/jnu.12790>

4. Chauhan, R., Kaul, V., & Maheshwari, N. (2022). Impact of Emotional Intelligence on Job Performance of Nurses with the Mediating Effect of Job Satisfaction. *Asia Pacific Journal of Health Management*, 17(2). <https://doi.org/10.24083/apjhm.v17i2.1257>
5. Chen, J., Li, J., Cao, B., Wang, F., Luo, L., & Xu, J. (2019). Mediating effects of self-efficacy, coping, burnout, and social support between job stress and mental health among young Chinese nurses. *Journal of Advanced Nursing*, 76(1), 163–173. <https://doi.org/10.1111/jan.14208>
6. Del Carmen Pérez-Fuentes, M., Del Mar Molero Jurado, M., Martín, A. B. B., Del Mar Simón Márquez, M., Martínez, Á. M., & Linares, J. J. G. (2018). The mediating role of perceived stress in the relationship of Self-Efficacy and work engagement in nurses. *Journal of Clinical Medicine*, 8(1), 10. <https://doi.org/10.3390/jcm8010010>
7. Del Mar Molero Jurado, M., Del Carmen Pérez-Fuentes, M., Ruiz, N. F. O., Del Mar Simón Márquez, M., & Linares, J. J. G. (2019). Self-Efficacy and emotional intelligence as predictors of perceived stress in nursing professionals. *Medicina*, 55(6), 237. <https://doi.org/10.3390/medicina55060237>
8. Foster, K., Fethney, J., McKenzie, H., Fisher, M., Harkness, E., & Kozlowski, D. (2017). Emotional intelligence increases over time: A longitudinal study of Australian pre-registration nursing students. *Nurse Education Today*, 55, 65–70. <https://doi.org/10.1016/j.nedt.2017.05.008>
9. Foster, K., McCloughen, A., Delgado, C., Kefalas, C., & Harkness, E. (2014). Emotional intelligence education in pre-registration nursing programmes: An integrative review. *Nurse Education Today*, 35(3), 510–517. <https://doi.org/10.1016/j.nedt.2014.11.009>
10. Ghawadra, S. F., Abdullah, K. L., Choo, W. Y., Danaee, M., & Phang, C. K. (2020). The effect of mindfulness-based training on stress, anxiety, depression and job satisfaction among ward nurses: A randomized control trial. *Journal of Nursing Management*, 28(5), 1088–1097. <https://doi.org/10.1111/jonm.13049>
11. Görgens-Ekermans, G., & Brand, T. (2012). Emotional intelligence as a moderator in the stress–burnout relationship: a questionnaire study on nurses. *Journal of Clinical Nursing*, 21(15–16), 2275–2285. <https://doi.org/10.1111/j.1365-2702.2012.04171.x>
12. Grunberg, N. E., McManigle, J. E., & Barry, E. S. (2020). Using social psychology principles to develop emotionally intelligent healthcare leaders. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01917>
13. Heffernan, M., Griffin, M. T. Q., McNulty, S. R., & Fitzpatrick, J. J. (2010). Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice*, 16(4), 366–373. <https://doi.org/10.1111/j.1440-172x.2010.01853.x>
14. Kadi, S. A., Beydoun, A. R., & Abbas, A. E. (2023). Nurses' Emotional intelligence, Satisfaction in Lebanon: The Mediating role of job stress. *International Review of Management and Marketing*, 13(2), 1–9. <https://doi.org/10.32479/irmm.14026>
15. Karimi, L., Cheng, C., Bartram, T., Leggat, S. G., & Sarkeshik, S. (2014). The effects of emotional intelligence and stress-related presenteeism on nurses' well-being. *Asia Pacific Journal of Human Resources*, 53(3), 296–310. <https://doi.org/10.1111/1744-7941.12049>

16. Karimi, L., Leggat, S., Donohue, L., Farrell, G., & Couper, G. (2014). Emotional rescue: the role of emotional intelligence and emotional labour on well-being and job-stress among community nurses.. *Journal of advanced nursing*, 70 1, 176-86.
<https://doi.org/10.1111/jan.12185>.
17. Katana, M., Röcke, C., Spain, S. M., & Allemand, M. (2019). Emotion regulation, Subjective Well-Being, and Perceived stress in daily life of geriatric nurses. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01097>
18. Landa, J. M. A., López-Zafra, E., Martos, M. P. B., & Del Carmen Aguilar-Luzón, M. (2007). The relationship between emotional intelligence, occupational stress and health in nurses: A questionnaire survey. *International Journal of Nursing Studies*, 45(6), 888–901. <https://doi.org/10.1016/j.ijnurstu.2007.03.005>
19. Lewis, G. M., Neville, C., & Ashkanasy, N. M. (2017). Emotional intelligence and affective events in nurse education: A narrative review. *Nurse Education Today*, 53, 34–40.
<https://doi.org/10.1016/j.nedt.2017.04.001>
20. Li, X., Chang, H., Zhang, Q., Yang, J., Liu, R., & Song, Y. (2021). Relationship between emotional intelligence and job well-being in Chinese clinical nurses: multiple mediating effects of empathy and communication satisfaction. *BMC Nursing*, 20(1).
<https://doi.org/10.1186/s12912-021-00658-4>
21. Lu, Q., Wang, B., Zhang, R., Wang, J., Sun, F., & Zou, G. (2022). Relationship between emotional intelligence, Self-Acceptance, and positive coping styles among Chinese psychiatric nurses in Shandong. *Frontiers in Psychology*, 13.
<https://doi.org/10.3389/fpsyg.2022.837917>
22. Mao, L., Huang, L., & Chen, Q. (2021). Promoting resilience and lower stress in nurses and improving inpatient experience through emotional intelligence training in China: A randomized controlled trial. *Nurse Education Today*, 107, 105130.
<https://doi.org/10.1016/j.nedt.2021.105130>
23. Musio, M. E., Ginogi, F., Casini, S., Lucente, G., Timmins, F., Hayter, M., Catania, G., Zanini, M., Aleo, G., Sasso, L., & Bagnasco, A. (2024). The impact of emotional intelligence on nurses' professional Quality of life in Pre-Hospital Emergency Settings: a Multicentre Mixed-Method study. *Journal of Clinical Nursing*. <https://doi.org/10.1111/jocn.17511>
24. Napirah, M. R., Untad, V., & Alfani, S. (2021). Correlation between Emotional Intelligence and Nurse Work Stress in Hospitalization Services, Undata Hospital. *Open Access Macedonian Journal of Medical Sciences*, 9(G), 337–340.
<https://doi.org/10.3889/oamjms.2021.6935>
25. Nightingale, S., Spiby, H., Sheen, K., & Slade, P. (2018). The impact of emotional intelligence in health care professionals on caring behaviour towards patients in clinical and long-term care settings: Findings from an integrative review. *International Journal of Nursing Studies*, 80, 106–117. <https://doi.org/10.1016/j.ijnurstu.2018.01.006>
26. Por, J., Barriball, L., Fitzpatrick, J., & Roberts, J. (2011). Emotional intelligence: Its relationship to stress, coping, well-being and professional performance in nursing students. *Nurse Education Today*, 31(8), 855–860.
<https://doi.org/10.1016/j.nedt.2010.12.023>

27. Raghubir, A. E. (2018). Emotional intelligence in professional nursing practice: A concept review using Rodgers's evolutionary analysis approach. *International Journal of Nursing Sciences*, 5(2), 126–130. <https://doi.org/10.1016/j.ijnss.2018.03.004>
28. Saikia, M., George, L. S., Unnikrishnan, B., Nayak, B. S., & Ravishankar, N. (2023). Thirty years of emotional intelligence: A scoping review of emotional intelligence training programme among nurses. *International Journal of Mental Health Nursing*, 33(1), 37–51. <https://doi.org/10.1111/inm.13235>
29. Sharma, J., Dhar, R. L., & Tyagi, A. (2015). Stress as a mediator between work–family conflict and psychological health among the nursing staff: Moderating role of emotional intelligence. *Applied Nursing Research*, 30, 268–275. <https://doi.org/10.1016/j.apnr.2015.01.010>
30. Sharma, P., Srivastava, K., Landge, J., & Vyas, S. (2022). Impact of Imparting Emotional Intelligence Skills Training Program to Enhance Emotional Intelligence and Work Stress among Staff Nurses of Tertiary care Hospital of North Gujarat. *Medical Journal of Dr D Y Patil Vidyapeeth*, 16(3), 348–352. https://doi.org/10.4103/mjdrdypu.mjdrdypu_337_21
31. Shinta, G. A., Suratmi, S., & Qowi, N. H. (2023). Emotional intelligence and nurses' occupational stress. *Adi Husada Nursing Journal*, 9(1), 51. <https://doi.org/10.37036/ahnj.v9i1.398>
32. Sims, T., Spratling, R., Grantham, C. H., & Cranford, J. (2024). Understanding and Managing Emotional Intelligence for Nursing Students: A Classroom Innovation. *Journal of Nursing Education*, 64(1), 52–55. <https://doi.org/10.3928/01484834-20240419-03>
33. Tesi, A. (2021). A dual path model of Work-Related Well-Being in healthcare and social work settings: the interweaving between trait emotional intelligence, End-User job demands, coworkers related job resources, burnout, and work engagement. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.660035>
34. Theodoratou, M., & Papadopoulos, A. (2024). "Emotional Intelligence, Psychological Distress, and Conflict Resolution among Healthcare Professionals." *European Psychiatry*, 67(S1), S832–S833. <https://doi.org/10.1192/j.eurpsy.2024.1737>
35. Urtubia-Herrera, V., Navarta-Sánchez, M. V., Palmar-Santos, A. M., Pedraz-Marcos, A., García-Gomez, A., Luis, E. O., & Bermejo-Martins, E. (2024). The relationship between sense of coherence and emotional intelligence as individual health assets for mental health promotion in students and healthcare professionals: a scoping review. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1304310>
36. Yildirim-Hamurcu, S., & Terzioglu, F. (2021). Nursing students' perceived stress: Interaction with emotional intelligence and self-leadership. *Perspectives in Psychiatric Care*, 58(4), 1381–1387. <https://doi.org/10.1111/ppc.12940>

AN ANALYSIS OF WOMEN SUSTAINABLE COSMETICS CHOICES IN INDIA

Pooja. S

PG Schloar, Department of Economics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore - 43

ABSTRACT

Environmental degradation resulting from unsustainable business and consumption patterns is one of the greatest challenges of our time. The study constitutes a quantitative analysis of the Women interest in green cosmetics and their desire for the presence of natural, eco-friendly ingredients in cosmetic products as the substances in the non- green cosmetics harm both the environment and human health. The findings reveals that the increasing global population driving up product demand and the stark reality of finite, overused natural resources cosmetic market grow rapidly day by day as the market size of India in the cosmetic industry in FY2023 is 11% CAGR with market share of 15 bn USD projected to grow in the future years expected to reach 33 bn USD. The study suggests that BPC industry should include **Sustainability + Preservative** free, for e.g. Beauty products formulated with as little amount of water as possible, higher usage of active ingredients / botanical oils which are harm- free to the people and environment respectively.

Keywords: Environmental Degradation, Women Interest, Natural Resources, BPC and Sustainability,

INTRODUCTION

Environmental degradation resulting from unsustainable business and consumption patterns is one of the greatest challenges of our time. Ecological degradation and unsustainable natural resource management disproportionately affect the poor in developing countries. Since women constitute the majority of the world's poor and are comparatively more dependent on scarce natural resources, they suffer in particular from these effects and the repercussions of climate change. The cosmetics industry, which is an economically important industry worldwide, has production processes that cause chemical pollution, water scarcity, waste management problems, ecosystem imbalances, and deterioration of human health. Increasing awareness among consumers about the toxic effects of traditional cosmetic products attracts consumers' interest in green cosmetic products. In short: climate change impacts are not gender-neutral. The opportunities the green economy potentially holds for women's participation in green growth relate to green product consumption eliminating chemical inputs and green consumerism creating new business opportunities and markets, MSME development and female entrepreneurship (including new professions, product development and use of green technology (*Federal Ministry for Economic Cooperation and Development, 2023*)).

The term 'Cosmetic' refers to a very diverse range of products, including styling gels, Fragrances (perfumes, cologne), colour cosmetics (Lip sticks, blush), and personal care items (Creams, oils, shampoos, cleansers and even toothpaste) (*Divina maria Alex, 2023*). In the contemporary world, beauty is advancing across all categories as it demonstrated its

resilience in the face of major economic downturns and macroeconomic disruptions. Health consciousness is the “degree of the readiness to perform health actions” in which consumers prefer products that are safe for their skin and are less likely to contain harmful chemicals or allergens, therefore health consciousness affects consumers attitudes and purchasing preferences towards natural cosmetic products.

Challenges of Cosmetic Industry

The cosmetics industry faces challenges of an increasing global population driving up product demand and the stark reality of finite, overused natural resources. In the face of this pressure, sustainability emerges as an urgent necessity. This industry is known for its high consumption of natural resources and environmental footprint such as energy intensive manufacturing and production of plastic packaging. A long term, sustainable vision is required for the cosmetics sector. When it comes to cosmetics, "green" and "sustainable" refer to the use of natural compounds derived from renewable sources rather than harmful ones present in popular products.

Statement of the Problem

The substances in the non- green cosmetics harm both the environment and human health. (Neha Rani ,2022) During the COVID-19 pandemic when all the retail shops, parlours and markets are closed and people have nothing to do at home, they start using various homemade remedies for keeping their skin and body healthy and good-looking because in this period they don't have any alternative beauty solutions which became the significant reason for the dramatic shift. So, people now have started using green products that are safe for the environment and contribute to sustainable development. Consumers are increasingly conscious of the ingredients in their personal care products, fuelling demand for products perceived as safe, ethical, and environmentally friendly. Blending traditional Indian beauty practices with modern science has created a unique niche where ancient wisdom meets contemporary needs. independently as well as: a gender perspective with a focus on the (potential) participation of women, a greening perspective and sustainable development perspective.

Figure 1.0



Figure1.1

The figure circle process depicts the contribution of Beauty and Personal Care products (BPC) which give a leg up to Accelerated growth inculcating resilient and innovation driven market which yield high gross margins.

Women and Consumer Behaviour in Cosmetic industry

Anindita Audhkhasi (2021) stated that the success of the cosmetic industry has been accompanied by a corresponding decline in women's self-worth, confidence, and value. It was observed that the economic class is generally categorized into upper, middle, and lower classes, based on accumulated economic assets, with each class being distinguished by a set of interests, lifestyles, and choices that are reflected in their behaviour². Regarding the beauty market, it was noted that Indian brands (both regional and national) hold a significant presence in the mass category, producing products perceived as lifestyle enhancements (Consulate General of Israel, Mumbai – Economic Department & Ministry of Economy and Industry, Foreign Trade Administration, 2018). The factors anticipated to drive the market include: a) the increasing awareness of beauty consciousness, especially among Gen Z; b) the transition from rural to urban lifestyles due to media influence and economic growth; and c) the shift from homemade to commercial products. Based on this background the study has following objectives:

- To understand the gender influencing perceptions of sustainable cosmetics.
- To explore the relationship between women consumer behaviour in relation to Green cosmetic industry in India.

Review of the Literature

Abdullah Bin Junaidet al., (2013) examined the consumption behaviour of young females and their attitudes towards cosmetics in Delhi/NCR which explains the influence of customer decision making process in purchasing the dermatological products in Delhi/NCR. The findings reveals that that these days female consumers prefer more of cosmetic products which are made from the natural ingredients in other words we can say that they prefer herbal cosmetic products that provides the herbal cosmetic industry a great opportunity to grab the cosmetic market by providing more and more new herbal cosmetic brands.

Sabahat Shakeel et al., (2019) analyzed the factors that affect the consumer buying behavior for organic and non-organic cosmetics. Consumer buying behavior is a topic of significant importance to marketers and to businesses as well. It is crucial to understand how consumer buying behavior functions. The findings reveals that the brand name showing what a company is about and Health- consciousness, environmental consciousness, as well as appearance consciousness would promote the ambience of the store environment.

Tavishi Tewary et al., (2021) assessed the influence of awareness of the women consumers regarding individual health and environmental health, price sensitivity, availability of the brands that are organic in nature on the consumer's attitude towards purchasing organic cosmetic products. The findings reveal that consumers prefer to purchase organic products as their belief in the environment's concern, and its importance has increased.

Anindita Audhkhasi et al., (2021) analysed how psychological and economic factors have influenced the consumer behaviour of women in terms of cosmetic products and contributed to this boost which the heteronormative beauty norms have played in establishing a culture that rewards 'femininity' and its consequent impact on psychology and cosmetic buying behaviour of women. The findings show the evidence of how the cosmetic

industry capitalises women's insecurities and contributes to gender socialisation and inequality and beauty standards and patriarchal norms have willed women into paying a higher price than men for the same cosmetic product, thereby aiding their own economic subjugation.

Vandana Tripathi Nautiyal et al., (2022) demonstrated the demand for the workplace clothing need and preference of urban women working in corporates as in recent time there has been a surge in demand for sustainable products due to growing awareness of sustainable practices amongst Indian consumers. The findings reveal that A large number of consumers wants to practice sustainability in their Fashion choices and to some extent they are also ready to pay more for it. In such cases the women's western office wear brands need to offer sustainable material choices in high quality and at better prices.

Neha rani et al., (2022) The study reveals that young female consumers in Bhiwani District are knowledgeable about green cosmetic products and generally have a positive attitude toward them. However, some prefer homemade remedies using natural ingredients such as Aloe vera, Multani Matti, and castor oil over purchasing green cosmetic products. The study also suggests that government intervention is necessary to encourage the production and adoption of green cosmetic products.

Marina Leite Mitterer-Daltoé et al., (2023) assessed the use of cosmetic creams and the perception of natural and eco-friendly products by women and to explore the impacts of their personal characteristics. The findings shows that Women with a postgraduate education presented a higher frequency of use and spending on cosmetic creams and only the postgraduate women presented a concern about natural and eco-friendly cosmetic creams, although they stated a lack of knowledge about the possible adverse health effects caused by synthetic ingredients in cosmetic creams.

Divina Maria Alex (2023) emphasized that gender influences, this study explores Kerala, India's Generation Z's sustainable cosmetics usage. The findings reveal that women are overwhelmingly aware of sustainability, have a similar gender distribution, and favour online shops. Use of organic ingredients and a heightened consciousness of health and skin play a pivotal role in their decision-making when opting for sustainable cosmetics.

Vasanth et al., (2024) investigated the consumer buying behavior and attitudes towards organic cosmetic products in Coimbatore city, India which aims to evaluate consumer awareness, brand perceptions, and demographic profiles related to organic cosmetics. Factors such as ingredient transparency, health considerations, sustainability preferences, and the influence of marketing strategies on consumer choices. The Findings revealed there's a strong interest in organic cosmetics among the youth demographic, with a balanced representation of genders.

İpek Kazançoğlu et al., (2024) examined the female consumers' attitudes towards green cosmetics. The cosmetics industry, which is an economically important industry worldwide, has production processes that cause chemical pollution, water scarcity, waste management problems, ecosystem imbalances, and deterioration of human health. Increasing awareness among consumers about the toxic effects of traditional cosmetic products attracts consumers' interest in green cosmetic products, and results shows that green cosmetics industry contributes to the environmental friendliness of the sectors.

Huong V.T.M et al., (2024) investigated on factors affecting consumers repurchase intentions of skincare cosmetics in Can Tho City found that clear, concise, and consumer-centric communication, emphasizing the emotional benefits of products, and fostering trust through transparency are key strategies for encouraging repurchase intentions.

Bang Nguyen-Viet et al., (2024) investigated the variables that impact Vietnamese consumers' decision-making processes toward green beauty care products. Regardless of manufacturers' efforts to enhance consumer awareness via green advertising, consumer skepticism toward these advertisements creates doubt and consequently reduces positive attitudes and intentions to buy green products. The Findings reveals that This emphasizes the need for companies to have educational responsibilities regarding AW issues, particularly because this concept is relatively novel to Vietnamese customers.

Siphiwe Dlamini et al., (2024) investigated green cosmetic purchase behaviour of female consumers in South Africa found that awareness of green products does not influence attitudes toward green cosmetic products. However, the lack of product information contributes significantly to the gap between environmental concern and actual green purchase behaviour.

METHODOLOGY

The study constitutes a quantitative analysis of the Women's interest in green cosmetics and their desire for the presence of natural, eco-friendly ingredients in cosmetic products. This research utilizes secondary data obtained from government databases and industry reports spanning the fastest growing industries within the Indian economy and women are more conscious and knowledgeable about environmental sustainability than men, and have the right attitudes and behaviour's regarding environmental concerns. India's Beauty and Personal Care (BPC) market is on a dynamic growth trajectory, reflecting the country's diverse and evolving consumer base, increasing disposable incomes and rising awareness of personal grooming and wellness. The BPC segment is large, and one of the fastest-growing industries within the Indian economy which provides a comprehensive understanding of the Indian BPC market, offering insights into the current landscape, emerging trends, challenges, and potential focus areas for sustainable growth.

Major Findings of the Study Women's Willingness to make lifestyle compromises to help the environment in India

Table 1.0

<i>Category</i>	Agree or strongly agree	Disagree or strongly disagree
Protecting the environment can boost the economy	64	8
I am willing to make compromises in my current lifestyle for the benefit of the environment	65	10
Environmental policies introduced by the government should not cost me extra money	63	11
Environmental issues will be resolved primarily through	45	18

technological progress		
Environmental issues will be resolved mainly through individuals voluntarily changing their behaviour	56	17
Environmental issues should be resolved mainly through public policies	55	13
Environmental issues should be dealt with primarily by future generations	27	50
Environmental impacts are frequently overstated	31	45

Source: World Bank Group ,2023.

Figure 1.2
Willingness to make lifestyle compromises to help the environment



The figure 1.2 illustrates the willingness of women to make lifestyle compromises to help the environment by engaging in sustainable practices. The tree map functions as a visualization composed of nested rectangles. These rectangles represent certain categories within a selected dimension and are ordered in a hierarchy, or “tree.” This particular map explains the dimension of women’s willing to make an environmentally friendly life by switching over to sustainable lifestyle and the awareness about the environmental concern.

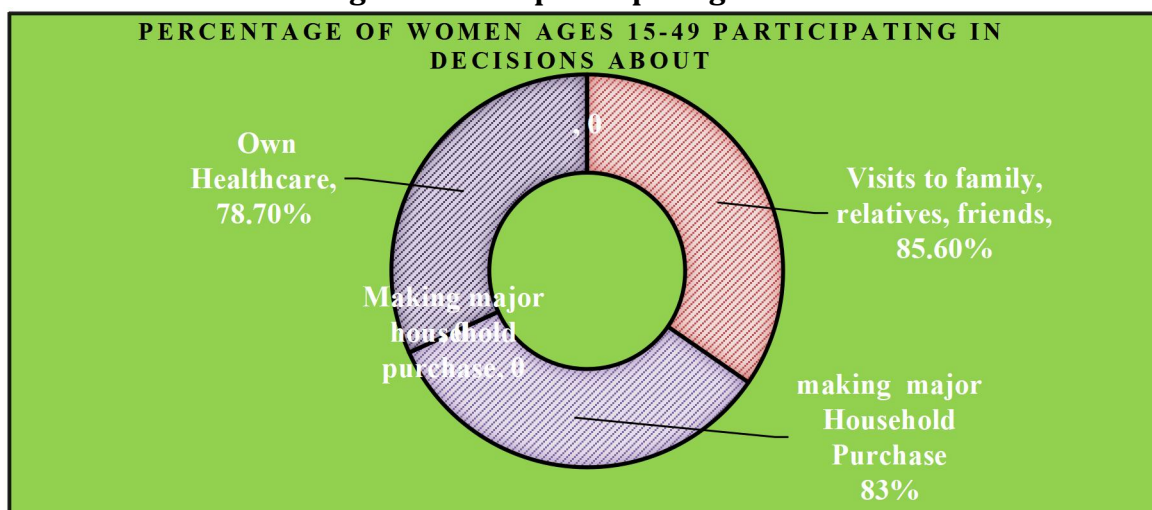
Percentage of women in ages 15-49 participating in decisions on consumption expenditure

Table 1.1

Participation Criteria	In percentage (%)
Visits to family, relatives, friends	85.6%
Making major household purchase	83%
Own Healthcare	78.7%

Source: World Bank Group, 2024

Figure 1.3
Women in ages of 15-49 participating in decisions about



The figure 1.3 illustrates the percentage of women under the age category from 15- 49 participating in the decisions about their own health care which they are intricated up to 78.70%, Visit to family, relatives, 85.60%, whereas making major household purchase is up to 83% which outlines there has been notable increase in the decision-making role of women in relation to their consumption behaviour.

Cosmetic Products: A Globally Attractive Segment in relation to Women

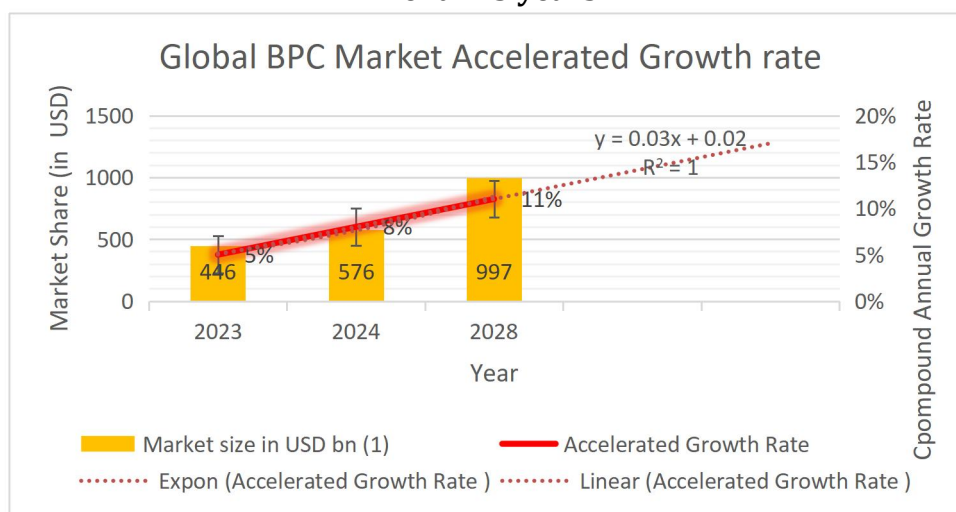
Table 1.2

S.no	Year	Market size in USD bn ⁽¹⁾	CAGR (%)
1	2023	446	5%
2	2024	576	8%
3	2028	997	11%

Source: BDO India Research,2023

Figure 1.4

Accelerated Growth rate – Global BPC market expected growth at 8% CAGR in the next 4- 5 years



Source: Binder Dijker Otte India ,2024

The figure1.3 illustrates expected Compound Annual Growth Rate of the global BPC market for the next 4-5 years. The market size of 446 bn USD has been increased to 576 bn USD with 5% CAGR and expected grow at 8% CAGR with market share of 8%- 11% in 2028. BPC is the only category, amongst key consumption categories in the Global market with positive performance in volume growth in 2023.The Increased Beauty and personal care products spending, especially by the Gen Z has been dramatically increased which increasingly reflecting in its products to cater wider needs of consumers.

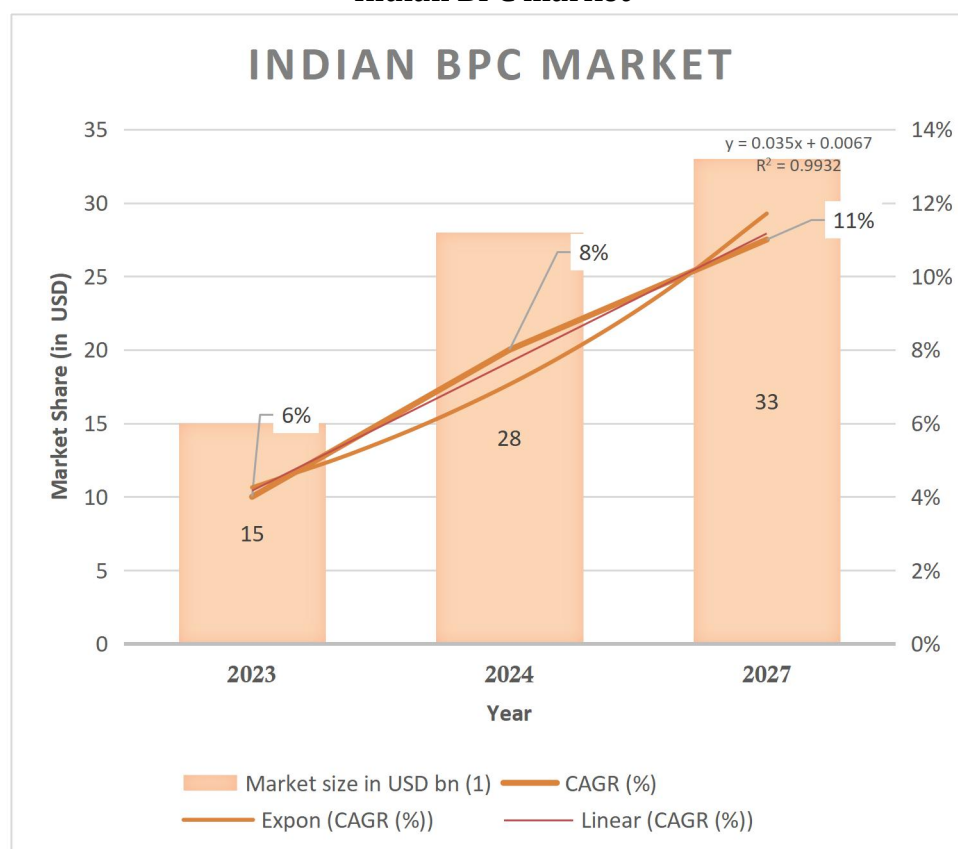
The Indian BPC Industry – Accelerated growth rate with CAGR for 4-6 years in relation to women purchasing behavior.

Table 1.3

S.no	Year	Market size in USD bn ⁽¹⁾	CAGR (%)
1	2023	15	6%
2	2024	28	8%
3	2027	33	11%

Source: Binder Dijker Otte India ,2024

Figure 1.4
Indian BPC market



The figure 1.4 illustrates the Indian BPC market which depicts the accelerated growth rate for the estimation of 15 bn USD market share in 2023 with CAGR of 6% per annum which has dramatically increased up to 8% in 2024 with market share of 28 bn USD which is expected to increase up to 11% in 2024-2027.

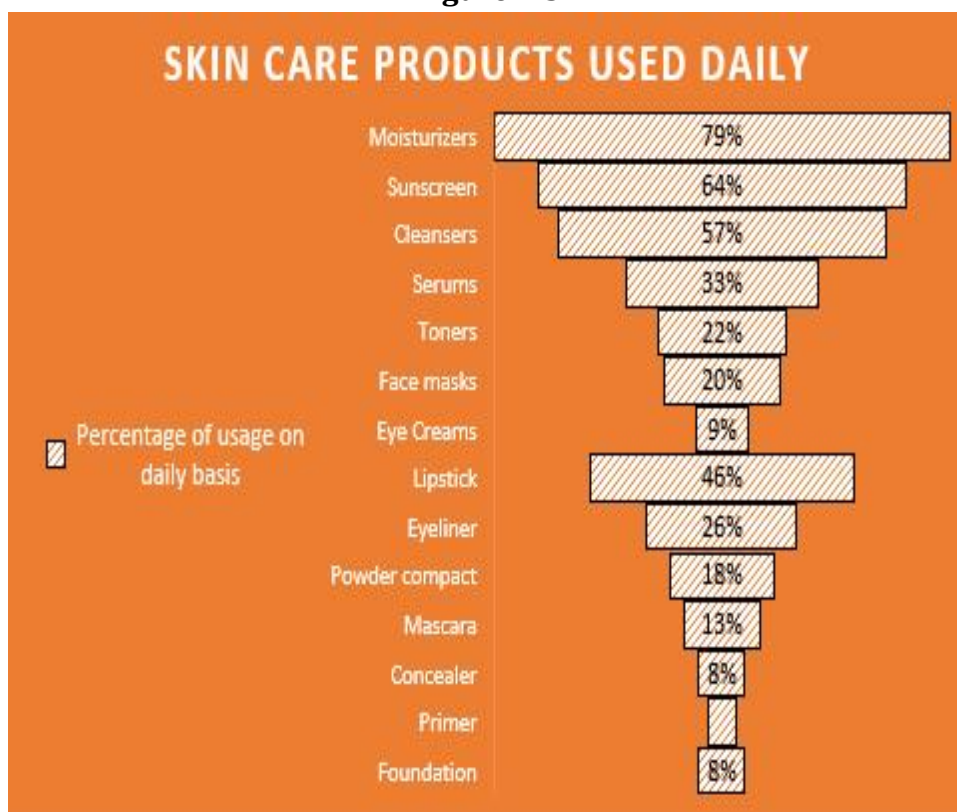
Beauty and Personal products used on daily basis of Women in India:

Table 1.4

Products	Percentage of usage on daily basis
Moisturizers	79%
Sunscreen	64%
Cleansers	57%
Serums	33%
Face masks	20%
Eye Creams	9%
Lipstick	46%
Eyeliners	26%
Powder compact	18%
Mascara	13%
Concealer	8%
Primer	5%
Foundation	8%

Source: Journal of Emerging Technologies and Innovative Research,2024

Figure 1.5



Source: Binder Dijker Otte India ,2024

The figure 1.5 illustrates the BPC products routines being used based on daily skin care routine. Findings shows that moisturizers (79%) , Sunscreen (64%) , and cleansers (57%) were the top mosed used products, followed by serums (33%), Toners (22%), Face masks (20%) along with Eye creams (9%) which they preferred natural and minimalistic products and other makeup products with 76% of the majority.

Consumption behaviour in the Cosmetics Industry in India

Where, when and what do women buy?

As reported by Avendus, the BPC industry has been whopping \$725 billion by 2025, with Indian market share touching \$28 billion by then (*Mittal, 2010*) and projected to show a CAGR of 16.39% by 2026 to be accompanied by a e-commerce beauty industry as a primary outlet of purchase by women through i) E-Commerce ii) Malls/Retail Outlets iii) Local markets. With the emergence of Gen-Z an attempt towards rejection of 'Fair is beautiful', there has been a shift in the behaviour of women.

Self – Perception

Subjugation, especially when occurring on multiple levels, has a significant impact on one's health and self-perception. They report that makeup can serve as a means of self-soothing by covering body flaws and enhancing interpersonal acceptance. This self-soothing involves two factors: pleasure pursuit and trend pursuit. When positive self-esteem transforms into a desire to follow trends, it can lead to increased confidence. Conversely, when negative self-esteem is present, makeup can transform feelings of inferiority and sadness into positive emotions. Grooming oneself can make a person feel confident and take steps forward, as being conventionally attractive plays a role in this process. (Lee & Oh 2018)

Self – Expression

Consumers put efforts into self-maintenance and enhancing one's appearance, makeup has often been understood with a notion of vanity and inauthenticity. A contrary narrative involves how makeup works as a means of self-expression (*Anindita Audhkhasi (2023)*). Makeup for many is associated with nostalgia of watching their mothers get ready, while for some the entire ritual is transformative and therapeutic in nature and also serves as a tool to create self-expression, thereby boosting one's self-efficacy and overall emotional health by choosing a way healthier path by choosing green cosmetic products.

Economic Reasons

Income and gender wage gap impact on the consumer behaviour of women

The increased participation of women in both informal and formal sectors has led to a notable rise in the consumption of green cosmetic products. Upon analysis, a direct correlation between women's income and their cosmetic expenditure has been identified. A survey conducted in 2014 observed that working women were likely to spend 57% of their savings on cosmetics, while non-working or non-earning women were likely to spend only 43%². The correlation between disposable income and women's green cosmetic consumption was found to be 0.537697, indicating that the income of women moderately affects their consumer behavior in the cosmetic industry (*Shreya Tewari et al 2014*).

It is widely known that women often get paid less than men for the same amount of work, a phenomenon referred to as the 'gender wage gap'³. Despite being employed in a considerable number of industries and earning less than men, women's cosmetic

expenditure is significantly higher than that of men. According to the United Nations, men's average wage is higher than women's in both rural and urban areas. Additionally, women globally contribute to 42% of the economy (ILO, 2024). However, despite the pay gap, women's consumption expenditure accounts for 80% to 90% of the cosmetics industry (Elessar, 2019).

Women's willingness to spend on Cosmetics

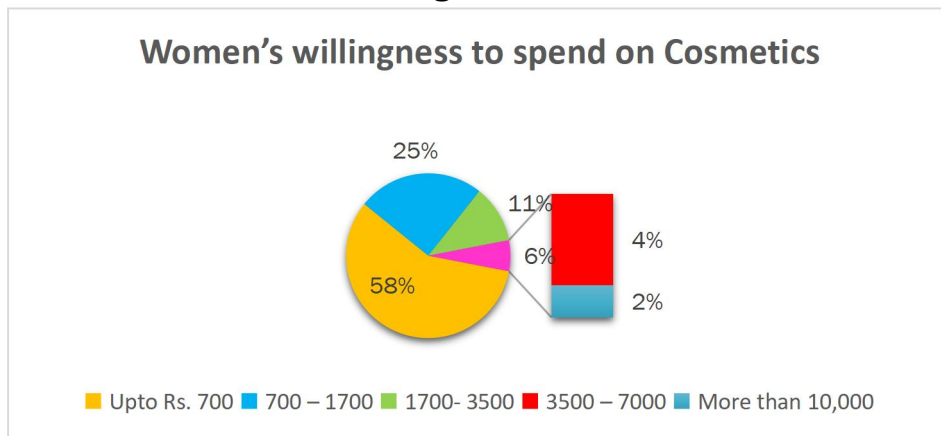
Table 1.5

S.no	Spending Range (INR)	Percentage of Respondents (%)
1	Upto Rs. 700	43.88%
2	700 – 1700	18.92%
3	1700- 3500	8.57%
4	3500 – 7000	3.4%
5	More than 10,000	1.2%

Source : Statista 2021

1. Tewary T, Gupta A, Mishra V, Kumar J. Young working women's purchase intention towards organic cosmetic products 2021;22(2-3):256-77.
2. Elessar (2019) The Link Between Beauty and The Gender Gap. 392f92425545

Figure 1.6



This data illustrates varying levels of willingness to spend on cosmetics among the respondents. This study observed that 43.88% of respondents were willing to spend up to ₹700 on cosmetics. Additionally, 18.92% were willing to spend between ₹700 and ₹1700, 8.57% between ₹1700 and ₹3500, 3.4% between ₹3500 and ₹7000, and 1.24% were willing to spend more than ₹10,000.

Pink Tax

The term "Pink Tax" refers to the practice of charging higher prices for goods and services specifically targeted at women, even when they are identical or similar to those marketed to men. This concept, which originated in California (USA) in 1994, encompasses various products such as personal care items, clothing, and services. It is not an actual government-imposed tax but rather a common term referring to the systematic overpricing

of products perceived as feminine, thereby imposing an additional financial burden on women.¹

Research indicates that only about 23% of individuals in India are aware of the Pink Tax, and an even smaller percentage comprehend its economic impact. Furthermore, while male contraceptives are exempt from taxes as they are considered essential, feminine hygiene products such as tampons and sanitary napkins are subject to a 12–14% GST tax⁵. This disparity highlights the additional financial burden placed on women due to the Pink Tax (Lafferty, 2019).

Financial Strain on Women

- **Higher Expenses for Everyday Essentials:** The Pink Tax in India results in women paying more for everyday items, such as razors, clothing, and personal care products, simply because they are marketed as “for women.” This places an additional financial burden on women, impacting their overall economic well-being.
- **Unequal Economic Burden:** The gender-based pricing strategy of the Pink Tax contributes to unequal expenses for identical or similar products, deepening the financial disparity between men and women. As per the Global Gender Gap Report 2022, women are already paid 19% less than men in sectors ranging from IT to agriculture. Also, in India, women earn 18% less than men.

Since many are oblivious to the reasoning and persistence of this tax, it is also branded as a “Hidden Tax”. Pink tax therefore contributes and further elevates the already existing gender disparity, all while capitalising on women’s insecurities (Lafferty, 2019)

Pink tax subconsciously influences women’s buying behavior, and its success is tied intrinsically to women’s perception of beauty and self-worth. The notion that pink products and women will buy it at a higher price can be attributed to the greater a woman’s desire to be seen as a ‘feminine’ the more she is willing to pay a higher price for cosmetic products.

The signalling theory is another reason for the existence of the pink tax and women’s willingness to bear with it. In signalling theory, one group sends a message, which is subjectively interpreted by the receiving group. Therefore, when one woman confronts the pink tax and purchases products deemed ‘feminine’ as it initiates a demonstration effect pulling the entire gender. Familiarity with pink tax also greatly affects the consumer behaviour of women.

This study focuses on understanding how consumers behave and what attitudes they hold when it comes to Indian organic cosmetic products. In today’s ever-changing market, there’s a notable movement towards sustainability, particularly in the beauty industry. This study aims to thoroughly investigate and uncover the factors that influence consumers’ choices in this specific domain.

- The BPC market has transformed into a highly competitive arena, with numerous domestic and international brands vying for consumer attention.
- Considering the environmental awareness, the data reveals a significant improvement in the decision-making roles of women aged 15 to 49. Specifically, 78.70% of women in this age category now actively participate in decisions about their health care.

- Furthermore, 85.60% of women are involved in decisions regarding visits to family and relatives, and 83% take part in making major household purchases. These statistics underscore a notable increase in women's engagement in decision-making processes related to their consumption behavior.
- In India, awareness and consciousness among the young female consumers, towards the cosmetic products available in the market and their looks make the cosmetic market grow rapidly day by day as the market size of India in the cosmetic industry in FY2023 is 11% CAGR with market share of 15 bn USD projected to grow in the future years expected to reach 33 bn USD.
- Most women consumers are open to purchase sustainable cosmetics from their favourite brands. This represents an opportunity for the brands to embrace sustainability trends and address the information need of those uncertain about making switch.
- The act of Self- perception and Self-expression towards women thereby boosting one's self efficacy and overall emotional health by choosing a way more healthy path by choosing green cosmetic.
- The increased participation of women in both informal and formal sectors has led to a notable rise in the consumption of green cosmetic products. Additionally, women globally contribute to 42% of the economy (ILO, 2024). However, despite the pay gap, women's consumption expenditure accounts for 80% to 90% of the cosmetics industry.
- With the emergence of Gen – Z an attempt towards rejection of 'Fair is beautiful', there has been a shift in the behaviour of women.

CONCLUSION

Cosmetics is one of the fastest growing industries in the market, that is growing rapidly and, in the future as well, this has much scope. Everyone wants to look beautiful and presentable and for this, various products are being used by people, but the demand for cosmetic products is more among females as compared to men. Females are always concerned for their skin and appearance and due to this various cosmetic products are used by them, that are skincare, makeup, personal care etc. After the Covid-19 pandemic, people are more concerned for their health, so the need and demand among the consumers for the green products starts increasing after this period. Even as global companies are eyeing India to accelerate growth, many homebred companies are looking to expand into international markets with native offerings, such as, ayurvedic products. Companies can look at developing products based on Indian recipes and native ingredients and could use India's association with health and wellness as a country. As Indian BPC sector has a remarkable growth in the past 4-6 years which has paved way for numerous women entrepreneurs, and employees who have contributed 8 %-11% CAGR each year dramatically. Hence the Sustainable cosmetics industry that employs green nudges should abide by responsible consumption (SDG12) women as well as men eyeing on cosmetics with neo – liberalization have an edge over green infused (i.e. Organic) which drives responsible production and consumption.

Recommendations

1. Given the stronger presence of younger female consumers in this particular market, the sustainable investment from the production part must be focused by tax breaks, subsidies or incentives may extended to the green based cosmetic brands that uphold transparency and actively participate in sustainable practices.
2. Women aware of the pink tax actively avoid it. Therefore, educating and raising awareness about the pink tax is crucial for driving collective action and tangible change.
3. It's crucial to recognize that rigid, patriarchal beauty norms are the root cause of women's manipulation by the cosmetic industry.
4. Society as a whole must reject these standards and embrace all bodies, skin colours, and physical characteristics as attractive and beautiful. This shift will promote a culture that doesn't exploit women's insecurities.
5. BPC industry should adopt sustainable, preservative-free practices, like water-efficient products and using active ingredients/botanical oils that are safe for people and the environment.
6. The BPC industry should invest on the perspective of Sustainability + **Preservative free**.

REFERENCES

1. Audhkhiasi A. & Arora P. (2021). Women and Consumer Behaviour in the Cosmetics Industry: Analysing the Impact of Intersectionality. *International Journal of Policy Sciences and Law*, 2(2), 3362-3396.
2. Chishti MD, Junaid AB, Ahmed F, Indoria P .2013, Perception and Purchase Behavior of Functionally Illiterate Women for Food Products in Delhi.
3. VENU L. *A Study On The Role Of Health And Environmental Consciousness On Young Female Consumers'attitude Towards And Purchase Of Organic Beauty Products* (Doctoral dissertation, St Teresa's (autonomous) Ernakulam) 2019.
4. Tewary T, Gupta A, Mishra V, Kumar J. Young working women's purchase intention towards organic cosmetic products. *International Journal of Economics and Business Research*. 2021;22(2-3):256-77.
5. Nautiyal VT, Atre A. A Study on Consumer Behaviour of Urban Indian Working Women Towards Office Wear Outfits and Sustainable Fashion. *Journal of Visual and Performing Arts*. 2022;3(2):226-35.
6. Neha rani et al., (2022) explained the awareness of the consumers towards green cosmetic products in the Bhiwani District,2022;
7. Mitterer-Daltoé ML, Martins VB, Parabocz CR, da Cunha MA. Use of cosmetic creams and perception of natural and eco-friendly products by women: the role of sociodemographic factors. *Cosmetics*. 2023 May 12;10(3):78.
8. "Cosmetic Consumption Amongst the Youth in India", *International Journal of Emerging Technologies and Innovative Research* (www.jetir.org), ISSN:2349-5162, Vol.10, Issue 11, page no.e456-e474,
9. <https://doi.org/10.1051/e3sconf/202455801017>, Exploring female consumers' attitudes toward green cosmetics, 2024;

10. Huong VT, Hung NP, Minh NT, Thuy LK, Duyen LT, Minh TN. Factors affecting consumers' repurchase intention toward skin care cosmetics: A cross-sectional study in Vietnam. *Heliyon*. 2024 Jun 15;10(11).
11. <https://doi.org/10.1016/j.actpsy.2024.104210> Vietnamese consumer's perspective on green beauty care products: Exploring the impact of animal welfare concerns and skepticism toward green advertising.
12. Dlamini S, Mahowa V. Investigating factors that influence the purchase behaviour of green cosmetic products. *Cleaner and Responsible Consumption*. 2024 Jun 1;13:100190.

Report

WHO, UNICEF, UNFPA, World Bank Group, and UNDESA/Population Division. Trends in Maternal Mortality 2000 to 2020. Geneva, World Health Organization, 2023

SURGE IN DIGITAL BANKING DURING COVID19 PANDEMIC IN PALAKKAD DISTRICT

***Thasleena. N, **CMA Dr. A Pankajam**

*Research Scholar, **Associate Professor, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore- 43

Abstract

An evaluation of changes in digital banking during the pandemic was conducted in the study. This study aimed at determining the level of awareness, necessity, and perception toward digital banking utilization in Palakkad district, Kerala. The data for this study were collected from both primary and secondary sources. The questionnaire was distributed to 150 digital banking users, and 110 responses were received. In order to test the hypothesized relationship, correlation analysis and multiple regression analysis are used. Simple percentage analysis is an additional tool for analysis. Analysis of the data was undertaken with the assistance of statistical software named the Statistical Package for Social Research (SPSS). According to the results, digital banking perceptions and awareness influence its Utilization. These findings indicate that Utilization has a moderately positive relationship with necessity, perception, and awareness. The study also discusses the importance of providing awareness of new technologies among the customers.

Keywords: Digital banking, Pandemic, Service Awareness, Service Necessity, Customer Perception, Service Utilization

Introduction

Digital banking fits into the broader context of online banking, which delivers banking services online. As a result, the transition from traditional to digital banking has been gradual and continues. There are different degrees of digitalization of banking services. There are high levels of process automation and web-based services and APIs that enable cross-institutional service composition for banking products and transactions with digital banking. The system provides users access to data via desktops, mobile phones, and ATMs. Development in technology, usage of smartphones, and demonetization are significant factors contributing to incredible growth in digital payments. As a result of the ongoing pandemic, digital banking has seen a sharp increase, and consumers have become more demanding of immediate and personalized services. Many people residing at home depend heavily on digital channels, both online and mobile, to carry out their banking transactions. Traditional branch visits and face-to-face interactions with bank staff have decreased as a result. Covid19's impact on Digital Banking cannot be studied so quickly. Despite this, this study can offer insight into some changes during pandemic situations. Historically, only educated people used digital banking. At this point, everyone is forced to use the digital banking platform because of this pandemic. Digital transactions are essential to any

institution, whether private or public, during this pandemic. This study explains customer awareness about digital banking. In addition, it discusses how digital transactions are essential during pandemic conditions. Doing so makes it easier to recognize the changes in digital transactions during Covid19.

Literature Review

Ali Reza Montazemi and Hamed Qahri-Saremi (2015) depicted that retail banks must pay special attention to informing/educating the consumers about the usefulness of their online banking products and the safety and trustworthiness of their physical and online banking channels. Their findings contribute to the online banking adoption literature by bringing conceptual and empirical clarity to the factors affecting online banking. This study says the relative importance of these factors differs depending on consumers' pre-adoption and post-adoption of online banking.

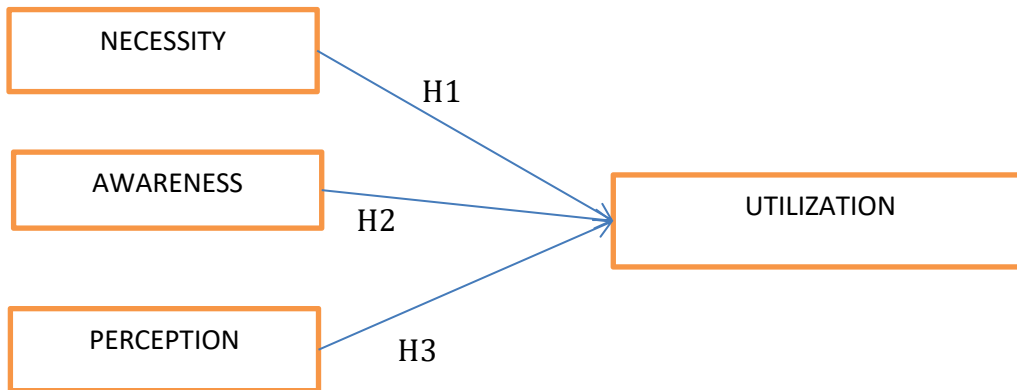
Ewa Kulińska-Sadłocha, Monika Marcinkowska, Jan Szambelańczyk (2020) in their article depicted the impact of pandemic on banking activity based on Polish banking sector. The influence of Covid 19 in banking is short-term in nature and can see changes in consumer expectation and demand in banking due to this pandemic. Social distancing is one of the essential factors in the surge of digital banking.

P. R. Jeyalakshmi (2021) depicts the community's attitude towards digital payments. Personal awareness about security and safety are some of the significant factors affecting digital banking usage. Age, gender, and education also influence attitudes towards digital banking. It concludes that lack of technological knowledge, network issues, and labour problems are significant net banking challenges.

Francois et. al (2020) mentioned the influence of social distancing in digital transactions. The increase in mobile money, mobile wallet, and bank-to-wallet transactions are some of the changes we can see. This study also finds an increase in account-to-account transfer and e-commerce sales in major cities in Nigeria, Egypt, and South Africa. The Egyptian government raised the limit for electronic payments to encourage the exclusive use of digital payments. They find a 35 to 40 percent increase in transactions in South Africa. This pandemic compelled the bankers to decrease the service charges.

F.Muñoz-Leiva, S.Climent-Climent, F.Liébana-Cabanillas (2017) "Determinants of intention to use the mobile banking apps: An extension of the classic TAM model" examines about the determinants of usage of mobile Apps. Perceived trust and risk has a negative effect on intention to use mobile apps. Ease of use, usefulness, attitude and social image has a positive impact on the usage. It was found that the attitude, with the strongest effect, determines predisposition to use m-banking apps. The Bank has to make communication campaigns explaining the advantages achieved with this type of mobile application, in order to make users see the usefulness of them and increase their intention to use via attitude.

Figure 1: Conceptual Framework



Objectives

- To assess awareness, necessity, and perception of digital banking
- To examine the surge in digital banking during the pandemic
- To analyze the effects of necessity, awareness, and perception on the Utilization of digital banking services during pandemics

Research Hypothesis and Methodology

The primary data is collected via a Google form using a questionnaire method. Articles, research papers, websites, etc., are all secondary sources of information. The research sample consisted of 110 digital bank customers in Kerala's Palakkad district using a simple random sampling as a sampling method. Analysis was conducted using the percentage, Correlation, and multiple regression methods.

H1: There may have a significant positive relationship between Necessity and Utilization

H2: There may have a significant positive relationship between Awareness and Utilization

H3: There may have a significant positive relationship between Perception and Utilization

Findings and Results:

Various measures such as correlation analysis and multiple regression analysis investigate the hypothesized relationship. In addition to determining the percentage of agreeableness, percentage analysis is also used. The collected data were analyzed with a statistical software program, namely the Statistical Package for Social Research (SPSS).

Table1

The analysis of the respondents' Socioeconomic profile by using percentages.

	Category	Number Of respondents	Percentage Of Respondents
Age	Below 25 Years	23	21%
	25 To 35 Years	58	52%
	35 To 45 Years	15	14%
	45 To 55 Years	1	10%

	Above 55 Years	3	3%
	Total	100	100%
Gender	Male	63	57%
	Female	47	43%
	Total	100	100%
Qualification	School Level	4	4%
	Graduates	35	32%
	Post Graduates	42	38%
	Professionals	29	26%
	Others	0	0%
	Total		100%

Correlation analysis

Hypothesis 1: There may have a significant positive relationship between Awareness and Utilization.

Table 2
Correlation between Awareness and Utilization

		Awareness	Utilization
Awareness	Pearson Correlation	1	.401
	Sig. (2-tailed)		.292
	N	111	111
Utilization	Pearson Correlation	.401	1
	Sig. (2-tailed)	.292	
	N	111	111

Hypothesis 2: There may have a significant positive relationship between Necessity and Utilization

Table 3
Correlation between Necessity and Utilization

		Necessity	Utilization
Necessity	Pearson Correlation	1	.512**
	Sig. (2-tailed)		.000
	N	111	111
Utilization	Pearson Correlation	.512**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

From the table -3, it can be observed that the correlation coefficient between Necessity and Utilization is 0.512, at a significant level of 0.01. Hence, we accept Hypothesis 2. In other words, Necessity and Utilization have a moderate positive relationship ($r = .512$).

Hypothesis 3: There may have a significant positive relationship between Perception and Utilization

Table 4
Correlation between Perception and Utilization

		Perception	Utilization
perception	Pearson Correlation	1	.648**
	Sig. (2-tailed)		.000
	N	111	111
Utilization	Pearson Correlation	.648**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

From the table -4, it can be observed that the correlation coefficient between Perception and Utilization is 0.648, at a significant level of 0.01. Hence we accept Hypothesis 1. In other words, Perception and Utilization are related moderate positive relationship ($r = 0.648$).

Multiple Regression Analysis

Model Summary: Table 5

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.690 ^a	.476	.461	1.89099

a. Predictors: (Constant), Perception, Awareness, Necessity

b. Dependent Variable: Utilization

Table-5 labeled R^2 , which measures how much of the variability in the outcome is accounted for by the predictors. For the R^2 model, its value is .476, which means Utilization for 47.6% of the variation in predictors. The value (1.89) is below 2, which indicates a positive correlation.

Multiple regression is the model which takes the form of an equation that contains a coefficient (b) for each predictor. The table-4 gives us estimates of these b values, indicating the individual contribution of each predictor to the model. The b values tell us about the relationship between Utilization and each predictor. If the value is positive, we can tell a positive relationship between the predictors and the outcome, whereas a negative coefficient represents a negative relationship between them. For these data, all predictors

have positive b values indicating positive relationships. The b values also tell us to what degree each predictor affects the outcome of the effects of all other predictors are held constant.

Coefficients

Table 6

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.991	2.005		2.490	.014
Necessity	.318	.099	.257	3.216	.002
Perception	.502	.077	.522	6.545	.000
Awareness	.034	.041	.059	.841	.402

a. Dependent Variable: Utilization

Source: Survey Data

The above coefficients table-6 indicated that digital necessity, perception, and awareness are positively related to Utilization. It can also be seen that awareness (0.59) has more influence on Utilization than the standardized coefficients of other variables. The results indicate that the necessity, perception, and awareness influence the Utilization of digital banking.

Percentage Analysis

Table -7

Sl no	Scale	Pandemic increased utility bill (%)	Pandemic increased online recharges (%)	Pandemic increased online fund transfers (%)	Pandemic increased usage of mobile apps for retail purchases (%)	Pandemic increased travel service ticket booking through online (%)
1	Strongly agree	60	61	62	53	51
2	Agree	34	37	36	42	41
3	Neutral	6	2	2	5	5
4	Disagree	0	0	0	0	2
5	Strongly disagree	0	0	0	0	1
Total		100	100	100	100	100

Source: Primary data

From table – 7, more than 50% of the respondents strongly agree, and more than 34% agree that the pandemic has increased online utility bill payments, online recharges, online fund transactions, and online travel service booking. They also agree that the pandemic has increased retail purchases with the help of mobile apps.

FINDINGS AND SUGGESTIONS

In response to the changes in the world due to pandemics, consumers reacted quickly. Social distancing and lockdown insisted the customers go online. The study says that there is a positive relationship between awareness, necessity, and perception towards Utilization. Studies proved that the pandemic has increased online transactions, online bill payments, and online ticket booking. Few people are not aware of how to use digital services in this Fintech era. Banks can increase digital service usage by providing awareness campaigns and training regarding the usage. Customer helpdesk also will be helpful to increase the usage. Poor literacy rates and technology unawareness are the main barriers to digital banking usage. Lack of trust in security is another factor that restricts usage. By providing training about the usage and terms and conditions, banks will be able to increase their usage. They should also implement more security and safety measures. In addition to specializing in mobile banking, service providers need to strive to simplify the applications used for transactions continuously. This will help the general population to have easier access to online services. New generation banks are taking the lead for these digital measures that other banks can follow. The new digital offerings of banks continue to be hindered by legacy systems that have been around for a long time and also need to be changed.

CONCLUSION AND SCOPE FOR FUTURE STUDY

Through the distribution of questionnaires, the study evaluated the effect of awareness, necessity, and perception on customer utilization, especially during pandemics in the Palakkad district of Kerala. The majority of the respondents agree that the pandemic has increased online transactions, online bill payments, and online ticket booking. Banks and service providers can plan their strategies accordingly based on the study's findings. Moreover, the study highlights the need to implement security measures. The scope of the study will be good for banks to identify the awareness level of the customers and identify the significant drawbacks of the existing digital banking system. The study only evaluated awareness, necessity, and perception. The study also has to be conducted on the remaining variables related to the Utilization.

Reference

1. Kulińska-Sadłocha, E., Marcinkowska, M., & Szambelańczyk, J. (2020). The impact of pandemic risk on the activity of banks based on the Polish banking sector in the face of COVID-19. *Bezpieczny Bank*, 79(2), 31–59. <http://doi.org/10.26354/bb.3.2.79.2020>
2. P. R. JEYALAKSHMI, A. S. LAKSHMI RANI. (2021). Attitude of the Community towards Digital payments Usage in Thrissur District - with special reference to Digital- Economy District initiative. *PalArch's Journal of Archaeology of Egypt / Egyptology*, 18(1), 4703-4710. Retrieved from <https://archives.palarch.nl/index.php/jae/article/view/7420>
3. Girancourt, F. J., Kuyoro, M., Ofosu-Amaah, N. A., Seshie, E., & Twum, F. (2020, June 4). How the COVID-19 crisis may affect electronic payments in Africa | McKinsey. McKinsey & Company; McKinsey & Company. <https://www.mckinsey.com/industries/financial-services/our-insights/how-the-covid-19-crisis-may-affect-electronic-payments-in-africa>

4. Montazemi, A. R., & Qahri-Saremi, H. (2015). Factors affecting adoption of online banking: A meta-analytic structural equation modeling study. *Information & Management*, 2, 210–226. <https://doi.org/10.1016/j.im.2014.11.002>
5. Munoz-Leiva, F., et al. “Determinants of Intention to Use the Mobile Banking Apps: An Extension of the Classic TAM Model.” *SSRN Electronic Journal*, Elsevier BV, 2016. Crossref, DOI:10.2139/ssrn.3489124.
6. Shree, S., Pratap, B., Saroy, R. *et al.* Digital payments and consumer experience in India: a survey based empirical study. *J Bank Financ Technol* (2021). <https://doi.org/10.1007/s42786-020-00024-z>
7. <https://www.thehindu.com/news/national/kerala/thrissur-gears-up-to-become-first-digital-district/article30589998.ece>
<https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/CDDP03062019634B0E EF3F7144C3B65360B280E420AC.PDF>

TRAINING EFFECTIVENESS AND COMPETENCY DEVELOPMENT OF WOMEN EMPLOYEES

*** N. Samutha, ** Dr. J. Arthi**

*Research Scholar, **Professor, Department of Business Administration, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore- 43

Abstract

This study investigates the training effectiveness and competency development of women employees in the **manufacturing sector**. The study evaluates **mean and percentage values**, revealing that training programs significantly enhance the competencies of women employees, with an **overall positive perception of 80-81%**. Organizational support (4.042/81%) plays a crucial role in enabling skill application and career growth. These findings suggest that while training programs are well-structured and effective, there is potential for further improvement by incorporating practical simulations, industry-specific training modules, and personalized coaching initiatives to enhance skill application and career progression. The study underscores the importance of tailored training strategies and continuous learning opportunities in **empowering women's equality** in the workforce. Findings indicate that practical training enhances the **competency development of women employees**. Increasing practical training, mentorship, flexible access, regular evaluations, and fostering an inclusive workplace culture to enhance skill application and career progression.

Keywords: Training Effectiveness, Women Employees, Manufacturing Sector, Competency Development.

INTRODUCTION

Training effectiveness refers to the ability of a training program to achieve its intended goals, such as improving employee skills, knowledge, and performance. It is measured by assessing how well participants apply what they have learned to their job roles, leading to increased productivity and organizational growth. Effective training involves clear objectives, engaging content, practical application, and continuous evaluation. A well-designed training program enhances workforce efficiency, reduces skill gaps, and contributes to long-term business success. Continuous monitoring and post-training support, such as mentorship, enhance retention and long-term impact. Practical training is essential for developing practical skills and improving workforce efficiency. Unlike classroom-based learning, it enables them to apply theoretical knowledge to real-world scenarios. This practical approach enhances technical expertise, problem-solving abilities, and adherence to safety protocols, ensuring employees perform tasks with accuracy and confidence.

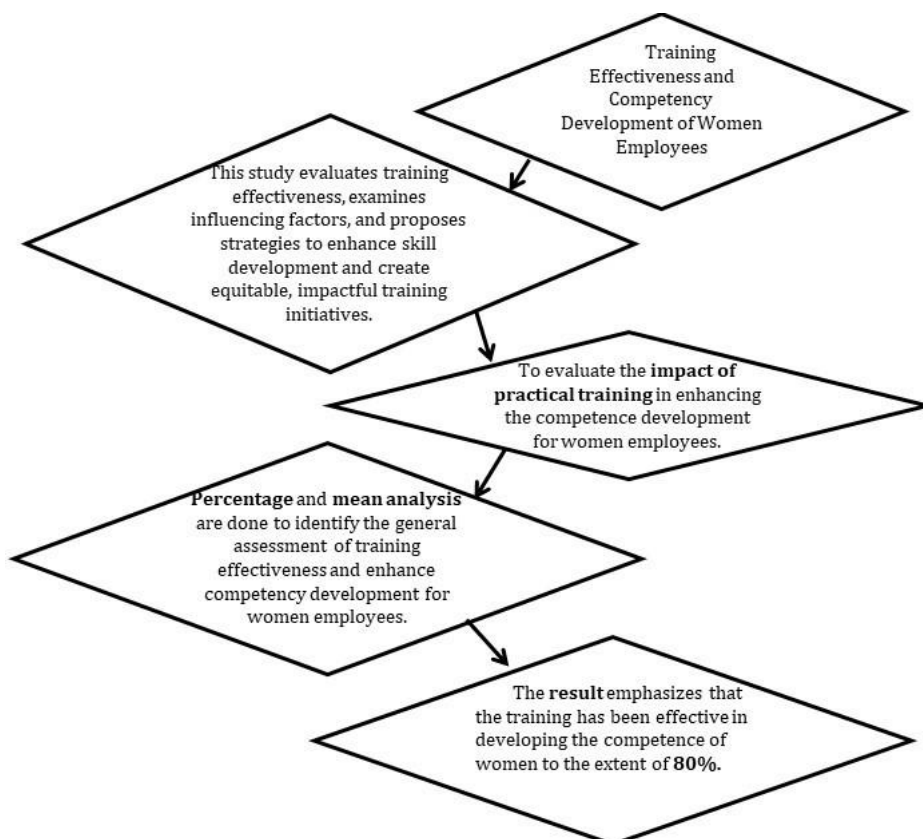
Practical training is particularly beneficial for women entering the manufacturing sector, as it allows them to gain interactive experience. This experiential approach builds proficiency in technical roles, making women more competitive in the workforce. Mentorship programs, leadership training, and flexible learning opportunities contribute to their long-term success. When companies invest in inclusive training programs, they foster a more diverse workforce, leading to greater innovation, improved employee morale, and

overall business growth. Training effectiveness will help in the competence development of women.

COMPETENCE DEVELOPMENT OF WOMEN EMPLOYEES

Competence development refers to the process of enhancing an individual's knowledge, skills, and abilities to improve job performance and career growth. It involves continuous learning, practical experience, and skill-building initiatives that help employees stay relevant in their fields. Organizations invest in training programs, mentorship, and hands-on learning to strengthen employee competencies, ensuring they can adapt to changing industry demands. Fundamental factors of competence development include technical skills, problem-solving, communication, and leadership abilities. Regular assessments, feedback, and career development opportunities help employees refine their strengths and address skill gaps. A strong focus on competence development not only boosts productivity and innovation but also enhances employee confidence, job satisfaction, and organizational success. Competence development is essential for empowering women by enhancing their skills, knowledge, and confidence in the workplace. Focused training programs help women acquire technical expertise, leadership abilities, and problem-solving skills, enabling them to excel in various industries. Practical learning, mentorship, and career development initiatives play a crucial role in bridging gender gaps and creating equal opportunities.

PROJECT FLOW



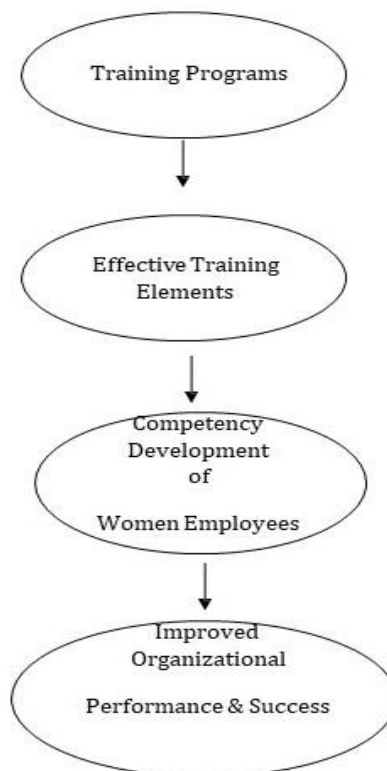
PROBLEM STATEMENT

Women employees often face barriers to effective training and competency development, leading to weak process knowledge, skill application, and overall efficiency in the workplace. Setbacks such as limited access to practical training, gender biases in skill development opportunities, and insufficient post-training support prevent them from fully utilizing their potential. This research aims to examine the effectiveness of training programs in enhancing the competencies of women employees, identify the factors that affect their skill development, and propose strategies for the improvement. This also seeks to create more equitable, skill-driven, and impactful training initiatives that empower women in the workforce.

OBJECTIVE

"To evaluate the impact of practical training in enhancing the competence development for women employees."

Conceptual Framework



LITERATURE REVIEW

The research "**Examining the Relationship of Training on Job Satisfaction and Organizational Effectiveness**" by Vasudevan in 2014, emphasizes the role of **practical training** programs in enhancing employee skills, behaviour, and performance, by collecting the Data's from the questionnaires were analysed using SPSS software, which had a **positive impact on practical training**. This shows that **the practical training** will help in the **competence development**.

This analysis “**The Role of Job Training in Improving Employee Performance**” by **Alhidayatullah and Muh. Abdul Aziz** in 2022, uses a structured survey to analyze how different aspects of training affect employee performance. The findings show that factors like **trainers, training content, methods, goals, and environment** play a crucial role in improving job performance. The trainees themselves do not have a **direct significant** impact. they finalized that when all these **training factors** are considered together, they **positively contribute** to employee performance. It suggests that **well-structured training programs** can **improve skill-building** for **women employees**. Exploring gender-specific learning needs can help make training more effective in boosting women's career growth.

The review “**The Effect of Training on Employee Performance**” by **Dr. Amir Elnaga, Amen Imran and Ms. Amen Imran** in 2013, examines how training influences employee performance and its crucial role in business success. This also provides brief overview of the **training effectiveness** and how it contributes in enhancing the employee performance and concludes along with recommendation to give directions for future research by applying different level of analysis on **exploring the impact of training practices** on employee performance. **Effective training programs** enhance employee's **abilities**, enabling them to perform better and grow in their careers. **Tailored training initiatives** help address specific skill gaps, fostering professional development.

The research work “**The Development of a Taxonomy of Career Competencies for Professional Women**” by **Hackett, Betz, and Dory**, in 1985, provides a valuable foundation for understanding the skills necessary for career advancement. By identifying and categorizing **620 career-relevant competencies**, the research highlights the behaviours and skills that contribute to women's professional growth. This emphasis where **practical training** will help in the **competence development of the women**, in which the training performance is effective. This also help with the real-world skill demands of women employees across various sectors.

The empirical research “**Management competencies of women business owners**” by **Elizabeth Walker & Beverley Webster** in **2006**, explores the competency levels and training preferences of women business owners compared to men. It finds that women are better informed about starting a business, based on a sample of **270 business owners**, also found that both men and women relied on on-the-job experience rather than professional training to develop their managerial competencies. This relates that the **on-the-job experience** will help in the competence development of women.

The exploration “**The Impact of Entrepreneurship Competence on Micro Business Performance**” by **Endang Sungkawa & Endang Sungkawati** in **2019**, examines the entrepreneurial **competencies essential** for traditional herbal medicine sellers to sustain their businesses amid **competition** and **crises**. Using **qualitative analysis**, it identifies the **competencies** such as strategic planning, business development, relationship-building, continuous learning, and strong personal traits, which **contribute to the success** of micro-enterprises. **Training programs** for women employees can **focus on developing** these competencies to improve their workplace performance, career growth, and **overall effectiveness**.

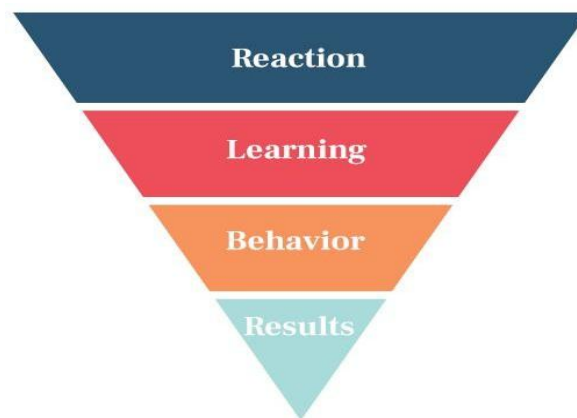
RESEARCH METHODOLOGY

Research methodology is the systematic approach to discovering answers to problems that arise in the search for information. This employs a quantitative research design using standard questionnaires based on the Kirkpatrick model to evaluate training effectiveness across four levels: reaction, learning, behavior, and results. Primary data were collected from 100 women employees in the manufacturing sector, and the results were analyzed using descriptive statistics, specifically mean and percentage analysis, to assess the overall impact of training on competency development.

KIRKPATRICK MODEL

The Kirkpatrick Model is a framework for evaluating the effectiveness of training programs. It's based on four levels of criteria: reaction, learning, behavior, and results.

FOUR LEVELS OF KIRKPATRICK MODEL



LEVEL: 1- REACTION

This level gathers immediate feedback from participants about their satisfaction, engagement, and the relevance of the training content. It helps determine if the training environment and delivery methods are effectively supporting learning.

This evaluates how women employees perceive and engage with the training program, gauging their initial satisfaction and readiness to learn.

LEVEL:2-LEARNING

At this level, the increase in knowledge, skills, and attitudes due to the training is measured. Pre- and post-training assessments are used to determine whether the learning objectives have been successful.

This measures the increase in knowledge and skills that participants gain, ensuring the training content effectively contributes to competency development.

LEVEL:3-BEHAVIOR

This level assesses the extent to which participants apply their new skills and knowledge in the workplace. Observations and feedback from supervisor's help determine if the training turns into improved job performance.

This assesses how well women apply the newly acquired skills and knowledge in their workplace, reflecting on changes in their job performance and professional conduct.

LEVEL:4- RESULTS

It links the training outcomes to business results, providing justification for the training investment.

Analyses the broader impact of training on organizational outcomes, such as improved productivity, career growth, and overall performance.

SOURCES OF DATA PRIMARY DATA

Primary data for the study has been collected through a structured questionnaire administered on the respondents effectively, as it is collected afresh and for the first time. Primary data refers to the information obtained first-hand by the researcher on the variables of interest for the specific purpose of study.

DATA COLLECTION METHOD

Questionnaire was designed to collect the information required to fulfil the objective of the study from the respondents.

SAMPLING POPULATION

Data were collected from 100 women in the manufacturing company.

PERCENTAGE ANALYSIS

Percentage analysis complements frequency analysis by expressing these occurrences as proportions of the total dataset. This method aids in understanding the relative significance of different categories or variables within the data. By calculating percentages, researchers can compare the prevalence of various elements and discern their relative importance or impact.

Percentage analysis quantifies the proportion of women employees who view different aspects of the training process, such as the availability of practical training, post-training support, and overall effectiveness, as either effective or inadequate.

MEAN ANALYSIS

Mean is the total of the sum of all values in a collection of numbers divided by the number of numbers in a collection. It is calculated in the following way:

$$\text{Arithmetic mean} = \frac{x_1 + x_2 + \dots + x_n}{n}$$

Mean analysis is used to calculate the average scores of responses regarding various aspects of training effectiveness and competency development. This analysis provides an overall view of how women employees perceive factors such as training design, practical training, learning content, and organizational support, highlighting the central tendency in their evaluations and identifying areas of strength and those needing improvement.

INTERPERTATION AND ANALYSIS

Interpretation and analysis involve breaking down complex information into its constituent parts, examining each element closely to discern patterns, trends, and relationships. It is akin to dissecting a puzzle, meticulously scrutinizing each piece to

understand its individual significance within the larger picture. Interpretation, on the other hand, is the process of assigning meaning to the results of analysis. It involves synthesizing findings, drawing connections, and crafting coherent narratives or explanations. Interpretation is where the analyst infuses their expertise, creativity, and perspective into the data, transforming it from mere numbers or words into insights that resonate with broader implications.

The following is the mean calculation of the eight-dimensional constructs according to Walton's model.

MEAN CALCULATION

Table 1

	N Statistic	Mean
Training Design	113	4.038
Delivery Methods	113	4.018
Learner characteristics	113	4.019
Organizational Support	113	4.042
Training Duration	113	4.007

Training Design

The mean score for training design is **4.038**, indicating that the women generally perceive the training structure as well-organized and effective. This average suggests that the design successfully meets the learning needs of the participants. This indicates that respondents generally agree that the training programs are well-designed, including the structure, content, and delivery methods.

Delivery Methods

The average of the training delivery methods is **4.018**, indicating that participants view the delivery as highly effective. This score reflects that the instructors, materials, and teaching techniques are well-aligned with the learners needs. It confirms a strong positive reception of how the training is conducted.

Learning Content

The rating for learning content is **4.019**, indicating that participants find the material both relevant and useful. This score reflects that the content provided in the training is well-aligned with their job roles and practical needs. The learning content is considered **relevant and useful**, indicating that the information provided in training is applicable to their job roles.

Organizational Support

The organizational support has a rating of **4.042**, indicating that employees feel well-supported by the organization. This score reflects strong accessibility to training, effective follow-up assistance, and ample opportunities to apply newly acquired skills at work. This shows that employees feel **supported by the organization** in terms of training accessibility, follow-up support, and application of skills in the workplace.

Training duration

The average training duration is **4.007**, indicating that participants feel the time allocated for training is generally appropriate. This suggests that the duration effectively balances comprehensive coverage of the material with maintaining participant engagement. It reflects a positive perception of how the training time is structured.

Overall Analysis

The analysis shows that all critical aspects-training design, delivery methods, learner characteristics, organizational support, and training duration have mean scores above **4**. This indicates a generally **optimistic outlook of training effectiveness** among **women employees**. **Organizational Support** ranked the best, suggesting that workplace backing plays a crucial role in **competency development**. Reliably strong performance highlights the importance of well-structured training programs in enhancing **employee skills** and **productivity**.

PERCENTAGE ANALYSIS

Table 2

	Average	Percentage
Training Design	4.038	81%
Delivery Methods	4.018	80%
Learner characteristics	4.019	80%
Organizational Support	4.042	81%
Training Duration	4.007	80%

Training Design

The training design score of **81%** demonstrates that the program is **well- structured** and customized to meet their specific needs. This **effective design** ensures that women have essential skills and knowledge, enabling them to overcome workplace challenges. In summary, it underscores the training initiative's impact in **empowering women** through targeted and personalized **development efforts**.

Delivery Methods

The score of **4.018 (80%)**, the delivery methods are perceived as **effective**. This indicates that the techniques, presentation styles, and instructional strategies used in the training are successful in conveying information, although there may be minor opportunities for enhancement.

Learner Characteristics

An average score of 4.019, equivalent to an **80%** rating, reflects that the training content is well-matched to the learners' backgrounds, skills, and expectations. This alignment ensures that the **training is relevant and accessible** to the participants.

Organizational Support

The highest ratings are seen in organizational support, with an average score of **4.042 (81%)**. This shows that respondents feel strongly that the organization provides adequate resources, follow-up, and a supportive environment, which are critical for the **effective** application of the **training**.

Training Duration

The training duration is rated at **4.007 (80%)**, suggesting that the length of the training is appropriate. Participants generally believe that the allocated time allows sufficient coverage of material without being too lengthy or too brief.

Overall Analysis

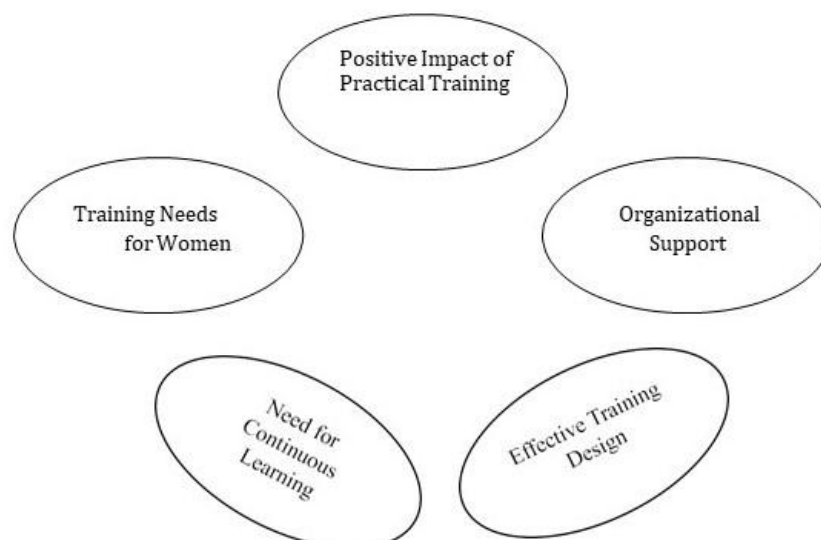
All five aspects of the training program give favorable evaluations, with percentages consistently around **80-81%**. This indicates a strong, **positive perception** of the training design, delivery, content relevance, organizational backing, and duration. The high scores merely mean that the training program is **effectively** structured and implemented.

Overall Analysis of Percentage and Mean Value

The results indicate that **practical training programs** play a crucial role in enhancing the skills of **women employees**. The consistently high scores suggest that structured training methods, interactive learning, and strong workplace support contribute to effective competency development. With **organizational support receiving the highest rating (4.042)**, it highlights the importance of a positive work environment in facilitating skill application. To further enhance practical training, organizations should integrate **real-world case studies, practical workshops, and mentorship programs** to ensure long-term professional growth and improved job performance.

FINDINGS AND SUGGESTIONS

FINDINGS



Positive Impact of Practical Training

Women employees benefit significantly from Practical training, improving skill application, problem-solving abilities, and workplace efficiency.

Role of Organizational Support

Strong organizational backing, including mentorship and career development programs, enhances training effectiveness and long-term competency growth.

Effectiveness of Training Design

Well-structured training programs with clear objectives and engaging delivery methods contribute to successful learning outcomes.

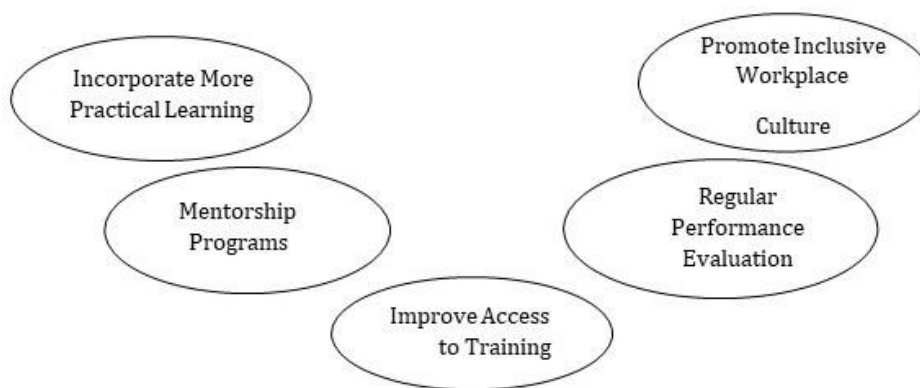
Need for Continuous Learning

Regular skill assessments, post-training support, and refresher programs are crucial to maintaining competency and adapting to industry changes.

Training Needs for women

Addressing specific challenges faced by women in male-dominated industries through tailored programs improves inclusivity and career advancement.

SUGGESTIONS



Incorporate More Practical Learning

Increasing the real-world case studies, simulations, and practical workshops to bridge the gap between theory and practice.

Enhance Mentorship Programs

Establishing structured mentorship initiatives to provide continuous guidance and career support for women employees.

Improve Access to Training

Ensuring equal opportunities for women by offering flexible learning options, online modules, and targeted skill development sessions.

Regular Performance Evaluation

Implement ongoing assessment mechanisms, such as feedback loops and competency tracking, to measure training impact and areas for improvement.

Promote Inclusive Workplace Culture

Encouraging diversity-focused policies, leadership training for women, and awareness programs to foster a supportive and growth-oriented work environment.

BIBLIOGRAPHY

1. Vasudevan, H. (2014). Examining the relationship of training on job satisfaction and organizational effectiveness.
2. Hidayat, A., & Aziz, M. A. (2022). The role of job training in improving employee performance. *Adpebi International Journal of Multidisciplinary Sciences*, 1(1), 21-30.
3. Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *European journal of Business and Management*, 5(4), 137-147.
4. Hackett, G., Betz, N. E., & Doty, M. S. (1985). The development of a taxonomy of career competencies for professional women. *Sex roles*, 12(3), 393-409.
5. Walker, E., & Webster, B. (2006). Management competencies of women business owners. *The International Entrepreneurship and Management Journal*, 2, 495-508.
6. The Impact of Entrepreneurship and Management Journal, 2, 495-508.
7. The Impact of Entrepreneurship Competence on Micro Business Performance

TREND ANALYSIS IN SANITATION COVERAGE: MENSTRUAL HYGIENE

*** S. Subasri**

PG Scholar, Department of Economics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-43

ABSTRACT

Menstruation is a physiological process for women of reproductive age. On an average a woman cumulatively menstruates for about five to seven years during her lifetime, thus menstrual health and hygiene constitutes a critical life event. Menstrual hygiene is integral for general empowerment and over-all wellbeing of women worldwide. Several studies have reported specific menstrual hygiene management practices among the general population in India. Most women do not have access to the necessary financial and non-financial logistics to manage satisfactory sanitation levels. The study findings emphasize that the problem is crucial for the central and eastern region of the country. This could be linked to the level of development, accessibility, availability and affordability of products that can be utilized to manage menstruation.

Keywords: Menstrual health and hygiene, Women wellbeing, Accessibility, Availability, Affordability, Sanitary pads.

Introduction

Menstruation is a physiological process for women of reproductive age. On an average a woman cumulatively menstruates for about five to seven years during her lifetime, thus menstrual health and hygiene constitutes a critical life event. Every woman has the right to healthy, safe and dignified menstruation. However, evidences indicate this basic human right of women is not being addressed adequately, as adolescent girls and women experience a multitude of personal challenges and cultural barriers to a safe and comfortable menstruation. Poor knowledge, inadequate clean water and soap, insufficient infrastructure, non-availability of private places to clean and change the products, and poor awareness about disposal of used products are but few of those (Nishisipa Panda, 2024). Moreover, poor social support systems, fear, stigma, uncertainty, mis-information at family and societal levels and personal inhibitions often act as barriers to managing safe menstruation. Further, due to cultural practices and restrictions many girls are not adequately informed about healthy menstruation around which exist many a myths, taboos and stigma. Over the years, women have used some strategies to cope with menstruation, varying greatly across settings, based upon personal preferences, resource availability, cultural beliefs, social norms, socioeconomic status, and access to information. In many low-middle-income countries, women and girls have restricted mobility and behavior during menstruation as they are considered to be impure during menstruation. In development countries menstruation is still often shrouded in secrecy, and mothers are reluctant to discuss menstruation with their daughters mainly due to lack of knowledge about menstruation.

Menstrual hygiene is integral for general empowerment and over-all wellbeing of women worldwide. Good menstrual hygiene management is defined as women and adolescent girls using clean MHM to adsorb or collect blood as frequently as necessary in privacy for the duration of the menstruation period, with effective cleansing and with access to disposal facilities for used materials. Globally, at least 500 million young girls lack access to proper menstrual hygiene facilities. >75% of displaced populations worldwide are composed of girls and women and these women are challenged to manage their menstruation in safe, comfortable conditions. During emergencies, women and girls often lack access to basic hygiene concerns such as sanitary pads, clean clothes, and privacy for changing, which are essential for managing monthly blood flow. Moreover, the shame and taboo associated with menstruation hinder the development of appropriate solutions. Menstruation is a natural process that must be managed hygienically to avoid health problem such as urinary track and reproductive tract infections. Climate change intensifies menstrual health challenges world-wild. In South Asia. Pakistan, India, and Bangladesh, women are particularly at risk due to rising sea levels, extreme weather events, and increased displacement. These populations face significant challenges due to structural inequalities, which exacerbate health inequities during climate-induced disasters such as floods, heatwaves, and wildfires. In emergency settings, menstrual health often becomes a lower priority, leading to inadequate care and heightened difficulties for women and girls during and after climate crises. The effective management of menstruation is crucial for improving the well-being of displaced women, so addressing menstruation systematically in the humanitarian response is crucial. Inadequate housing, lack of women-friendly spaces, insufficient waste disposal, inadequate infrastructure, and lack of humanitarian aid are primary obstacles to maintaining menstrual hygiene during disasters in low and middle-income setting.

Statement of the Problem

In India, there are approximately 355 million menstruating women. Despite this, many women across the country struggle to maintain good MHM. The Kerala state is known for its high health and development indicators compared to other regions of India. Although there have been significant advances in health and management, menstrual practices, especially in rural areas, are still unsatisfactory. Several studies have reported specific menstrual hygiene management practices among the general population in India. However, limited studies address coastal populations where women often experience natural disasters, increasing their vulnerability. This study aims to evaluate the MHM among women of reproductive age in a coastal area of Kerala, India during displacement. Practicing hygiene practices during menstruation is of considerable importance, as it has implications on increased vulnerability to Reproductive Tract Infections (RTI).

Need for the Study

Today, millions of women suffer from RTI and related complications, and often these infections are transmitted to the offspring of the pregnant mother. Most childbearing takes place inside a marital union in the cultural setting of India. Therefore, with increasing age at marriage and declining parity levels, women with regular menstrual cycles are increasing.

However, most women do not have access to the necessary financial and non-financial logistics to manage satisfactory sanitation levels. Particularly vulnerable are young women from socially and economically deprived sections of society. India society is still facing a lot of reluctance to discuss menstruation-related issues. Menstrual hygiene has empirically been the entry point to raise broader issues like gender equality and women empowerment, encompassing essential matters such as sex education sexual and reproductive health & rights, child marriage, fistula, and female genital mutilation.

Background of the study

At international level, the United Nations has played a fundamental role in including the gender dimension in environmental policies. The first time that gender perspective was integrated in the promotion of sustainable development was in 1992 at the United Nations Conference on environment and development, also known as Earth summit, where it was decided that all environmental and development policies and programs should include a gender perspective. In 1995, during the Fourth World conference on women in Beijing, the gender environment-sustainable development nexus was defined. Since gender dynamics play a key role in the access to and control of natural resources and in the goods and services derived from them, environmental issues were identified as one of the 12 critical areas for women. The European parliament has been playing a leading role in this area since 2011, having produced several resolutions addressing climate change from a gender perspective. In its resolutions of September 29, 2011 on the development of a common EU position before the United Nations Conference on sustainable development, Article 19 emphasizes that an integrated approach should be discussed to address multiple challenges including climate change gender equality or energy supply. In this Background of the study as frame the following objectives.

- To assess the knowledge and practices related to menstrual health and hygiene.
- To explore the experiences and challenges of women during menstruation; and
- To identify the predictors of healthy menstrual health and hygiene

Review of literature

Deepanjali Vishwakarma et al., (2021) explored the linkages between women empowerment, utilization of hygienic methods during mensuration's and its effect on reproductive moment tract infections (RTI) among women aged (15-24) years in India. The findings reveal that about 60% of women aged 15-24 utilised hygienic methods during mensuration in India. This study suggests that the different dimension of women empowerment is essential in accelerating the level of practicing hygienic mensuration method and providing assistance against diverse malpractices and taboos attached to it.

Alonso Epelde et al., (2024) provided systematic review of the impacts of climate policies in inequalities from a gender perspective. The Result shows that real gender-oriented analysis is missing such as power relations intersectionality, and gender mainstreaming and science has to contribute to generation of knowledge that is useful for tackling some of the greatest challenges for the 21st century, such as transition to a socioeconomic model that is more respectful with the ecological limits of the planet and gender equality.

Nishisipa Panda et al., (2024) aimed to assess the knowledge and practices related to menstrual and hygiene amongst females of (10 – 49 years) of age by exploring the experiences of women during menstruation; and identifies the key predictors of healthy menstrual hygiene and health. The findings show 74.3%, mothers were the primary source of information, 61% are using sanitary pad.

Sourav Biswas et al., (2024) discussed the period product use among young women in rural and urban India from a geospatial perspective. The findings revealed that the central district of India was found to have considerably by low usage of hygienic products, while the improvement of menstrual hygiene and health was considerably low usage.

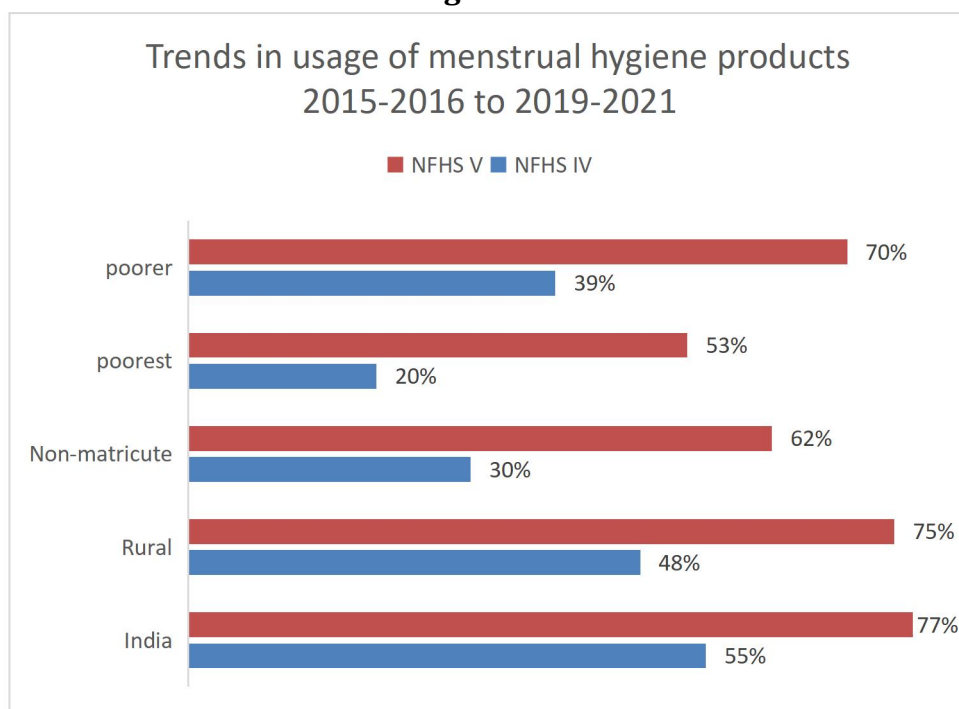
Jessy Prabhakar et al., (2025) discussed the menstrual hygiene management practices among displaced coastal women in Kerala. During the climate related displacement, women face additional challenges in safely managing menstrual hygiene. The findings revealed that older women and lower with education were more likely to have poor menstrual hygiene practices.

METHODOLOGY

The study is based on secondary data. This study has used the fourth and fifth round of National Family Health Survey conducted during 2015-2016 and 2019 to 2021. The survey was guided under the supervision of the Ministry of health and Family welfare, government of India. The international Institute for Population sciences, NFHS is a nationally represented survey, providing data on various aspects of population, family planning, maternal and child health, child survival, HIV/AIDS and sexually transmitted infection (STIs), reproductive health, and Nutrition in India.

Major Findings of the Study

Figure 1.1



Trends in menstrual hygiene during 2015-2019

An empirical analysis using data from the National Family Health Surveys (NFHS) to assess whether these recent efforts have led to a positive change in the adoption of clean hygiene menstrual practices among women in India. For this study, I aggregate data from two rounds of the survey conducted in 2015 (NFHS-IV) and 2019 (NFHS-V). Aggregate trends reveal a noteworthy transformation: In 2015, just 55% of the surveyed women were reported to use hygienic menstrual management products such as locally made sanitary pads, sanitary napkins, tampons, or menstrual cups. However, by 2019, this figure surged to an impressive 77%. Even more striking is the granular data, which underscores that the most substantial improvement took place among rural, less educated women hailing from the most economically disadvantaged sections of society. Three main trends prevail: First, the data highlights that the most significant progress in menstrual hygiene management (MHM) has been observed in rural districts, where a lack of information had hitherto hindered the widespread use of hygienic menstrual products. In 2015, less than half of rural women reported using clean menstrual hygiene products. However, by 2019, approximately three-fourths of women from rural areas reported using such products. Second, the progress in the adoption of MHM products has been particularly pronounced among women with lower levels of education. These women often possess limited autonomy and access to resources, which impedes their access to clean menstrual hygiene products. In 2015-16, only three in 10 women without a matriculation qualification were reported to use such products. However, by 2019-21, this figure had doubled, with more than six in 10 women reporting the use of clean menstrual hygiene products. Third, the assertion that the scheme has benefitted the neediest can also be seen if we analyze the changing pattern of menstrual hygiene products among the women in different wealth categories. The NFHS employs a wealth-based categorization, distinguishing households into five distinct economic categories: the poorest, poorer, middle, richer, and +. A comparative analysis of NFHS data spanning rounds IV and V reveals that the use of menstrual hygiene products has increased most substantially in households from the poorest and poorer wealth quintiles.

In 2015, the landscape was bleak: only around 20% of women in the poorest category used hygienic menstrual health products. However, the NFHS-V data paints a different picture; by 2019, a significant number of women (53%) in the poorest category had embraced menstrual health products. A similar narrative unfolds for women from the poorer class. In 2015, just 39% of women in the poorer wealth quintile had access to clean menstrual health products. Remarkably, by 2019, more than 70% of women from these households had adopted clean menstrual health products.

Timeline chart of menstrual hygiene management

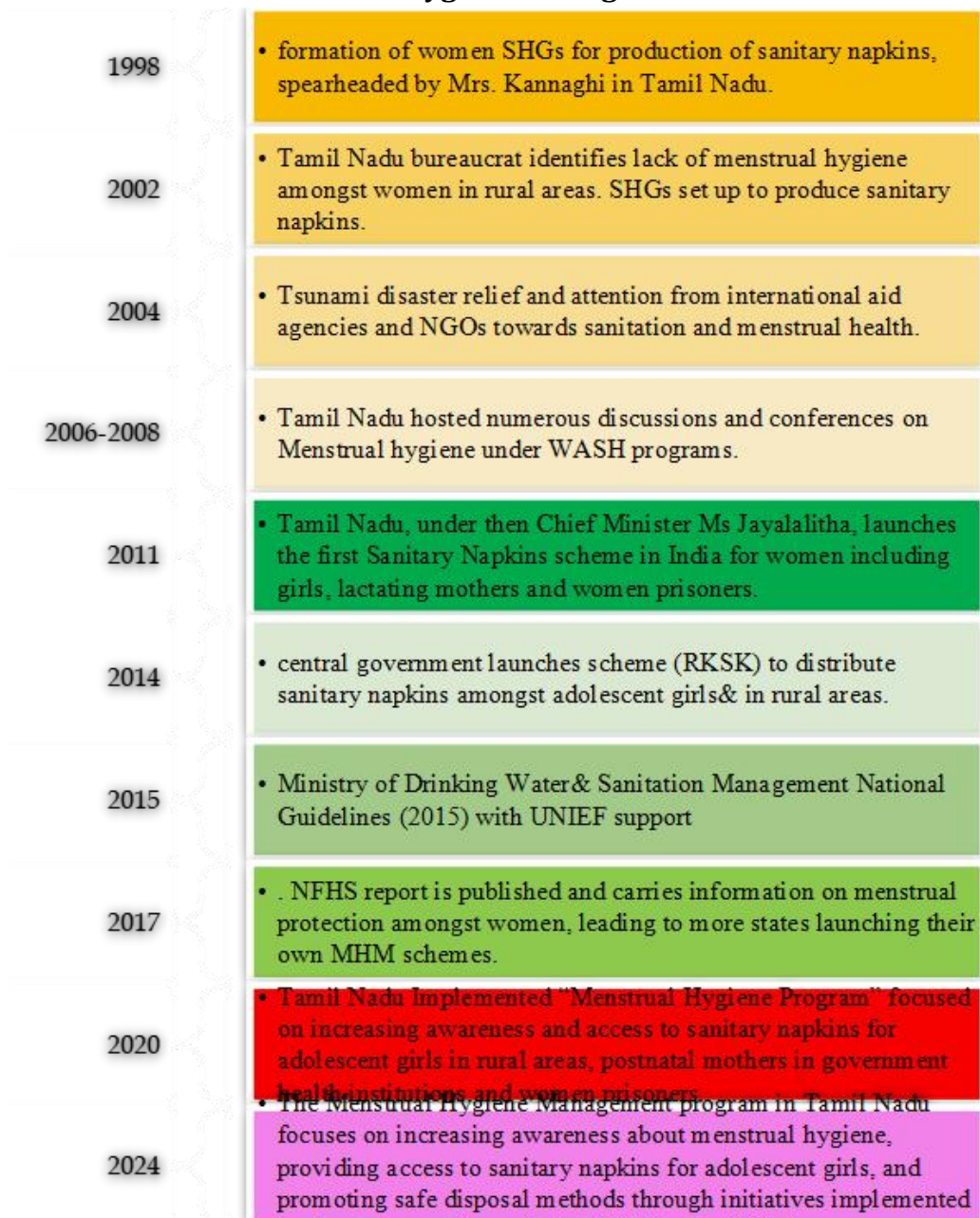


Figure 1.0

Adolescents who menstruate in India

The image presents a statistical comparison of menstruating women in India and their access to sanitary napkins. On the left side, it shows that there are 355 million menstruating women in the country, represented by multiple female icons. On the right side, it highlights that only about 42.6 million menstruating women use sanitary napkins, which is visually depicted by a significantly smaller number of icons. This suggests that a vast majority of menstruating women in India do not have access to or do not use sanitary napkins, indicating a potential issue of menstrual hygiene awareness, affordability, or accessibility.

Menstrual hygiene with women's empowerment and reproductive tract infections: Evidence from India **discussed** to achieve sustainability, on the whole, UN Millennium Development Goals-2000, emphasized the development of women, by empowering them, promoting gender equality and imparting them with health and well-being. However, as we have advanced post the 2015 world, WASH-water, sanitation, and hygiene has emerged as a pivotal concern. WASH deals with cleanliness, sanitation, hygiene awareness and its implementation as a practice among women and children. Menstruation is a normal physiological process, a phenomenon, unique to women. In Indian society, there are diverse ways of welcoming this period of a woman's life. There are the variety of ceremonies which are celebrated in different parts of the country, some of which are referred as 'Ritu kala samskara', Manjal Neerattu Vizha, etc. These ceremonies are mainly designed to acknowledge the reproductive and marriageable status of young girl. However, these ceremonies do not impart any knowledge above maintaining the phenomenon in hygienic way to these young girls. Additionally, there are numerous myths which are attached with menstruation in India. It is considered filthy. Owing to the same, which is attached to menstruation, not just for individuals from rural areas but also, urban areas, call it by different synonyms like test match, 'that time of the month lady time', 'Happy birthday', etc. Some customs of Indian society, including sending women to basic huts outside the village premises, 'Gaokar', and are forced to live in grubby surroundings. These norms compel women to overlook the importance of hygiene during menstruation. Lack of menstrual hygiene was found to result in adverse health outcome like, yeast infection and RTA (Reproductive Tract Infections).

In India, tribal groups are considered as most vulnerable, and as a result, they are subjected to isolation in society. The study revealed that women belonging to scheduled tribes are in a more vulnerable situation as they are less prone to use hygienic methods during menstruation as compared to other caste groups. Bad cultural practices and taboos regarding the issue, has prevented the girls and women from articulating their needs for proper menstrual hygiene.

Women empowerment refers to creating an environment which enables women to take independent decision on their personal development, giving them equal rights in the community, society, and workplace. The empowerment of women is the best strategy and the most effective tool to ensure their health and wellbeing which is essential to achieve the sustainable development goals. In the diverse land of India, there are a variety cultural beliefs, myths, and taboos relating to menstruation. There are unwritten rules and practices, about managing menstruation and intermingling with menstruating women, which are evident from most part of country. Amongst this unwritten regulation which are enforced

on women, only few can be counted as beneficial, whereas, the majority of them have potentially unfavorable ramifications. The evidence generated by the present study supports the claim of heterogeneity in the following practices of hygienic methods for protection during menstruation by region in the country.

Conclusion

This study has highlighted the use of menstrual hygiene methods for protection during menstruation and its association with different dimensions of women empowerment in India. The study findings emphasize that the problem is crucial for the central and eastern region of the country. This could be linked to the level of development, accessibility, availability and affordability of products that can be utilized to manage menstruation. Additionally, this finding can be directly linked to the status of women and attitude of society towards menstruation in these regions. Stigmatizing menstruation, which in plain terms, is a biological phenomenon often leads to the violation of several human rights, prominently the rights to human dignity, right to non-discrimination, equality, bodily integrity, health, privacy and the right to freedom from inhumane and degrading treatment from abuse and violence. With the concern of these practices in our society, decision making the power of women can be utilized as a smooth and easy way to elevate the level of utilization of hygienic practices during menstruation. As the present study revealed that household decision making power of women has a positive association with the use of hygienic practices during menstruation to prevent the blood stain. If a woman can take decisions for the household, then there are higher chances that she can take decisions regarding the choice of hygienic methods for protection during menstruation.

Recommendations

- Women as a pivot, is the current strategy of implementing programme for use of menstrual hygiene methods which in turn enables protections from infections where there must gain focusing in women's right to decision on their own life and health.
- The gender perspective is typically more absent in the studies led by men where gender mainstreaming is missing. It is important to expand knowledge in this area but also reconnect with feminist theory.
- There is need of adequate attention to the needs of women regarding MHM in emergency situations.
- Strategies to promote education, improve media access, and enhanced house wealth can facilitate menstrual hygiene adaption.
- Initiatives to reduce sanitary napkin cost and increase accessibility particularly in rural areas are crucial to mitigating geographical disparities nationwide.

Reference

1. Vishwakarma D, Puri P, Sharma SK. Interlinking menstrual hygiene with Women's empowerment and reproductive tract infections: Evidence from India. *Clinical Epidemiology and Global Health*. 2021 Apr 1; 10:100668.

2. Alonso-Epelde E, García-Muros X, González-Eguino M. Climate action from a gender perspective: A systematic review of the impact of climate policies on inequality. *Energy Research & Social Science*. 2024 Jun 1; 112:103511.
3. Panda N, Desaraju S, Panigrahy RP, Ghosh U, Saxena S, Singh P, Panda B. Menstrual health and hygiene amongst adolescent girls and women of reproductive age: a study of practices and predictors, Odisha, India. *BMC Women's Health*. 2024 Feb 26;24(1):144.
4. Prabhakar J, Aswin MG, Nazar AF, Adarsh MS, PJ JJ, Nisam AP, MJ KP, Mini GK. Exploring menstrual hygiene management practices among displaced coastal women in Kerala, India. *The Journal of Climate Change and Health*. 2025 Jan 1; 21:100375.
5. Biswas S, Alam A, Islam N, Roy R, Satpati L. Understanding period product use among young women in rural and urban India from a geospatial perspective. *Scientific Reports*. 2024 Aug 29;14(1):20114.
6. <https://www.ideasforindia.in/topics/human-development/transforming-menstrual-hygiene-in-india.html>
7. <https://ceda.ashoka.edu.in/decoding-menstrual-hygiene-in-india-the-strides-that-we-have-made-and-the-battles-yet-to-be-won/>
8. <https://ashoknagar.mppolice.gov.in/wp-content/uploads/2024/02/padbank-and-menstrual-education-article-3.pdf>
9. <https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene>

CUSTOMER SATISFACTION TOWARDS TECHNOLOGY-ENABLED BANKING- A COMPARATIVE STUDY OF SELECTED PSB AND PVB BANKS IN COIMBATORE CITY

Dr. K. Shobha

Associate Professor and Head of Economics, Government Arts College, Coimbatore -18

ABSTRACT

India has a huge potential for digital payments with about 25.5 billion real-time payment transactions, India ranked first in the world in terms of the number of transactions. Based on this scenario it's essential to analyze the customer satisfaction towards technology-based banking. For that systematic and convenience sampling were adopted to select the respondents from both private and public sector banks. The study found that the respondents of public sector banks were more satisfied than the private sector banks in relation to ATM services, core banking services and overall satisfaction level. Private sector bank customers were satisfied with the telebanking services and internet banking services. Overall, the public sector bank customers were more satisfied when compared to private bank customers.

Key Words: Customer satisfaction, Technology based banking, ATM, Mobile banking, Internet banking

1. Introduction

India has a huge potential for digital payments. As of October 2021, the country had around 1.18 billion mobile connections, 700 million Internet users, and about 600 million smartphones. These numbers are growing rapidly each quarter. With about 25.5 billion real-time payment transactions, India ranked first in the world in terms of the number of transactions in 2020. In order to transform India into a digitally empowered society and knowledge economy, the Government of India launched Digital India programme in 2015. The programme focuses on three main vision areas: digital infrastructure as a core utility to every citizen, governance and services on demand, and digital empowerment of citizens. Through the programme, the government wants to ensure the availability of high-speed Internet, provide mobile phones and bank accounts to every citizen, ensure availability of services in real-time from online and mobile platforms, make financial transactions electronic and cashless, and ensure digital literacy and availability of digital resources across the country. (<https://www.ibef.org/research/case-study/digital-payments-and-their-impact-on-the-indian-economy>)

E-banking is the automated delivery of new and existing products to customers. Through e-banking, both individual and corporate customers can perform a host of operations such as accessing accounts, transacting business, transferring funds, obtaining information, having funds debited and credited and others. Gone are the days of customers planning their days around limited bank timings and long queues. Banking now happens with a few clicks and is always available on devices such as phones and computers. Within the period of one and a half decades, traditional banking has

undergone a massive change, with the advent of technology and e-banking and the resultant customer satisfaction taking over the banking sector, the world over. Banking customers are transitioning from apathy to satisfaction and enjoying multiple benefits as banks embrace technology on an ongoing basis.

This growth in the banking industry got an impetus because of the COVID pandemic. With people meeting or communicating very rarely, there was very little scope for them to interact with each other, or to exchange cash physically, in a transaction, at these times. This increased the use of e-banking because of the growth in digitized transactions and a cashless society. Banking services, the world over, with the influx of technology went on to be transformed into being supply-driven demand driven, as it was traditionally. Now, a lot of customer-focused research goes into the products and services that banks bring out.

Globally, lifestyles have been changing enormously and with that the banking needs of consumers are also evolving. For banks to meet their goals of customer acquisition and retention, gauging customers' needs and launching products and services accordingly is the need of the hour. There are several channels in the e-banking universe that are making this transformation possible. The ones which are most often used are online, phone and SMS banking, ATMs, debit and credit cards, electronic funds transfer and clearing, e-payments, digital wallets, trading accounts and other e-commerce solutions.

It is very important to remember that customer satisfaction is an indication that the existing customer base of a bank approves of and is satisfied with the banks' offerings and operations. That helps the transition from customer satisfaction to customer loyalty and helps brand building enormously. Some easily discernible results leading to customer satisfaction in an e-banking set up are increased productivity, reduction in cost of banking operations, fast settlement, and high volumes of banking transactions.

Some factors that could influence customer service were identified by the sector to be service quality, conversational banking, web design and content security, privacy, convenience, and speed. The digital transformation of banks has been complemented by the increase in the number of Internet users. The number of internet users in India is steadily increasing and is part of the story of why and how e-banking is flourishing. It is the same the world over. (<https://www.infosysbpm.com/blogs/financial-services/the-impact-of-e-banking-on-customer-satisfaction.html>)

Based on the scenario its essential to analyze the customer satisfaction towards technology-based banking on selected respondents. The main objective of the study is to make a comparative study between selected Public Sector Banks (PSBs) and Private Sector Banks (PVBs) on customer satisfaction towards technology-enabled banking. The hypothesis tested was that the customer satisfaction does not differ on the basis of telebanking services, core banking services, ATM services, internet banking services, mobile banking services and overall satisfaction towards technology-enabled banking.

2. Literature review

Halim et.al., (2023) in their study revealed that the student segment of banking institutions' customers in Malaysia build their satisfaction based on the reliability, security, and perceived usefulness. The equality plays a very important role, as it has become the basis for how customers view e-banking and, eventually, how it interacts and behaves with

online services. The determinants of e-banking service quality associated with the banking industry is found to be essential hence, banks should take care of all three factor in regard to sustain an elevated level of customer satisfaction. This shows that customers are more attracted to banks that allow faster transactions via online portals, which are easily available. In addition, customers lay more stress in the effectiveness of the website security system as they are concerned with the privacy of their personal information and the safety of their financial transactions while using e-banking. Therefore, banks should ensure that customer's personal information shared over e-banking platforms is not accessible to any third party. To enhance the security of the financial transactions, banks should provide secure and unique personal identification numbers and always send login and transaction alerts to registered contact numbers and e-mail addresses. Banks should also send onetime usable passwords to customers via registered phone/e-mail to complete each transaction, thus preventing suspicious transactions.

Serrah, E. A., and Maideen, M. B. H. (2022) in their study found that customer satisfaction has been always a concerning issue not only in the banking sector but in all the other industries. In this study, the factors that have been influencing customer satisfaction were security and privacy, reliability, system availability, and website design. The sample that the study conducted on is one of the private banks in Malaysia, the study only focused on the E-banking services quality not on all banking services in order to get more specific results.

The various studies relating to customer satisfaction on banking services covered various dimensions. Based on the literature reviewed and inference drawn by an in-depth study, it was found that the earlier studies had not concentrated on a comparison of customers' satisfaction of public sector and private sector banks on technology enabled banking services. This research gap made it essential to compare the banking services of public sector and private sector banks.

3.Methodology

The sample unit consists of target and control groups with 500 customers, out of which 250 are clients of public sector banks and 250 are clients of private sector banks. Those customers residing within the Coimbatore Municipal Corporation limits were selected. Systematic sampling technique and convenience sampling technique were adopted in the selection of sample units, covering all the 11 revenue divisions. Direct judgment method, a variant of quantitative judgment method was used to measure the customer satisfaction level. Using the limited category response method, the respondents were asked to mark their preference on a five point scale as fully satisfied, satisfied, neutral, dissatisfied and fully dissatisfied. The values assigned were 5,4,3,2 and 1 respectively. Primary data was collected in the month of January 2023 Discriminant analysis was used to identify the customer satisfaction level, which discriminates the public sector and private sector bank respondents. Discriminant analysis was analyzed using the SPSS (Statistical Package for Social Sciences) 24.

4. Findings

4.1 Demographic and Economic Profile of the Respondents

The percentage analysis shows that 74 percent of the respondents were males as against the 26 percent female respondents. The age wise distribution indicates that the majority of the samples considered are below 40 years. The occupation profile indicates that the majority were salaried class followed by the self-employed and home makers. Monthly income ranged from Rs.1,00,000 to Rs.1,50,000.

4.2 Customer Satisfaction towards Technology Enabled Banking

Technology enabled banking improves the service quality and strengthens the banking sector. Due to electronic payment there is an increase in customer satisfaction level, increased productivity, reduction in cost of banking operations, settlement faster etc. Customer satisfaction is a crucial factor for banks to retain or bring new customers to their respective bank. The following six factors identified for customer satisfaction are telebanking services, core banking services, ATM services, internet banking services, mobile banking services and overall satisfaction. The type of bank i.e. the public sector bank (1) and the private sector bank (2) were considered as the dependent variable and the factors as independent variables. The table shows the significant effect on the group from each of the independent variables.

Table – 1
Tests of Equality of Group Means

Variables	Wilks' Lambda	F	df1	df2	Sig.
Telebanking services	0.963	19.125	1	498	0.000
ATM services	0.960	20.547	1	498	0.000
Core banking services	0.898	56.612	1	498	0.000
Internet banking Services	0.990	4.833	1	498	0.028
Mobile banking services	1.000	0.142	1	498	0.707
Overall satisfaction	0.784	137.573	1	498	0.000

Source: Compiled by author

Table - 1 gives an insight about the "Test of Equality of Group Means". The significant value that is above 0.05 has been observed in only one variable i.e. "Mobile banking services". The perception of the respondents based on the type of bank significantly differ with regard to Telebanking Services, ATM services, core banking services, internet banking services and overall satisfaction. The value of Wilks Lambda close to 1 indicates that the differences are not significant.

The value of Box's M-test is 279.271 with F=14.466. The Box's M-test the assumption of equality of variance-covariance matrices in the group. The p-value for Box's M is less 0.05 showing that the assumption regarding the matrix cannot be made. The sample size for the current research is 500 i.e. a large sample and Box M is known to provide a statistically significant result when it does not exist (<http://www.statisticshowto.com/boxs-m-test/>).

The pooled within group correlation matrix provided the bivariate correlation values. It indicated that most of the correlation values are nearing 0.3. It is clear that except for the correlation value of 0.546 between "internet banking services and telebanking services" and the correlation value of 0.414 between "internet banking services and ATM services" all other correlation value are around 0.3 and the hence the problem of multicollinearity is eliminated in the study on customer satisfaction. Pooled Within - Group Matrices reveals that there is no problem of multicollinearity among independent variables. The summary of canonical discriminant functions shows the extent to which each of the independent variables is contributing to the ability to discriminate between the two groups.

Table - 2
Standardized Canonical Discriminant Function Coefficients

Variables	Coefficients
Telebanking services	-0.445
ATM services	0.364
Core banking services	0.496
Internet banking services	-0.251
Overall satisfaction	0.675

Source: Compiled by author

The relative importance of the five independent variables in predicting the dependent variable (public and private sector bank respondents' perception) is given. The coefficient provides the discriminating ability of a variable. The coefficient value is large it suggest that the particular variable has a higher discriminating ability.

Overall satisfaction has a high discriminating ability on function 1 with a score of 0.675 followed by the core banking services (0.496) and ATM services (0.364). Further the negative standard coefficient value of -0.445 with regard to tele banking services and negative value of -0.251 with regard to internet banking service indicate negative relation with the type of bank. Internet banking service has the negative relation (-0.251) which indicates that the technology enabled banking has to be improved.

The structure matrix table provides the discriminant loading. The SPSS output in general provides the value from the highest to the lowest by the absolute size of the loading (Hair et.al, 1995). In the customer satisfaction towards e-banking only one function is identified and the correlation of the function with the independent variable is displayed.

Table - 3
Structure Matrix

Variables	Function
	1
Overall satisfaction	0.743
Core banking services	0.476
ATM services	0.287
Telebanking services	-0.277
Internet banking services	-0.139

Source: Compiled by author

Overall satisfaction with the loading of 0.743 strongly discriminates the perception of the private sector and the public sector bank respondents. The other important variable that discriminates the perception of the private and the public sector bank respondents is “core banking services” with a loading of 0.476. The negative loading of -0.277 with regard to telebanking services and a negative loading of -0.139 with respect to “internet banking services” indicates a negative relationship with the dependent variable.

Table -4
Relative Discriminating Power of Variables

Factors	Unstandardized Discriminant Co-efficients	Relative Discriminant Power
Telebanking Services (X1)	-0.418	12.30996
ATM services (X2)	0.330	10.46596
Core banking services (X3)	0.374	23.61693
Internet Banking Services (X4)	-0.216	3.486387
Overall satisfaction (X5)	0.885	50.12106

Source: Compiled by author

The discriminant equation from the unstandardized discriminant co-efficient is

$$Z = -3.261 - 0.418X_1 + 0.330X_2 + 0.374X_3 - 0.216X_4 + 0.885X_5$$

Table – 4 indicates that the internet banking services has a least influence on the perception of public and private sector bank respondents when compared to other aspects. The relative discriminant power reveals that the overall satisfaction (50.12 percent) and core banking services (23.61 percent) were the dominant factors in discriminating the respondents of the public and private sector banks. Other variables like telebanking services (12.31), ATM services (10.46) and internet banking services (3.48) were less dominant factors in discriminating the respondents of the public and private sector banks.

5. Conclusion

Discriminant analysis was used to analyse the dominant factors in discriminating the respondents of the public and private sector banks. Overall satisfaction and core banking services were the dominant factors in discriminating the respondents of the public and private sector banks. Other variables like telebanking services, ATM services and internet banking services were less dominant factors. The respondents of public sector banks were more satisfied than the private sector banks in relation to ATM services, core banking services and overall satisfaction level. Private sector bank customers were satisfied with the telebanking services and internet banking services. For mobile banking services the satisfaction level of both the public and private sector banks were the same.

References

1. Hair, J. F. Jr., Anderson, R. E., Tatham, R. L and Black, W. C (1995). *Multivariate Data Analysis* (3rd edition). New York: Macmillan.
2. Halim, H., Basar, S. A., Hamzah, H., Sukrri, N. N. A. N. M., and Bhuiyan, A. B. (2023). Customer satisfaction on e-banking services among university students in Malaysia.

3. sian Finance and Banking Review, 7(1), 1-9. (<https://doi.org/10.46281/asfbr.v7i1.1916>)
4. IBEF (2022). Digital Payments and their Impact on the Indian Economy. (<https://www.ibef.org/research/case-study/digital-payments-and-their-impact-on-the-indian-economy>)
5. Infosysbpm (2023). The Impact of e-banking on customer satisfaction. (<https://www.infosysbpm.com/blogs/financial-services/the-impact-of-e-banking-on-customer-satisfaction.html>)
6. Serrah, E. A and Maideen, M. B. H (2022). E-Banking Services and Customer Satisfaction: Focus on A Private Bank in Malaysia. International Journal of Academic Research in Business and Social Sciences, 12(10), 1489 – 1499.
7. Shobha K, How to do two group discriminant analysis SPSS. (<https://www.youtube.com/@dr.shobhak6764/videos>)
8. Stephanie Glen. Box's M Test: Definition, Elementary Statistics for the rest of us. (<https://www.statisticshowto.com/boxs-m-test/>)

ECONOMIC STRENGTH, BETTER HEALTH: THE INTERCONNECTION OF WOMEN'S FINANCIAL AUTONOMY AND HEALTHCARE ACCESS

Ms. Sharmila S*, Ms. Akshatha S* & Dr. C. Athena**

* UG Students ** Assistant Professor, PSGR Krishnammal College for Women, Coimbatore- 04

ABSTRACT

Women's financial independence and access to healthcare go hand in hand, shaping both their personal well-being and the progress of society. When women have financial autonomy, they can make informed choices about their health, ensuring access to quality medical care, proper nutrition, and essential reproductive health services. At the same time, good health empowers women to participate fully in economic activities, contributing to financial stability and personal growth. However, many women still face barriers—whether due to economic disparities, gender-based discrimination, or systemic challenges—that limit both their financial freedom and access to healthcare.

This study delves into the connection between economic strength and healthcare access for women, exploring how financial independence enables them to take charge of their well-being. It also examines the role of government programs designed to provide financial security, particularly in old age. Based on a survey of women in Coimbatore, the research highlights real-life challenges in financial decision-making, healthcare accessibility, and awareness of available support systems. The findings emphasize the urgent need for policies that empower women economically and ensure that healthcare is within their reach. By addressing these gaps, we can move toward a future where every woman has the opportunity to thrive—both financially and in terms of her health.

KEYWORDS: Women's empowerment, financial independence, healthcare access, economic security, gender equality, government support, financial literacy, old-age security, economic growth, social well-being.

INTRODUCTION

Women's financial independence and healthcare access are deeply interconnected. It influencing both individual and community's development. Economic empowerment helps women to take independent decisions regarding their health, ensuring access to quality medical care, nutrition, and reproductive health services. At the same time, improved health enhances women's ability to participate in economic activities, fostering financial stability and overall productivity. However, socio-economic disparities, gender-based discrimination, and systemic barriers often hinder women's ability to achieve financial independence and access essential healthcare services. This paper explores the interconnection between women's economic strength and healthcare access, examining how financial autonomy empowers women to prioritize their health, the challenges they face, and the policy interventions is essential to fill the gaps. Understanding this concept is crucial for advancing gender equity, improving public health outcomes, and fostering sustainable economic growth. The Tamil Nadu government has introduced several initiatives to uplift women and ensure financial security in their later years. Programs like the Tamil Nadu Corporation for

Development of Women (TNCDW) help women become financially independent by providing education, job opportunities, and support for entrepreneurship. The Government Service Home offers a safe space, vocational training, and rehabilitation for widows, destitute women, and differently-abled women, helping them rebuild their lives. To support widows who wish to remarry, the Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Assistance Scheme provides financial aid to ease their transition. Women's safety and empowerment are also prioritized through helplines, crisis centers, and working women's hostels. For elderly women, pension schemes and welfare programs ensure they have financial support in their old age, allowing them to live with dignity and independence. Through these efforts, the Tamil Nadu government continues to work toward a future where every woman feels secure, empowered, and valued. In this background, this study is proposed with the following objectives

1. To find whether there is any relationship between Economic empowerment of women and access to health.
2. To know the extent and awareness of Government schemes in providing Economic security to women in their old age

REVIEW OF LITERATURE

The current study on the "Economic Strength, Better Health: The Interconnection of Women's Financial Autonomy and Healthcare Access"

- Studies on the Empowerment & health access of women
- Studies on the extent of government schemes in economic security for women in their old age

Koggel (2011), in his study on *"Globalization and Women's paid work: Expanding Freedom?"* analyzed the emphasis on women's agency as central to development theory, practice and the strategies he advocated for enhancing it. His work in feminist economics and postcolonial studies tested Sen's complex account of freedom. Further levels of complexity needs to add when we examine how global forces of power interact with local systems of oppression in ways that often limit women's freedom.

Roberts (2014), in his study on *"Gender, financial deepening and the production of embodied finance: Towards a critical feminist analysis"* critically interrogated the ways in which gender equality has been linked to processes of financial deepening, partly via a global coalition of public and private institutions that has come together in recent years to promote an instrumentalist gender equality agenda. Also, the study tells about the role of Corporations, banks, and financial firm in shaping the contours of global gender equality and reproducing narratives.

Sinclair et.al., (2022), in their study on *"Women's autonomy and food security: connecting the dots from the perspective of indigenous women in rural Colombia"* examined the numerous economic, social, cultural, and political constraints affected their autonomy and limited their ability to ensure a nutritionally adequate diet for their households. Economically, key constraints include the lack of remuneration for women's work, a lack of education, and restrictive gender roles and discrimination in the agricultural realm. Social constraints center

around the inadequate recognition and valuation of women's work, gender stereotypical roles, and gender-based violence.

Saluja, Singh, Kumar (2023), in their study on *“Barriers and interventions on the way to empower women through financial inclusion: A study decades systematic review (2000-2020)”* analyzed to reduce ambiguity in theoretical and empirical underpinning by synthesizing various knowledge concepts through a systematic review of barriers and interventions to promote the financial inclusion of women. The surrounding literature was vast, complex, and difficult to comprehend and necessitate frequent reviews. Reviews are generally fragmented focused only on the factors causing the financial exclusion of women while ignoring the interventions that has been discussed all along. PRISMA approach has been used to explain various inclusions and exclusions extracted from Scopus & WOS databases with the backward and forward searches of important studies.

Montesanti, Thurston (2015) in their study on *“Mapping the role of structural and interpersonal violence in the lives of women: Implications for public health interventions and policy”* examines the interpersonal violence towards women has commonly focused on individual or proximate-level determinants associated with violent acts ignored the roles of larger structural systems that shaped interpersonal violence. Though this research has contributed to an understanding of the prevalence and consequences of violence towards women, it ignores how patterns of violence has been connected to social systems and social institutions.

McGibbon et.al., (2011) in their study on *“Applying inter sectionality & complexity theory to address the social determinants of women's health”* examines the compounding effects of lack of access to education create far reaching implications for income, access to the goods and services of society, and women's physical and psychological health. A social determinants of health (SDH) perspective has taken it is aim at the structural causes-of-the-causes of social and material deprivation that lead to ill health. The paper built on previous work to describe how feminist inter sectionality theory has been applied in tandem with complexity theory to support the amelioration of inequities in the social determinants of women's health.

Onarheim, Iveren (2016) in their study on *“Economic benefits of investing in women's health: A systematic review”* analysis the status of women's health falls short of its potential. In addition to the deleterious ethical and human rights implications of this deficit, the negative economic impact may also be consequential, but these mechanisms are poorly understood. Building on the literature that highlights health as a driver of economic growth and poverty alleviation, they aimed to systematically investigate the broader economic benefits of investing in women's health.

RESEARCH METHODOLOGY

Research methodology refers to the specific procedures or techniques used to identify, select, process, and analyze information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. In this chapter, the methodology adopted for the research work on **“Economic Strength, Better health: The Interconnection of Women's Financial Autonomy and Healthcare Access”** is discussed.

RESEARCH DESIGN

This paper is a quantitative study through gathering and analysis of numerical information regarding the phenomenon.

DATA COLLECTION

This study adopted survey methodology, where questionnaires have to be provided to a sample of respondents.

SAMPLING STRATEGY

The present research work is based on the principle of probability sampling. Simple random sampling has been taken into consideration to pick up 50 samples from Coimbatore city.

SAMPLING AREA

The selected city for the research is Coimbatore, which is the highly populated city of Tamil Nadu, India.

METHODOLOGICAL LIMITATIONS

1. Risk of research biases: information bias, omitted variable bias, sampling bias
2. The depth of the analysis shall be shallow since it only uses descriptive statistics.

ANALYSIS AND INTERPRETATION

The study on “**Economic Strength, Better Health: The Interconnection of Women’s Financial Autonomy and Healthcare Access**” was discussed by taking into account their age, education, occupation and various other factors which interprets the interconnection of women’s financial autonomy and healthcare access.

Table 1

Economic Security and Empowerment of Women

Details	Particulars	Percentage
PRIMARY SOURCE OF INCOME	Employment	48
	Self-employment / Business	16
	Government Support / Pension	4
	Family Support	30
	Others	2
	TOTAL:	100
DO YOU HAVE SAVINGS FOR EMERGENCIES	Yes	68
	No	32
	TOTAL:	100

DO YOU HAVE ACCESS TO FINANCIAL	Yes	86
Details	Particulars	Percentage
HAVE YOU RECEIVED ANY FINANCIAL LITERACY TRAINING OR EDUCATION	Yes	68
	No	32
	TOTAL:	100

Source: Primary Data

The above table shows the Economic Security and Empowerment of Women where the primary source for income has been classified into 4 types in that employment of women is 48% and self-employment or own business is 16%, those who have receiving government support or pension only 4%, women whose source of income is on their family support is 30% and 2% women have opted others.

Table 2
Control and Access of Personal Finance of Women

Details	Particulars	Percentage
DO YOU HAVE CONTROL OVER YOUR PERSONAL FINANCE?	Yes	50
	No	12
	Partial	38
	TOTAL:	100
DO YOU MAKE FINANCIAL DECISIONS INDEPENDENTLY?	Yes	44
	No	14
	Sometimes	42
	TOTAL:	100

Source: Primary Data

The above table shows the control and access of personal finance of women where 50% of women have control over their personal finance at the same time 12% of women don't having control over their personal finance and 38% women has partial control, 44% women is making their financial decisions whether 14% women don't make financial decisions independently their financial decisions are taken by someone, 42% women sometimes takes financial decisions independently.

Table 3
Healthcare Decisions of Women

Details	Particulars	Percentage
HEALTHCARE DECISIONS IN HOUSEHOLD	Myself	30
	Shared with spouse / partner	34
	Parents / other family members	36
	Someone else	0
	TOTAL:	100
VISITING OF HEALTHCARE CENTRE OF WOMEN	Regularly	24
	Only when I'm sick	56
	Rarely	12
	Never	8

Source: Primary Data

The above table shows the data of healthcare decisions taken by women in their household and how often they are visiting to a healthcare centre or hospital. 36% of women healthcare decisions are taken by Parents or other family members in their family and for 34% of women's healthcare decisions are shared with their spouse or partner and 30% of women are taking their own decisions in their healthcare and 56% of women visit an healthcare centre only when they are sick and 24% of women visit regularly because they don't have financial constraints and they are conscious about their healthcare, 12% of women visit an healthcare centre rarely and 8% of women never visit an healthcare centre.

Table 4
Financial Barriers of Women in accessing Healthcare

Details	Particulars	Percentage
KIND OF HOSPITAL FOR HEALTH CARE	Private	64
	Government	36
	TOTAL	100
HAVE YOU FACED FINANCIAL BARRIERS IN ACCESSING HEALTH CARE?	Yes	30
	No	36
	Sometimes	34
	TOTAL:	100
HAVE YOU EVER DELAYED OR SKIPPED MEDICAL CARE?	Yes	20
	No	48
	Sometimes	32
	TOTAL:	100

MAIN BARRIERS IN ACCESSING HEALTHCARE	Financial Constraints	60
	Distance	4
	Lack of time	20
	Transportation Problem	14
	Quality Healthcare	2
	TOTAL:	100

Source: Primary Data

The above table shows the Financial barriers of women in accessing Healthcare in that 64% of women's choose Private Hospital Healthcare, 36% of women choose Government Hospital for their healthcare. 36% of women don't have any financial barriers in accessing their healthcare at the same time 34% of women sometimes have financial barriers in accessing their healthcare, 30% of women have financial barriers in accessing their healthcare. 40 of women haven't delayed their medical care and 30% of women sometimes delayed and 20% of women delayed their medical care. 60% of women faces financial constraints as their main barriers, 20% of women don't have time to visit and healthcare centre, 14% of women have transportation problem, and 4% of women have distance issue and 2 % chosen Quality healthcare.

Table 5

Awareness and Challenges in accessing government Schemes for old-age security

Details	Particulars	Percentage
DO YOU HAVE SAVINGS OR INVESTMENT FOR YOUR RETIREMENT	Yes	50
	No	50
	TOTAL:	100
ARE YOU AWARE OF PENSION OR OLD-AGE SECURITY SCHEME FOR WOMEN?	Yes	50
	No	50
	TOTAL:	100
HAVE YOU ENROLLED IN ANY OF THE OLD-AGE SECURITY SCHEMES?	Yes	14
	No	86
	TOTAL:	100
HAVE YOU FACED CHALLENGES IN ACCESSING PENSION OR ELDERLY, HEALTHCARE BENEFITS	Yes	16
	No	84
	TOTAL:	100

Source: Primary Data

The above table shows that where 50% of women have savings or investment specifically for their retirement whereas 50% of women don't have such savings or investments. When coming to awareness 50% of women has the awareness about the schemes provided by the government like pension schemes or old-age security schemes among that only 14% of women have enrolled and receiving the benefits of the schemes and the remaining 86% of women didn't enrolled in the schemes. In accessing the pension 16% of women having challenges and 84% of women don't face any challenges.

Table 4.5
Factors and Parameters of the study

Details	SA	A	N	D	SD	Total
DO YOU AGREE THAT FINANCIAL INDEPENDENCE IS NECESSARY TO TAKE	23	16	10	-	1	50
FINANCIAL INDEPENDENCE IMPROVES YOUR ABILITY IN HEALTHCARE?	13	23	11	2	1	50
DO FINANCIAL CONSTRAINTS TAKE DECISIONS UPON YOUR MEDICAL CHECKUP?	7	27	15	1	0	50
IS YOU ARE FORCED TO CHOOSE BETWEEN HEALTHCARE AND FINANCIAL OBLIGATION?	9	19	17	2	3	50
IF YOU AGREE THAT ECONOMIC OPPORTUNITIES WOULD IMPROVE WOMEN'S HEALTH OUTCOMES?	11	15	21	1	2	50
SCHEMES HELPS WOMEN'S IN THEIR OLD-AGE?	10	16	22	1	1	50

Source: Primary Data

The above table shows the data of the factors and parameters of this study where 23 women strongly agree and 16 women agree that financial independence is necessary, 10 of women choose neutral across the necessary of financial independence and only one women choosed Strongly disagree that necessary of financial independence of women in taking financial decisions.

13 women has strongly agree, 23 women agree that financial independence improves ability in their healthcare, 11women have choose neutral towards this and 2 women have opted disagree, only one women have opted strongly disagree that financial independence will not improve the ability in the healthcare.

7 women has strongly agree, 27 women agree that they have financial constraints in taking decisions about their healthcare, 15 women have choose neutral towards this and 1 women have opted disagree.

9 women has strongly agree, 19 women agree that they are forced between healthcare and financial obligations, 17 women have choose neutral towards this and 2 women have opted disagree, 3 women strongly disagree that they are not forced to choose between healthcare and financial obligations.

11 women has strongly agree, 15 women agree that economic opportunities improve women's health outcomes, 21 women have choose neutral towards this and only one women have opted disagree, only 2 women have strongly disagree that economic opportunities will not improve women's health outcomes.

10 women has strongly agree, 16 women agree that Government Schemes helps women's in their old-age, 22 women have choose neutral towards this and only one women have opted disagree, only one women strongly disagree that Government Schemes helps women's in their old-age security.

Findings

1. Economic Empowerment and Healthcare Access

When women have financial independence, they make better choices about their health. Whether it is affording doctor visits, eating nutritious food, or accessing reproductive healthcare, economic empowerment plays a huge role in their well-being. Women who earn their own income tend to prioritize their health more than those relying on family or government support.

2. Income Source and Financial Security

Most of the women about 44% have access to take financial decisions independently, while the rest either share decisions with family members or have little say at all. While 68% of women have some savings, 32% don't leaving them vulnerable in emergencies. Despite 86% having bank accounts, many lack financial literacy, which prevents them from making the most of their resources.

3. Healthcare Accessibility

Most of the women about 56% only visit a doctor when they fall sick, often delaying or skipping care due to financial concerns. About 60% say money is the biggest barrier to

accessing healthcare. Many prefer private hospitals 64% over government hospitals, which might indicate a lack of trust in public healthcare services.

4. Awareness and enrollment of Government Schemes

Only 50% of women are aware of pension and old-age security schemes, and an even smaller 14% have actually enrolled in them. The enrollment process is unclear or difficult to access, leaving many women without financial security in their later years.

Suggestions and Findings

SUGGESTIONS

1. Enhancing Financial Independence:

Promoting Entrepreneurship programs and skill development helps to increase self-employment opportunities. Expanding the financial literacy programs will help to ensure women can make financial decisions. Encouraging women to participate in investment and savings schemes can help to satisfy their needs.

2. Improving Healthcare Access:

Strengthen government hospitals and rural healthcare centers to improve quality and trust in public healthcare. Increase awareness programs which help in preventing healthcare and the importance of regular checkups. Government has to make awareness that Maternal checkup is mandatory.

3. Strengthening Government Support:

Simplifying the enrollment process for old-age security and pension schemes to improve participation. Conduct awareness campaigns to ensure more women understand the benefits of government schemes. Enhance public-private partnerships to offer financial aid and healthcare support programs.

CONCLUSION

The current study, concludes the economic empowerment and access to healthcare and also about the government initiatives or schemes which help women's in their old-age are discussed and analyzed and interpreted. The research shows the level of awareness and the accessibility of financial independence and the schemes provided by the government for old-age security and their barriers also. However, there are many women's are benefited by the government initiatives and programmes some of the women don't have access to the old-age security schemes and most of the women agreed with the importance of financial independence and most of the women having barriers and challenges in accessing the pension schemes.

REFERENCES

1. Women empowerment and health:
https://www.researchgate.net/publication/386361266_Women's_Empowerment_and_Health_A_Narrative_Review
2. Economic and social impact and benefits of health system
<https://apps.who.int/iris/bitstream/handle/10665/329683/9789289053952-eng.pdf>
3. Health and economic growth <https://ftp.iza.org/dp11939.pdf>
4. Women's financial autonomy in household Financial decision: A study on rural women
<https://www.jetir.org/papers/JETIR2307547.pdf>
5. Women's autonomy in healthcare decision making in development countries; a synthesis of the literature <https://scispace.com/pdf/women-s-autonomy-in-health-care-decision-making-in-594ay1fhut.pdf>

BRIDGING THE DIGITAL DIVIDE: THE ROLE OF MOBILE TECHNOLOGY IN WOMEN'S ECONOMIC AND SOCIAL EMPOWERMENT

“Empowering women is key to building a future we want”

- Amartya Sen

*** N. Bhuvaneshwari, ** Dr. V. Malarvizhi**

*Research Scholar, **Professor, Department of Economics, Avinashilingam Institute for Home Science e& Higher Education for Women, Coimbatore- 43

ABSTRACT

Mobile technology has become integral to modern life, revolutionizing communication, education, business, and social interactions. This paper explores mobile usage among women, focusing on its role in empowering them through digital literacy, education, entrepreneurship, and financial inclusion. A quantitative study was conducted among 100 women students in Coimbatore, employing a structured interview schedule. Statistical tools such as Chi-square tests, Garrett's ranking method, and ANOVA were used to analyze the impact of mobile technology. The results indicate that mobile phones significantly enhance educational access, economic opportunities, and safety while posing challenges such as cybersecurity threats and addiction. The study suggests targeted policies for digital literacy, cybersecurity awareness, and affordable mobile services to maximize benefits while mitigating risks.

Keywords: Mobile usage, women empowerment, technology, digital literacy, economic inclusion.

Introduction

The theoretical foundations of this study are rooted in three key frameworks: Digital Divide Theory, which explains disparities in access to mobile technology among different socio-economic groups, Technology Acceptance Model (TAM), which helps analyze women's adoption of mobile phones based on perceived ease of use and usefulness, and Empowerment Theory, which highlights how mobile technology contributes to women's autonomy and participation in decision-making. Understanding these theoretical underpinnings provides deeper insights into the role of mobile phones in women's empowerment.

Technology has transformed lifestyles globally, providing unprecedented access to information and services. Mobile phones, in particular, have reshaped communication, commerce, and education. Women, especially in developing countries, benefit from mobile technology through enhanced digital literacy, financial inclusion, and entrepreneurship. However, concerns such as cybersecurity, digital literacy gaps, and the gender digital divide persist. This paper examines the role of mobile usage in women's empowerment, analyzing its impact on education, employment, and well-being while proposing policy measures for equitable access.

Evolution of Mobile Phones and Women's Access

The evolution of mobile phones from basic communication devices to smartphones has facilitated women's participation in the digital economy. Key milestones include:

- 1992: First smartphone introduced (Simon Personal Communicator)
- 2000: Introduction of the first camera phone
- 2008: Emergence of Android smartphones, enhancing accessibility
- Present: Continued updates and innovations improving user experience

Despite advancements, a digital divide remains, limiting women's access to mobile technology, particularly in rural areas.

Mobile Technology: A Transformative Tool for Women's Empowerment

Mobile technology plays a pivotal role in empowering women across various domains:

- **Education and Digital Literacy:** Mobile-based learning applications provide access to quality education, while digital literacy programs equip women with essential skills for employment and entrepreneurship.
- **Economic Opportunities:** Mobile banking and e-commerce platforms enable women entrepreneurs to establish and expand businesses. Additionally, mobile technology facilitates flexible work-from-home opportunities, promoting financial independence.
- **Health and Well-being:** Mobile health applications offer crucial healthcare services, including maternal health information and telemedicine consultations, ensuring timely medical assistance.
- **Safety and Security:** Emergency helplines, GPS tracking, and mobile applications enhance women's safety. Social media platforms are vital tools for reporting abuse and seeking assistance.

Mobile technology transforms women's empowerment by bridging educational gaps, expanding economic opportunities, improving healthcare access, and enhancing safety.

Objectives of the Study

1. To analyze the role of mobile technology in enhancing women's education, digital literacy, and academic performance.
2. To examine the impact of mobile phones on women's economic participation, entrepreneurship, and financial inclusion.
3. To assess the influence of mobile technology on women's safety, security, and overall well-being.

Need for the Study

The increasing penetration of mobile technology offers vast opportunities for women's empowerment. However, challenges such as digital illiteracy, affordability issues, cybersecurity threats, and the gender digital divide hinder its potential. Understanding the impact of mobile technology on women's lives is essential for policymakers, educators, and organizations working towards gender equality. This study provides insights into how mobile usage influences education, entrepreneurship, and security, contributing to the broader goal of women's empowerment in the digital era.

Theoretical Framework

To ground this study in established theories, the following frameworks are integrated:

- **Digital Divide Theory:** This theory explains the gap between individuals who have access to modern information technology and those who do not, particularly affecting women in rural and low-income settings.
- **Technology Acceptance Model (TAM):** TAM helps in understanding the factors influencing women's adoption of mobile technology, such as perceived ease of use and usefulness.
- **Empowerment Theory:** This framework emphasizes how access to mobile technology can enhance women's autonomy, decision-making & overall societal participation.

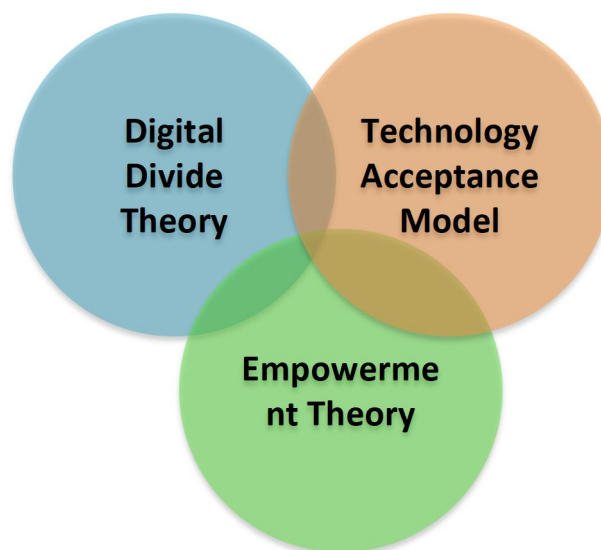


Figure 1

Review of Literature

Recent studies highlight the significant impact of mobile technology on students' lives. **Sasidhar (2022)** examined how smartphone usage affects students' sleep, revealing that binge-watching, social media use, and nighttime mobile interruptions contribute to irregular sleep patterns and reduced cognitive performance, emphasizing the need for objective sleep tracking. Similarly, **Thomee (2019)** conducted a systematic review analyzing the link between mobile phone use and mental health, focusing on psychological and behavioural perspectives while excluding aspects like cyberbullying and radiofrequency exposure. Varun **Swarthy & Kausalya (2022)** explored the role of mobile phone literacy in university communities, highlighting challenges students face in accessing and utilizing digital resources effectively, which impacts learning and research. Meanwhile, **Rao & Alwaaili (2023)** investigated the increasing reliance on mobile phones among students, noting that some prioritize their devices over essential needs like food. While mobile phones support education and entertainment, they also contribute to addictive behaviors. Lastly, **Vijay & Pradeep (2020)** analyzed the impact of mobile phone use among Warangal college students, finding that excessive social media engagement

disrupts learning, reduces subject knowledge, and negatively affects career prospects. These studies collectively underscore both the benefits and challenges of mobile technology in students' academic and personal lives.

Methodology

The study examines the impact of mobile technology among women students in Coimbatore, focusing on usage patterns, benefits, and challenges. A sample of 100 students from Avinashilingam Institute was selected using purposive random sampling, and data was collected through a pre-tested interview schedule. Various statistical tools such as the Chi-square test, Garrett's ranking scale, and One-way ANOVA were employed for analysis. The findings highlight the association between mobile usage and demographic factors, preferences, security concerns, and its influence on education and lifestyle. The study provides insights into the role of mobile phones in students' daily lives and suggests measures to address challenges.

Result and Discussion

Table - 1
Mobile Phone Usage and Its Impact on Learning

Variables	Frequency	Percent (%)
Mobile phone assists in learning	95	95.0
Mobile phone distracts from studies	5	5.0

Source: Estimation based on field survey (2023)

This table highlights the positive role of mobile technology in education, as 95% of respondents agree that mobile phones help in learning and improving access to information, online resources, and academic communication.

Table - 2
Reasons for Mobile Phone Usage Among Women Students

Reason for mobile phone usage	Total score	Garrett Mean	Garrett Mean Rank
Necessity	400	4	VII
Because everyone has one	952	9.52	II
Safety/Security	1380	13.8	I
Emergency	648	6.48	V
Connect with family	658	6.58	IV
Convenient	861	8.61	III
Communicate with friends	462	4.62	VII
Gift from parents	609	6.09	VI

Source: Estimation based on field survey (2023)

The table shows that women students primarily use mobile phones for safety and security (13.8), followed by social influence (9.52) and convenience (8.61). Other reasons

include connecting with family (6.58), emergencies (6.48), and gifts from parents (6.09), while necessity (4) and communication with friends (4.62) rank lower. Overall, mobile phones enhance women's empowerment by ensuring safety, social connectivity, and digital access, promoting independence and learning opportunities.

Table - 3
Association Between Mobile Phone Usage and Academic Performance

Variables	χ^2 Value	df	P- value	Inference
Mobile phone usage improves academic performance	4.086	3	0.005	Significant association
Mobile phone helps improve the quality of education	4.253	3	0.003	Significant association
Teachers use mobile phones in the classroom	4.588	3	0.015	Significant association

Source: Estimation based on field survey (2023)

The table highlights a significant association ($p < 0.05$) between mobile phone usage and academic performance among women students. It shows that mobile phones contribute to improving academic performance ($p = 0.005$), enhancing the quality of education ($p = 0.003$), and supporting teachers in the classroom ($p = 0.015$). These findings reinforce the role of mobile technology in empowering women through education, enabling better learning opportunities and digital inclusion.

Table - 4
Impact of Mobile Learning on Education

Impact of Mobile Learning on Education	F- Value	p- value	Inference
Contacting teachers for study purposes	2.018	0.117	No significant difference
Contacting classmates for academic help	0.852	0.469	No significant difference
Mobile technology improves academic performance	4.591	0.005	Significant difference
Mobile phones help improve education quality	5.036	0.003	Significant difference

Source: Estimation based on field survey (2023)

The table confirms that mobile phone usage significantly impacts academic performance and quality of education, highlighting mobile technology as a tool for women's empowerment.

Challenges of Mobile Usage among Women

Despite its benefits, mobile technology presents several challenges:

- **Security Concerns:** Cyber threats and data breaches compromise privacy.
- **Addiction and Mental Health Issues:** Excessive smartphone use leads to sleep disorders and anxiety.
- **Gender Digital Divide:** Limited access to technology due to financial constraints and societal norms.
- **Online Harassment:** Women are more vulnerable to cyberbullying and online abuse.

Conclusion

The findings of this study align with Digital Divide Theory, illustrating those disparities in mobile technology access hinder women's empowerment, especially in rural and low-income areas. Furthermore, the Technology Acceptance Model (TAM) highlights that mobile technology adoption among women is driven by its perceived usefulness in education, safety, and economic participation. Finally, Empowerment Theory is validated through the study's results, as mobile phones contribute to increased autonomy, better decision-making, and improved access to resources. Addressing digital literacy gaps, affordability, and security concerns is crucial for maximizing the benefits of mobile technology in women's empowerment. Mobile technology plays a crucial role in empowering women by improving educational opportunities, financial inclusion, and safety. However, addressing challenges such as digital literacy gaps, security risks, and affordability is essential for equitable access. By implementing targeted policies, mobile phones can be harnessed as a powerful tool for women's empowerment, fostering social and economic progress.

Recommendations for Enhancing Women's Mobile Empowerment

To bridge the digital divide and enhance mobile usage among women, the following measures are recommended:

1. **Digital Literacy Programs:** Government and private initiatives should focus on improving digital skills among women.
2. **Affordable Mobile Services:** Telecom companies should provide cost-effective data plans to encourage mobile usage.
3. **Cybersecurity Awareness:** Women must be educated on online safety practices to prevent cyber threats.
4. **Encouraging Female Entrepreneurship:** Support through financial literacy and mobile banking initiatives.
5. **Safe Digital Spaces:** Strengthening laws against online harassment and ensuring safer digital platforms.

References

1. Yeganeh Shah-Sarver (2023). "Mobile Health Interventions and Women's Empowerment: A Review."
2. Wolayat Tabasum Niroo,&Helen Crompton, (2022) "Women's Empowerment Through the Use of Technology" Asian Journal of Distance Education, 10.5281/zenodo.7117324

3. Alpana Vaidya (2016). "Mobile Phones in India: Trends and Challenges."
4. Kalyan Sasidhar (2022). "Smartphone Usage and Sleep Patterns Among Women."
5. Subramani Parasuraman (2017). "Mobile Phone Addiction and Awareness Among Women in Malaysia."
6. Safdar Malahat Ashraf (2018). "Impact of Mobile Phones on Women's Social Behaviors."
7. Varun Swarthy and Kausalya (2022). "Digital Literacy and Women's Economic Participation."
8. Simon Amez (2019). "Smartphone Use and Women's Academic Success."
9. Chan Yuen Fook (2021). "Mobile Phone Addiction and Academic Performance."

A STUDY ON ONLINE ADVERTISEMENT USAGE PRACTICES OF THE CONSUMERS WITH SPECIAL REFERENCE TO THE SELECTED CONSUMER DURABLE GOODS

****Mrs. Malarvizhi. A & **Dr.P. Deivanai***

***Research Scholar & **Assistant Professor (SG), Department of Commerce, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore -43**

Abstract

In Today's scenario, online advertising is one of the current, rapid, and remarkable methods that create purchase desire as a result of the different and various offers through ads. The study focuses on analyzing the consumer attitude towards online advertising and identifying whether Entertainment, Informativeness, Credibility, and Irritation have significant effects on consumer attitudes towards buying behavior and it also aims to examine the impact of online advertisements on building consumer attitudes for making purchase decisions. The sampling technique was the Convenience sampling method. Data were collected from online consumers through interview schedules and in total there were 250 respondents. Data were collected and analyzed using the SPSS. The tools used in this study are Mediating analysis and Correlation. The result of Correlation analysis indicates consistent positive associations between impact factors and attitudes, suggesting that changes in impact factors are linked with corresponding shifts in attitudes. The SPSS mediating analysis demonstrates that it mediates a substantial relationship with the dependent variable of buying behaviour.

Keywords: Online Advertisement, Consumer Attitude, Buying Behaviour

Introduction

The advertising field has undergone an enormous change in the modern era. The fundamental goal of advertising is to raise consumer awareness of a product and encourage their desire to purchase it. One of the main tools of marketing and a part of larger promotion activities is advertising. Because it is a natural aspect of human behavior, consumers frequently converse about brands, goods, or services during interactions. Effective communication eventually creates an extraordinary environment for marketing success **(Milichovsky, 2013)** and generates positive sentiments from customers. A selected group of people is persuaded to perform new actions using communication called

advertising. According to **Ryans (1996)**, advertising is regarded as a crucial and significant component for the financial development of marketers and other businesses operating in competition. It is a type of non-personal, paid communication used to showcase and market concepts, products, or services by a designated sponsor (**Kotler 2000**). One of the most recognizable ways to promote in advertising is an enormous sector and acts as an essential link between the marketer and the potential customer. It is seen as a tool for informing clients and encouraging them to purchase a product (**Kumar and Meenakshi, 2011**). Online advertising, also known as web advertising or internet advertising, is a type of promotional material that can be found on the Internet and is created by any business or entity in order to inform consumers about a good or service (**Schlosser, et al., 1999**). According to **Belch & Belch (1998)**, Online advertising has some distinct advantages over traditional media advertising, one of which is its relative affordability. It's a form of advertising where marketing messages are delivered online with the specific aim of attracting clients (**Kim, Park, et al., 2012**). Online advertising occurs in a variety of forms and using a range of technologies claims **Miller (2012)**. Internet advertising is at least as engaging as television advertising and can include audio, animation, and video. More than ever, consumers use digital tools and networks. Online advertising is the best means of connecting with both urban and rural consumers (**Sheng, Gao, and others, 2013**). Digital advertising has expanded quickly over the years in connection with technology advancements because it is virtually utilized in all sectors. Online channels are becoming the most popular platforms for advertisements due to people's increasing reliance on the internet as their primary source of a wide variety of information and communication tools. It offers internet customers a fresh, quick-paced experience **Gupta, K.S. and Bakshi, G. (2013)**. According to **Ducoffe (1996)** to use web advertising effectively, one first needs to determine the target audiences' attitude of the Web's value as a source of consumer information, as this will shape their opinions of specific advertisements on this platform. However, knowing the intended audience is insufficient. Following this stage, the best online advertisements ought to be created. Increasing advertising value now becomes a significant concern since it affects both the target audience's attitudes of the ads and their efficacy as web advertisements. Customers' assessments of advertising values, and consequently their attitudes toward advertisements, are influenced by four factors: entertainment, informativeness, credibility, and irritation (**Wang, Zhang, et al., 2002**).

Review of the Literature

Havale et al., (2023) researched “**Impact of Google AdWords on Consumer Buying Behaviour**” This study employed a quantitative methodology to investigate the impact of

Google AdWords on consumer buying behaviour. These results highlight the effectiveness of targeted and personalized advertising strategies through Google AdWords in meeting individual consumer needs and driving consumer behavior.

Tobi et al., (2020) conducted research on the “**Effect of Online Advertising on Consumer Buying Behaviour of Internet Users in Lagos State**” This study examines the effect of 15 corporate website advertising on purchase decisions and also examines the effect of perceived online advertising credibility on the purchase decision. The findings of this study were positive relationship between corporate website advertising and purchase decisions also determined that perceived online advertising credibility is an important factor that positively affects purchase decisions.

Nabila and Achyar (2019) researched “**Analysis of Factors Affecting Users’ Attitude Toward the Youtube Ads and Their Effects on Purchase Intention**”. This study aims to identify five factors in YouTube advertising (entertainment, informativeness, customization, irritation and credibility) that might effect on ad value, and attitude toward YouTube ads, leading to purchase intention of consumers. The study uses conceptual models where they hypothesize that the ad value is positively correlated concerning the attitude toward YouTube ads, which then affects consumer’s purchase intention. This study found that entertainment, customization, and credibility is positively affected to advertising value on YouTube, where ad value has a positive effect on attitude toward YouTube ads and purchase intention of consumer.

Objectives of the study

- To analyse the impact of online advertisements on building consumer attitudes for making purchase decisions.
- To examine effect of buying behavior and consumers towards online advertising.

Research Methodology

Research design

Research design is the blueprint of the research study. **Myers (2019)**. The researcher aims to find out the hidden facts or associates between one another. Then, quantitative research and descriptive research are being used in this study. Besides, the prime goal of this study is to investigate the consumers’ attitude towards online advertisement and its’ impact on consumer’s buying process of consumer durable goods. The consumer attitude towards online advertisement was assessed through the assessment of the following characteristics of online advertisements such as entertainment, informative, irritation, and credibility.

Sources of Data Collection

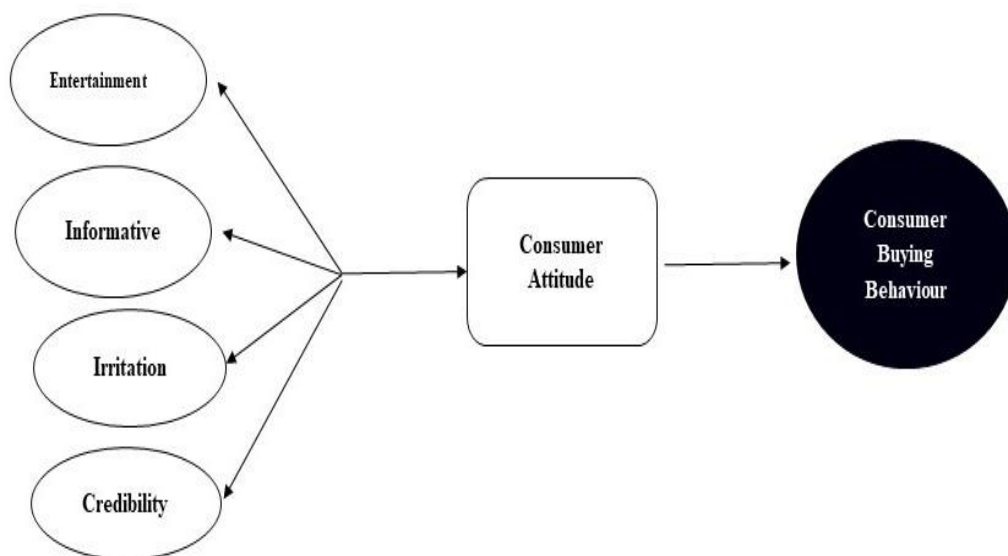
The study was conducted from December 2023 to April 2024. The study utilized both primary and secondary data sources. Primary data was collected through a questionnaire distributed among customers who purchase products through online portals. Secondary data was collected from various sources, such as books, internet sources, journals, and research studies, to supplement the primary data.

Sampling Method

The process of selecting an adequate number of elements from a population is called sampling. Coimbatore is selected for the study as the people of this city are highly adaptive and fast-growing in internet usage and e-commerce compared to other cities in Tamil Nadu. This in turn increases the probability of outcomes obtained from the sample, the survey was conducted among those who make their purchase after viewing the online advertisement of the selected consumer durable goods which facilitates online purchases in Coimbatore city. The study has adopted the convenient sampling method. The sample population of the study constituted 250 consumers residing in Coimbatore city.

Conceptual Framework of the Study

The conceptual framework imparts a clear focus and logical direction to the study. The variables incorporated and its anticipated associations can be thoroughly understood by developing a conceptual framework.



Source: (Ducoffe, 1995)

4.0 Findings and Interpretations:

Impact of Online Advertisement on Building Consumer Attitude

		Correlations											
		impact1	impact2	impact3	impact4	impact5	attitude1	attitude2	attitude3	attitude4	attitude5	attitude6	attitude7
impact1	Pearson Correlation	1	.350**	.497**	.222**	.380**	.623**	.357**	.389**	.371**	.329**	.339**	.348**
	Sig. (2-tailed)		0	0	0	0	0	0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
impact2	Pearson Correlation	.350**	1	.374**	.646**	.448**	.333**	.705**	.492**	.628**	.509**	.716**	.575**
	Sig. (2-tailed)	0		0	0	0	0	0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
impact3	Pearson Correlation	.497**	.374**	1	.527**	.671**	.422**	.394**	.654**	.526**	.610**	.512**	.643**
	Sig. (2-tailed)	0	0		0	0	0	0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
impact4	Pearson Correlation	.222**	.646**	.527**	1	.576**	.221**	.619**	.513**	.607**	.511**	.609**	.482**
	Sig. (2-tailed)	0	0	0		0	0	0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
impact5	Pearson Correlation	.380**	.448**	.671**	.576**	1	.376**	.492**	.614**	.536**	.674**	.507**	.628**
	Sig. (2-tailed)	0	0	0	0		0	0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude1	Pearson Correlation	.623**	.333**	.422**	.221**	.376**	1	.344**	.424**	.252**	.378**	.373**	.470**
	Sig. (2-tailed)	0	0	0	0	0		0	0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude2	Pearson Correlation	.357**	.705**	.394**	.619**	.492**	.344**	1	.410**	.690**	.511**	.702**	.500**
	Sig. (2-tailed)	0	0	0	0	0	0		0	0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude3	Pearson Correlation	.389**	.492**	.654**	.513**	.614**	.424**	.410**	1	.700**	.801**	.631**	.744**
	Sig. (2-tailed)	0	0	0	0	0	0	0		0	0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude4	Pearson Correlation	.371**	.628**	.526**	.607**	.536**	.252**	.690**	.700**	1	.736**	.804**	.692**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0		0	0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude5	Pearson Correlation	.329**	.509**	.610**	.511**	.674**	.378**	.511**	.801**	.736**	1	.676**	.814**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0		0	0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude6	Pearson Correlation	.339**	.716**	.512**	.609**	.507**	.373**	.702**	.631**	.804**	.676**	1	.772**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0		0
	N	250	250	250	250	250	250	250	250	250	250	250	250
attitude7	Pearson Correlation	.348**	.575**	.643**	.482**	.628**	.470**	.500**	.744**	.692**	.814**	.772**	1
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	0	0	
	N	250	250	250	250	250	250	250	250	250	250	250	250

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

Source: Computed data

The correlation analysis revealed a significant relationship among various impact factors and attitudes. Impact1(Online advertisements influence my purchase decisions) was positively correlated with all attitude factors to moderately strong correlations ranging from $r = .329$ to $r = .623$, all $p < .01$. Impact2(I trust the information provided in online advertisements when making purchasing choices) showed similar patterns of correlation with attitudes, ranging from $r = .333$ to $r = .716$, all $p < .01$. Impact3(Online advertisements often shape my attitude of products or services) exhibited significant positive correlations with attitudes ranging from $r = .394$ to $r = .801$, all $p < .01$. Impact4 (I am more inclined to explore products or services that are advertised) demonstrated moderate to strong positive correlations with attitudes, ranging from $r = .221$ to $r = .736$, all $p < .01$. Impact5 (Seeing an

online advertisement increases my likelihood of making a purchase) displayed significant positive correlations with attitudes, ranging from $r = .376$ to $r = .814$, all $p < .01$.

In summary, the analysis indicates a consistent positive relationship between impact factors and attitudes, suggesting that changes in impact factors are linked with corresponding shifts in attitudes. Overall, the findings suggest that changes in impact factors are associated with corresponding shifts in attitudes.

Entertainment, informativeness, Credibility, and Irritation have significant effect on Consumer Attitudes towards Buying Behaviour

The SPSS mediating analysis is used to analyze the relationship between (independent variable) and (dependent variable) is mediated by (mediating variable).

Mediating analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin - Watson
					R Square Change	F Change	Df 1	Df 2	Sig. F Change	
1	.807 a	.651	.645	.28933	.651	114.089	4	245	.000	1.918
2	.834 b	.696	.690	.27051	.045	36.280	1	244	.000	

a. Predictors: (Constant), credibility, entertainment, informative, irritation

b. Predictors: (Constant), credibility, entertainment, informative, irritation, attitude

c. Dependent Variable: buying behaviour

The model summary reveals mediating significant findings. Model 1, which includes credibility, entertainment, informative, and irritation as predictors, demonstrates that it mediates substantial relationship with the dependent variable of buying behavior ($R = 0.807$, $R \text{ Square} = 0.651$, $\text{Adjusted } R \text{ Square} = 0.645$, $F(4, 245) = 114.089$, $p < .001$).

Upon including attitude as an additional predictor in Model 2, the relationship strengthens ($R = 0.834$, $R \text{ Square} = 0.696$, $\text{Adjusted } R \text{ Square} = 0.690$, $F(1, 244) = 36.280$, $p < .001$). The increase in $R \text{ Square}$ from Model 1 to Model 2 was significant ($R \text{ Square} = 0.045$, $\Delta F(1, 244) = 36.280$, $p < .001$), indicating that attitude contributes significantly mediates to explaining the variance in buying behaviour beyond the initial predictors.

The Durbin-Watson statistic for Model 2 suggests minimal autocorrelation ($DW = 1.918$), supporting the independence of residuals.

Table Excluded Variables

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
					Tolerance	VIF	Minimum Tolerance
1 attitude	.458a	6.023	.000	.360	.215	4.644	.096

- a. Predictors in the Model: (Constant), credibility, entertainment, informative, irritation**
b. Dependent Variable: buying behaviour

The collinearity statistics for Model 1 indicate that attitude, although not included as a predictor, exhibits a significant correlation with the dependent variable, buying behavior ($\beta = 0.458$, $t(245) = 6.023$, $p < .001$, partial correlation = 0.360). This suggests that attitude may have an indirect influence on buying behavior through its relationship with the included predictors.

Furthermore, the tolerance value for attitude (Tolerance = 0.215, VIF = 4.644) indicates a moderate level of multicollinearity, suggesting that attitude shares variance with the included predictors. However, it is still within an acceptable range, indicating that multicollinearity is not severe enough to invalidate the model.

Therefore, while attitude was not directly included as a predictor in Model 1, its correlation with the dependent variable and its moderate multicollinearity with the included predictors suggest that it may still play a role in explaining variation in buying behavior.

Conclusions

The study on online advertisement usage practices of consumers, with a focus on selected consumer durable goods, reveals several key insights. Firstly, it highlights the increasing reliance of consumers on online platforms for information gathering and decision-making regarding durable goods. This underscores the importance for businesses to have a robust online presence and utilize targeted advertising strategies. The study emphasizes the significance of factors such as product relevance, credibility of sources, and visual appeal in influencing consumers' responses to online advertisements. Understanding these factors can aid marketers in crafting more effective campaigns.

Furthermore, the research underscores the need for continuous adaptation and innovation in online advertising techniques to keep pace with evolving consumer preferences and technological advancements. Overall, the findings from this study provide valuable insights for businesses seeking to optimize their online advertising efforts in the consumer durable goods sector, ultimately aiming to enhance consumer engagement, drive sales, and foster long-term loyalty.

REFERENCES

BOOKS

1. Kothari C.R. Research Methodology (2016), Sultan Chand Publications, New Delhi.
2. R. Panneerselvem (2018), Research Methodology, PHI Learning Private Limited, Delhi.

JOURNALS

1. Bakhsi, G. and Gupta K.S. (2013) "Online advertising and its impact on Consumer buying behavior". *International Journal of Research in Finance & Marketing*, Vol. 3, Issue 1 (ISSN 2231-5985).
2. Belch, GE & Belch, MA 1998, 'Advertising and Promotion: An integrated marketing communications perspective (4th ed.)', Boston, MA: Irwin/McGraw-Hill.
3. Ducoffe, RH 1996, 'Advertising value and advertising on the Web', *Journal of Advertising Research*, vol. 36, no. 5, pp. 21-35.
4. Gao, J., Sheng, B. Chang, L., and Shim, S. (2013). *Online Advertising- Taxonomy and Engineering Perspectives*, San Jose State University.
5. Havale, D. S., Borde, A., Ekbote, N., Sane, S., & Deshmukh, A. A. (2023) *Impact of Google Adwords on Consumer Buying Behaviour*.
6. Kim, C., Park, S., Kwon, K., & Chang, W. (2012). How to select search keywords for online advertising depending on consumer involvement: An empirical investigation. *Expert Systems with Applications*, 39(1), 594-610.
7. Kotler, P. 2000, 'Marketing management. Englewood Cliffs, NJ: Prentice Hall.
8. Kumar, A., & Meenakshi, N. (2011). *Marketing management*. Vikas Publishing House
9. Milichovský, F. (2013). New tools for effective marketing communications. *Acta Universitatis Bohemiae Meridionalis*, 16(1), 35-43.
10. Miller, R. K., & Washington, K. (2012). *The 2012 Entertainment. Media & Advertising Market Research Handbook*. (12th ed.), Atlanta, United States of America.
11. Nabila, S., & Achyar, A. (2019). Analysis Of Factors Affecting Users' attitude Toward the Youtube Ads and Their Effects on Purchase Intention. *Jurnal Manajemen Dan Bisnis Sriwijaya*, 17(2), 91-100.
12. Ryans, C. (1996). Consumer Resources. *Journal of Small Business Management*, 34, 63-65.
13. Schlosser, A.E., Shavitt, S. & Kanfer, A. (1999). Survey of Internet Users' Attitudes Toward Internet Advertising. *Journal of Interactive Marketing*. 13(3): 34-4.
14. Tobi, O. T., Ayodele, M. D., & Akindele, A. A. (2020). Effect of online advertising on consumer buying behaviour of internet users in Lagos State. *Ilorin journal of human resource management*, 4(1), 171-181.
15. Wang, Zhang, and et.al, Choi, Risook; and D'Eredita, Michael. (2002). Understanding consumer attitude towards Advertising, American /conference information systems AMCIS 2002 Proceedings. 158.

CHALLENGES FACED BY WOMEN ON SOCIAL MEDIA NETWORK SITES

Dr. Malarvizhi. V

Professor, Department of Economics, Avinashilingam Institute for Home Science and Higher Education for Women Coimbatore, Tamil Nadu-43

ABSTRACT

Social media networks have created a phenomenon on the internet that has gained popularity over the last decade. With the increase in Internet technology, many factors now influence how one seeks a sense of connectedness during the digital era (Wu et al., 2016). The social media now become the main part of one's life, from shopping to electronic mails, education and business resource because it plays a key role in changing the lifestyle of the people in society. Therefore, the present study throw lights on the attitudes to adopt and purposes of using social networking sites by the women and to identify the problems faced by the women while using social networking sites and measures to be carried out. The study was conducted in Sundarapuram, Podhanur and Madukkarai areas of Coimbatore city, totally 101 women social media networking users were identified and selected, based on random sampling method. The study revealed that the cyber stalking, hacking, sexual harassment, morphing and received vulgar and abusive messages, which were the main problems faced by the women while using the social networking sites.

Key Words: Social Media, Internet, Women, Technology & Users

Introduction

With the advent of Information and communications technology and the growing broadband penetration in urban, semi urban as well as rural areas has connected the masses like never before with a mere “click” of the mouse. Social media is the new medium through which individuals, businesses, organizations, government as well as civil society engages and interacts in this information age. Social networking sites like Facebook, Twitter, YouTube, etc. can topple government regimes, boost political campaigns, bring about public protests, organize social demonstrations, mobilize social campaigns and enable communications and discussions on public forum, spread awareness, provide instant news and information. As the communications landscape gets denser, more complex and more participatory, the networked population is gaining greater access to information, more opportunities to engage in public speech and an enhanced ability to undertake collective action. A social networking site is an online platform that allows users to create a public profile and interact with other users. Social networking sites usually allow a new user to provide a list of people with whom they share a connection, and then allow the people on the list to confirm or deny the connection. After connections are established, the new user can search the networks of connections to make more connections. A social networking site is also known as a social networking website or social website.

Social media have become a fact of life for civil society worldwide, involving many actors-regular citizens, activists, non-governmental organization, telecommunication software providers, governments. As social media increasingly becomes part of everyday life, more

government agencies are carving out a social media presence online. Facebook, Twitter and YouTube not surprisingly, are perhaps the most common outlets for government social media efforts. Initially the governments worldwide were not that supportive of using social media for improving governance but slowly and steadily government's world over are embracing this platform. In the 21st century, the government needs to more open and transparent about its working and these social networking sites can help in evolving a more participatory, innovative and inclusive governing model where the government not only spread awareness of its policies and plans but also engages in a two-way communication where they can get instant citizen feedback as well as incorporate suggestions made by common people for proper delivery of public services.

In 2013 the number of people who use social networking sites has reached to 1.73 billion and this number seems to be mounting day-by-day (Wikipedia.com). People join SNS because it gives them an opportunity to express their views, a feel of independence and self-esteem. It's just a quick way to create a virtual profile and connect with millions of users across the world. Social Networking Sites, therefore, facilitate communication, sharing between family and friends irrespective of any barriers.

Most Used Social Media Platforms in India

In India, Instagram is the most used social media platform in 2022 with 76.50% of the internet users enrolled. The number of active Instagram users in India comes to 503.37 million. A big percentage of Instagram's users are young people, especially teenagers and Meta, the parent company which paid \$1 billion to buy Instagram. It has grown into a source of income for creators and a great sales channel for businesses. 74.70% of the internet users in India have profiles on Facebook and that makes it the second most popular platform with 491.53 million active users. Among the commercial entities, the political class as well as the masses in India, Facebook is most favored and will remain a dominant force for many years to come. Facebook has been used by many top brands to engage with their fans. A few other social media platforms that are popular in India are Twitter (44.90% penetration), LinkedIn (37.2% penetration), Pinterest (34.9% penetration). There are few new entrants like MX TakaTak (23.40% penetration), a short video community, made locally and specially by MX Media & Entertainment followed by Moj (23.00% penetration), another short video app and Skype (23.00% penetration).

Objectives of the Study

- To investigate the demographic profile women using social networking sites in Coimbatore city.
- To analyse frequency usage and purpose of using social networking sites by women.
- To identify the problems being faced by women and give suggestions to overcome the problems faced by women while using social networking sites.

Hypothesis of the Study

- Social networking users are young (Students), highly educated and well-off.
- The selected factors are independent to identify the problems faced by women while using social media networking sites.

- The selected variables are independent factor to solve the problems faced by women in social media networking sites.

Literature Studies

Shekhawat & Bhatt (2021) Social Networking sites are termed to as web based services that give an opportunity to individuals to create their own personal profile with the choice of their own list of users and thereby connect with them in an altogether public forum that provides them with features such as chatting, blogging, video calling, mobile connectivity and video/photo sharing. The main objective is to analyze the impact of social media on young women in urban area of Vadodara. The study found that the majority of the respondents show the agreements with these influences of social media. Respondents opine WHATSAPP and Instagram as their favorite social media with 51% followed by YouTube. They spend more than usual hours on social networking sites to download pictures, browse through updates.

Rajvanshi (2016) discussed that today in India particularly among the Indian college students the usage of Social Networking Sites (SNS) has significantly increased and it certainly has far reaching impacts on the academic and other activities of the students. The average person now spends more time each day on their mobile phone and computer than they do sleeping. A study of 2015 shows that the average time spent on social network per day is 1.72 hours and the average number of hours a teenager spends online per week is 27 hours.

Rajeswari (2014) studied the influence of Social Networking Sites on personal and professional lives of people. The study mainly focuses on the impact of these sites on the people and the disturbance it causes to their lives in both personal and professional. The social networking sites are gaining a lot of popularity these days with almost all of the educated youth using one or the other such site. In this age of globalization, the world has become too small a place thanks to the electronic media and portals. These have played a crucial role in bridging boundaries and crossing the seas and enabling them to communicate on a common platform. The study found out the influence of social networking sites on the personal and professional life of the people- how it affects their relations, what are its uses for each individual and how have they been influenced by these sites. The question regarding the safety, privacy and the legal issues have been cropping up all the time.

Dasgupta (2018) analysed the relationship between gender and media is quite old. Media representations clearly highlight how different media portray gender roles in different forms. Gendered representation of media across the world revolves around the stereotypical portrayals of masculinity and femininity. Throughout history, the content of gender stereotype has changed in relation to historical changes in the relationship between men and women. Media for long is reinforcing the notion of gender stereotyping through its content. With the emergence of internet, change has been witnessed slowly but steadily in the stereotypical portrayal of gender in media content. Social media sites have been seen to allow information delivery, constant engagement and discussion of those ideas which are falling outside the existing of gendered discourse. The study tried to delve into various

aspects pertaining to gender portrayal in age of social media by surveying existing literatures.

Methodology

The study was conducted in Coimbatore city, sundarapuram, podhanur and madukkarai areas were selected purposively as all groups of women, totally 101 women social media networking users were identified and selected based on random sampling. Therefore, the sampling technique adopted in the study was purposive random sampling. Data pertaining to the study were collected by personal interview method. The interview schedule consisted of questions relating to the socio-economic background of the women in various age groups, frequency sage and purpose of using social media networking sites; challenges faced by women and give suggestions for their problems. The schedule was first pre-tested with few selected sample units and based on their responses the questions were reformulated and the final interview schedule used in the study. Data for the study were collected from the sample units by administering a pre-tested interview schedule during the period December 2023 to April 2024. Besides averages, percentages and techniques like Garrett's rating scale, Likert's summated scale and factor analysis were used.

Socio- Economic Profile of the Respondents

With technological advancements over the last decade, many people now use the Internet not only to communicate, socialize, and interact, but also to create and consume information rather than just connecting to it. New interactive Web 2.0 sites, with their rich content, have created new platforms for users via user-friendly interfaces that encourage and facilitate the participation of users in social media networking. With this background, the study attempt to explain the socio-demographic characteristics of the respondents such as gender, age, marital status, educational level, occupation of the respondents, income and type of family. A total of 101 women social networking sites users were surveyed as shown in table1.

Table -1
Socio- Economic Profile of the Respondents

S. No	Variables	Characteristics	Frequency	Percentage
1.	Gender	Female	101	100.0
2.	Age (In Years)	Below 20	15	14.9
		20-30	51	50.9
		30-40	16	15.8
		40-50	19	18.8
3.	Marital Status	Married	43	42.6
		Unmarried	38	37.6
		Single Parent	15	14.9
		Widowed	5	5.0
4.	Level of Education	Illiterate	5	5.0
		Higher Education	18	17.8

		Secondary Education	14	13.9
		Graduate	38	37.6
		Post Graduate	36	25.7
5.	Level of Occupation	Business	11	10.9
		Student	47	46.5
		Housewife	6	5.9
		Government Job	32	31.7
		Private Job	5	5.0
6.	Income Level (Rs.)	Zero Income	53	52.5
		Below 10,000	18	17.8
		10,000-20,000	25	24.8
		20,000-30,000	1	1.0
		30,000-40,000	2	2.0
		40,000-50,000	2	2.0
7.	Type of Family	Joint Family	38	37.6
		Nuclear	56	55.4
		Single	7	6.9
TOTAL			101	100

Source: Field Survey

Gender: Of the 101 women respondents who have answered the questionnaire regarding their use of Social networking sites.

Age: Four categories were used for gathering information about the age of the respondents. About nearly 51% of the women were in the age group of 20-30 years which is the highest percentage among other age groups. In the next highest category of age group were belonged to 40-50 years (19%) and the lowest category of age group were belong below 20 years (15%). Hence, the study found that the young generation which is actively utilizing the technological revolution and they are able to use this technology for their well-being.

Marital status: Marital status of the individual is quiet important in any socio-economic study. There is change in the life style of the individuals after marriage, which is more pronounced in the case of women. The present study shows that, majority of the respondents were married (i.e.) 43% and unmarried women were nearly 38% and single parent women were nearly 15% who are using social networking sites for their needs.

Education: Social media users are generally dominated by the educated group. Majority of the respondents (38%) of the survey had under degree; as a matter of fact 95% of the respondents are well educated have either a Master's or a bachelor's or diploma. In terms of education level, graduates dominated the sample. The higher education and Secondary level consists of nearly 18% and 14% for each. Education is a major factor for utilizing social media networking.

Occupation: Occupation is central in determining the well-being of individuals or household. Being techno-savvy, Social networking sites are becoming very popular among students, professionals and government servants ect. The occupation of the respondents

included services like government staffs, private staffs, business women and students. In the present study, the majority of the respondents were students (nearly 47%) who are all using the social media for their educational purpose and next majority (32 percent) were government servants; followed by business women (11%); followed by housewives (6 percent) and rest of them (5 percent) were private sector employees. The study found that social networking users belonged to the student community and government employees, those who have aware about the technology innovations.

Income: Income was one of the demographic variables that influence the social media networking sites. In the present study majority of the respondents were students (53%), so they are all considered as unemployed, though they are unemployed, they do use the sites as maximum for the educational purposes. Nearly 25 percent of the respondents were in the income range of Rs.10,000/- to Rs.20,000/-; followed by nearly 18 percent in the range from below Rs.10,000/ and two percent of the respondents income range from Rs.30,000/- to Rs.40,000/- and Rs. 40,000/0 to Rs. 50,000/- each. The study found that, maximum range of income comes from the government employees and business women. **Type of Family:** Three categories of family type were used for gathering information about the respondents in the present study. Nearly 55 percent of the respondents were belonged to nuclear type of family; followed by nearly 38 percent of them were belonged to joint family and rest nearly 7 percent were living their life as single.

Frequently Usage of Social Networking Accounts

More than 50% of college students go on a social networking site ever all times a day (Sheldon, 2008). Quan-Haase and Young (2010) found that 82% of college students reported logging into Facebook several times a day. In the present study showed how the respondents frequently use the social networking sites represented in the below table 2.

Table-2
Frequently usage of Social Networking Accounts

Frequently usage	Frequency	Percentage
Daily Weekly Monthly Years	55	54.5
Rare usage	18	17.8
Total	7	6.9
	13	12.9
	8	7.9
	101	100.0

Source: Field Survey

The table shows that, majority of the women (55 percent) were most frequently using the networking sites for daily access; followed by nearly 18 percent of the musing frequently in a week; nearly 13 percent of them using once in year; nearly 7 percent of them using once in a month and rest of the women were using these sites for rare usage in their life. Younger students tended to use Facebook more frequently than older students to keep in touch with

friends from high school or from their hometown (Pempek et al., 2009). Hence, the study revealed that there were variations in the frequency at which the respondents visited social networking sites. Some of them visited these sites daily and some others once a week. The figure-10 represents the frequency usage of social networking sites.

Purpose of Using Social Networking Site by the Respondents

Social networking sites have a wide variety of uses and women use these sites for various purposes like friendly communication, publishing, messaging, group discussion, etc. The respondents were asked to rank the various purposes of using social networking sites in their order of priority. The ranks were then converted into percent position and from the percent position the individual scores were determined on a scale of 100 points by using Garrett's rating scale. The average scores and the ranks corresponding to each purpose are shown in table 3.

Table-3
Purpose of Using Social Networking Site – Average Scores and Ranks

S.No	Purposes	Average score	Rank
1.	To keep in touch with friends and family members	19.5	7
2.	To avail any time for any purpose	48.7	6
3.	To socialize	50.0	5
4.	To discussing and solving social problems	51.0	4
5.	For education purpose	54.7	3
6.	For communication purpose	57.8	2
7.	Sharing personal profile with friends and family Members	58.8	1

Source: Estimation based on Field Survey

The majority of the respondents were using the networking sites for the main purpose of 'Sharing personal profile with friends and family members' (1st rank), 'Communication purpose' (2nd rank), and 'Education purpose' (3rd rank) and the scores obtained by these factors were 58.8; 57.8 and 54.7 points respectively. The factor which was attained the least score on 'To keep in touch with friends and family members' (7th rank) the score being 19.5 points. The previous study of Haneefa & Sumitha (2011) revealed that a majority of the respondents used social networking sites for friendly communication. They treated social networking sites as a way to connect and reconnect with friends and relatives. However, a good number of the students use social networking sites like Blogs for academic purpose.

Problems of Social Networking Sites Users -Factor analysis

An attempt was made to analyse the problems facing by women while using the social networking sites. The respondents were asked questions relating to the problems while

using the social networking sites about the usage of SNS a five-point scale ranging from -2 (strongly disagree) +2 (strongly agree). To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measures were computed and the results are presented in the table 4.

Table-4
KMO and Bartlett's Test Measures

Problems	Social Networking Sites
KMO measures	.950
Bartlett 's test of Sphercity:approx : chi-square	3799.776
Degrees of freedom	351
Significance	.000

Source: Field Survey

KMO statistics for usage of SNS were .950 signifying higher than acceptable adequacy of sampling, Bartlett's test of Sphercity was also found to be significant at one percentage level, providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were assessed to determine the amount of variables accounted by the variables to be including in the factor rotations.

All the variables had value greater than 0.70 signifying sustainable portions of the variables accounted by the factors. The Eigen values, their relative explanatory powers and factor loadings for 27 linear components identified within the dataset. The Eigen value greater than one alone was considered for inclusion in the analysis.

Table-5
Rotated Component Matrix

S.No	Factors	Components	
		1	2
1	Cyber stalking	0.917	
2	Cyber bulling	0.853	
3	Cyber sexual defamation	0.870	
4	Harassment Via E- mails (sexual / others)	0.891	
5	Received phishing mails and spam mails	0.876	
6	Anonymous calls	0.905	
7	Vulgar and abusive SMSs	0.884	
8	ATM / Credit card frauds	0.896	
9	E-Mail spoofing		0.974
10	Morphed your photo	0.876	

11	Created fake profile with your name	0.906	
12	Hacking your phone and accounts	0.868	
13	Online commission of intellectual propertycrime	0.904	
14	Poronography	0.869	
15	Malicious code	0.878	
16	Job frauds	0.898	
17	Affect my regular sleeping	0.886	
18	Ease spread of rumours	0.890	
19	Isolation	0.893	
20	Distraction in work	0.866	
21	Feeling of getting addiction	0.887	
22	Fear of misusing personal information / diminishing Privacy	0.872	
23	Affect interaction of the people	0.908	
24	Impact on social life style	0.904	
25	Sexual socialization	0.884	
26	Negative health consequences	0.877	
27	Waste of time	0.885	
Eigen values		20.455	1.031
Percentage of variance		75.758	79.575
Cumulative percentage		75.082	79.575

Source: Estimation based on Field Survey, Extraction method: principal component analysis, Rotation method: Varimax with Kaiser Normalization, rotation converged in 27 iterations

The results indicates that for the sample data, Eigen value of the all factors was greater than one indicating that these factors alone were appropriated for inclusion in the analysis. These factors together accounted for nearly 80 percent of the variations in the factors. Factor 1 had significant loadings on 26 dimensions namely 'Cyber Stalking' to 'Waste of time'. These dimensions explained nearly 76 percent of the variance. For the factor 2 had significant loadings only one dimension namely 'E-Mail spoofing' and explained nearly 80 percent of the variance.

Suggestions for Problems of Women in Social Networking Sites -Factor analysis

An attempt was made to examine the suggestions to solve problems faced by women while using social networking sites. The respondents were asked questions relating to their own suggestions about the usage of SNS a five point scale ranging from -2 (strongly

disagree) +2 (strongly agree). To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measures were computed and the results are presented in the table 6.

Table-6
KMO and Bartlett's Test Measures

Suggestions	Social Networking Sites
KMO measures	.766
Bartlett 's test of Sphericity: approx: chi-square	273.723
Degrees of freedom	91
Significance	.000

Source: Estimation based on field survey

KMO statistics for usage of SNS were .766 signifying acceptable adequacy of sampling, Bartlett's test of Sphercity was also found to be significant at one percentage level, providing evidence of the presence of relationship between variables to apply factor analysis.

The communalities for each variable were assessed to determine the amount of variables accounted by the variables to be including in the factor rotations.

All the variables had value greater than 0.50 signifying substantial portions of the variables accounted by these factors. The Eigen values, their relative explanatory powers and factors loadings for 15 linear components identified within the data set. The Eigen value greater than one alone was considered for inclusion in the analysis.

Table-7
Rotated Component Matrix

S.NO	Factors	Components			
		1	2	3	4
1	Avoid unnecessary uploading		0.544		
2	Creation of social awareness and Securities				0.577
3	Do not share their photos and password to anyone				
4	Improving parents children Interaction	0.675			
5	Placing of job portals	0.657			
6	Proper counseling for right usage	0.573			
7	To avoid unwanted links	0.571			
8	Time restriction to use			0.581	
9	Awareness about laws and Regulations		0.551		

10	Government should frame and enforce strict laws against cybercrimes				0.544
11	The punishment and penalties should be strictly implemented	0.531			
12	The proper internet security				
13	Internet security	0.612			
14	To increase hardware and software requirement to protect the data				
15	To pay little attention to what the lecture are saying		0.544		
Eigen values		3.763	1.422	1.320	1.170
Percentage of variance		26.882	10.160	9.432	8.357
Cumulative percentage		19.351	32.994	44.117	54.830

Source: Estimation based on Field Survey, Extraction method: principal component analysis, Rotation method: Varimax with Kaiser Normalization, rotation converged in 15 iterations

The results indicates that for the sample data, Eigen value of the all factors was greater than one indicating that these factors alone were appropriated for inclusion in the analysis. These factors together accounted for nearly 55 percent of the variations in the factors. Factor 1 had significant loadings on six dimensions namely ‘Improving parents children interaction’, ‘Placing of job portals’, ‘The punishment and penalties should be strictly implemented’, ‘The proper internet security’, and ‘Proper counseling for right usage’ and these dimensions explained nearly 27 percent of the variance. For the factor 2 had significant loadings 3 dimensions namely ‘Avoid unnecessary uploading’, ‘Awareness about laws and regulations’, and ‘to pay little attention to what the lecture are saying’ and explained 10 percent of the variance. Factors 3 had significant loadings for only one dimensions i.e. ‘Time restriction to use’ and explained 9 percent of the variance. Factor 4 had significant loadings for two dimensions ‘Creation of social awareness and securities’ and ‘Government should frame and enforce strict laws against cybercrimes’ and explained nearly 8 percent of the variance.

Conclusion

Women attitude towards adopting the social networking sites were to increase knowledge, increasing self-confidence and decreased their inferiority complex. Cyber stalking, hacking, sexual harassment, morphing and received vulgar, abusive messages were the major obstacles of women and constitute hindrance to intending users of social networking sites. Further the study suggested that, if appropriate measures of creating strong Internet security, creation of social awareness and securities, proper counseling for right usage of sites, create awareness about laws and regulations have the potential to revolutionize the way the women use of social media networking sites. Hence, it is of vital importance for the government to take appropriate steps to develop a safety and security

aspects of social media networking sites and also enact a new law that would guide the users of the social network sites with the do's and don'ts the way of accessing social networking sites.

References

1. Anjula Rajvanshi (2016), "Social media: The Inevitable and Pertinent influence in the Lives of Indian Youth", *International Journal of Applied Research*, Vol. 2, Issue 4, pp.17-21.
2. Debastuti Dasgupta (2018), "Gender Portrayal in Age of Social Networking Sites: An Analytical Discussion", *Amity Journal of Media & Communication Studies*, Vol. 8, No.1, pp. 42-48.
3. India Social Media Statistics 2022, The Global Statistics, <https://www.theglobalstatistics.com>
4. Rajeswari. M (2014), "Influence of Social Networking Sites on Personal and Professional Lives of People", *International Journal of Advanced Research in Engineering and Technology*, Vol.5, No.12, pp.64-72.
5. Shelly Shekhawat & Bindu Bhatt (2021), "Analyzing Impact of Social Media on Women: A Study in Vadodara City", *International Journal of Interdisciplinary Research and Innovations*, Vol. 9, Issue 1, pp. 53-59.
6. Sheldon, P. (2008), "Student Favorite: Facebook and Motives for its Use", *Southwestern Mass Communication Journal*, Vol. 23, No.2, pp. 39-53.
7. Mohamed Haneefa K. and Sumitha E (2011), "Perception and Use of Social Networking Sites by the Students of Calicut University", *Journal of Library & Information Technology*, Vol. 31, No. 4, July 2011, pp. 295-301.

DIGITAL INTEGRATION OF WOMEN'S PUBLIC HEALTH CARE SCHEMES IN TAMILNADU

*** Dhakshadha. S & ** Sri Ranjani. V**

PG Scholars, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore -43

ABSTRACT

Women's healthcare is a critical aspect of public health policy, especially in developing regions where accessibility and awareness play a crucial role in ensuring well-being. Tamil Nadu has been a frontrunner in implementing various healthcare schemes for women, yet gaps persist in terms of accessibility, utilization, and efficiency. A significant portion of the female population, particularly in rural and marginalized communities, remains unaware of available government programs or faces bureaucratic challenges in availing them. The absence of a centralized system leads to fragmented information, making it difficult for beneficiaries to track and utilize healthcare services effectively. The study examines the current landscape of women's public healthcare in Tamil Nadu, identifying key challenges related to infrastructure, digital penetration, administrative hurdles, and economic constraints. It further explores how a centralized digital platform can serve as a transformative solution by integrating all government healthcare schemes, providing real-time updates, and enabling effective monitoring of policy implementation. The research is based on secondary data analysis, drawing insights from government reports, policy documents, and academic studies to highlight the importance of digital governance in enhancing healthcare delivery. By streamlining information and improving accessibility, the proposed model aims to bridge the existing gaps, ensuring that healthcare schemes reach the intended beneficiaries efficiently.

Key words: Women's Healthcare, Accessibility, Digitalization, Governance

INTRODUCTION

Healthcare is a fundamental aspect of human development, with women's health playing a crucial role in shaping the socio-economic progress of any society. In Tamil Nadu, the government has implemented numerous public healthcare initiatives aimed at improving maternal and reproductive health, preventive care, and overall well-being; however, challenges such as limited accessibility, bureaucratic inefficiencies, and a lack of awareness hinder the optimal utilization of these services. Although the state has pioneered public health reforms through programs like the Dr. Muthulakshmi Reddy Maternity Benefit Scheme and the Amma Maternity Nutrition Kit, disparities persist—particularly among marginalized groups, rural populations, and economically disadvantaged women who face socio-economic barriers such as financial instability, digital illiteracy, and lack of transportation. These challenges are further compounded by bureaucratic red tape, which leads to delays and underutilization of available healthcare programs, underscoring the need for a comprehensive approach that combines policy interventions with digital solutions to enhance service delivery and accessibility.

A major shortcoming in the existing healthcare framework is the lack of a unified platform consolidating government schemes and services. Currently, information is scattered across multiple portals, making it difficult for beneficiaries to track eligibility, application procedures, and service availability. This fragmentation leads to inefficiencies, redundancy in policy implementation, and limited transparency in fund allocation. A centralized digital platform for women's healthcare could address these gaps by providing real-time information, monitoring policy execution, and ensuring timely service delivery. However, digital penetration remains a challenge, as many women, particularly in rural areas, still lack access to the internet and smartphones despite Tamil Nadu's progress in digital governance.

Need of the Study

Women's healthcare is crucial for economic productivity and social stability. Tamil Nadu has progressive policies, but gaps remain in service delivery, especially for rural and economically weaker women. Awareness, administrative challenges, and socio-cultural barriers hinder access to healthcare benefits. Fragmented service delivery across multiple platforms creates inefficiencies and fund misallocation. A centralized system is needed for better accessibility and transparency. This study aims to analyse these gaps and propose an integrated digital solution. Digital governance can streamline healthcare schemes, improving efficiency and utilization.

Scope of the Study

This study analyses the public healthcare landscape for women in Tamil Nadu, focusing on accessibility, efficiency, and policy implementation. It examines government-funded healthcare schemes and their effectiveness, especially for rural and economically disadvantaged women. The role of digital platforms in improving healthcare accessibility is explored. With technological advancements, digital governance is key to enhancing service delivery. The study assesses the feasibility of a centralized digital platform for better monitoring and transparency.

Objectives of the Study

- To assess the accessibility and efficiency of public healthcare schemes for women in Tamil Nadu.
- To identify key challenges faced by women in availing healthcare benefits, including digital and administrative barriers.
- To propose a centralized digital platform as a solution for improving healthcare service delivery and ensuring transparency.

Hypothesis of the Study

A research hypothesis provides a structured framework to test assumptions and derive conclusions based on data analysis. This study is based on the following hypotheses:

H1: The existing public healthcare schemes for women in Tamil Nadu are not fully utilized due to lack of awareness and administrative barriers.

H2: A centralized digital platform can significantly improve the accessibility and efficiency of women's healthcare services.

H3: Digital governance in healthcare will bridge regional disparities, ensuring better outreach to rural and marginalized women.

Limitations of the Study

This study has relies on secondary data, which may not reflect real-time challenges. The digital aspect assumes technological access among women, though disparities exist. Behavioural and cultural factors affecting digital adoption are not fully addressed. Findings are specific to Tamil Nadu, limiting broader applicability.

REVIEW OF LITERATURE

Kannan and Devi (2020) conducted a comprehensive analysis of health and welfare schemes implemented for women in Tamil Nadu. Their study revealed that despite the introduction of numerous initiatives, the impact remained limited due to inadequate awareness among beneficiaries and challenges in accessing services. The researchers emphasized the need for improved dissemination of information and streamlined processes to enhance the effectiveness of these schemes.

The Press Information Bureau (2023) released a report exploring the role of digital innovations in transforming India's healthcare landscape. The report highlighted those digital platforms significantly improved healthcare delivery by enhancing accessibility, reducing costs, and streamlining administrative processes. It underscored the potential of digital health initiatives to bridge gaps in the existing healthcare system, particularly in underserved regions.

Saravanakumar et al. (2019) conducted a study comparing the levels of women empowerment in urban and rural areas of Tamil Nadu. The research indicated that urban women exhibited higher empowerment levels, attributed to better educational and employment opportunities. Conversely, rural women faced socio-cultural barriers limiting their empowerment. The study called for targeted interventions to address these disparities and promote equitable empowerment.

The Centre for Health Equity, Law and Policy (2023) conducted research into the intersections of digital technology, health, and law in India. The study examined how digital health technologies could facilitate the realization of the right to health and universal health coverage (UHC). It concluded with policy and legal recommendations to align the adoption of digital health technologies with human rights and ethical frameworks, aiming to enhance healthcare accessibility and equity.

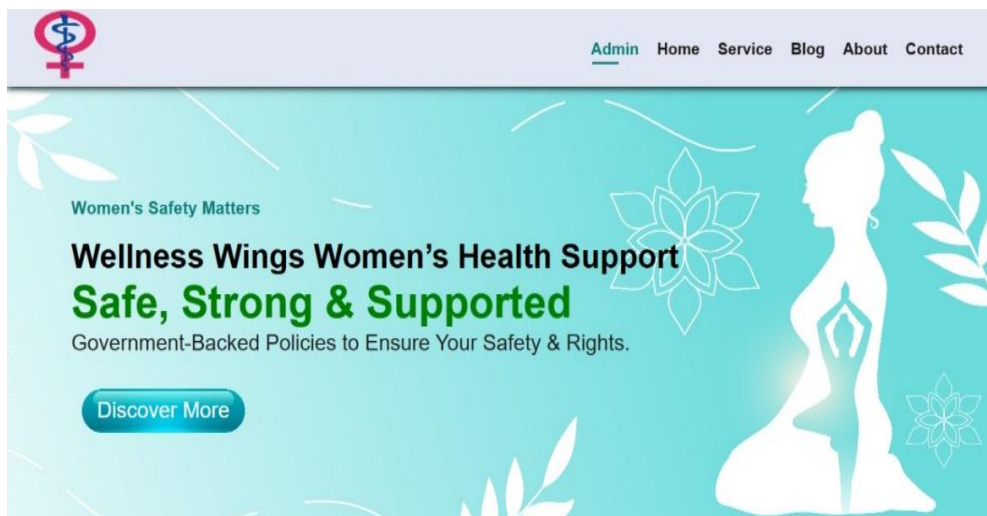
Janaki & Prabakar (2024) conducted a bibliometric analysis to identify trends, patterns, and gaps in literature concerning maternal and reproductive health inequalities in Tamil Nadu. The study highlighted significant disparities in access to healthcare services, influenced by economic status, education, and social determinants. The authors called for focused research and policy interventions to address these inequities, particularly in rural and marginalized communities.

METHODOLOGY

Research Design

The study follows a descriptive research design to analyse the availability, accessibility, and effectiveness of women's public healthcare schemes in Tamil Nadu. The research focuses on secondary data collection to evaluate existing government healthcare schemes, their implementation, and the digital gap in accessing healthcare benefits. Additionally, the study explores the feasibility of a centralized digital platform to improve healthcare scheme awareness and accessibility.

FIGURE-1
Women Wellness Wings



Source: <http://localhost/wellnesswings/>

Data Collection Method

The research primarily relies on secondary data sources, including government reports and policy documents on public healthcare schemes, along with academic research papers and journal articles. It also incorporates reports from international organizations such as WHO, UNDP and the World Bank. Additionally, statistical data from the Ministry of Health and Family Welfare and the Tamil Nadu Government schemes provide essential insights into healthcare accessibility and implementation.

Data Analysis Techniques

The study employs quantitative methods to assess the effectiveness of women's healthcare schemes in Tamil Nadu. Comparative analysis will evaluate the impact of different schemes on women's health outcomes, while trend analysis will track changes in healthcare access and scheme utilization over time. Additionally, the study identifies the shortcomings in the implementation of schemes, digital accessibility and service delivery, helping to highlight areas that require policy improvements.

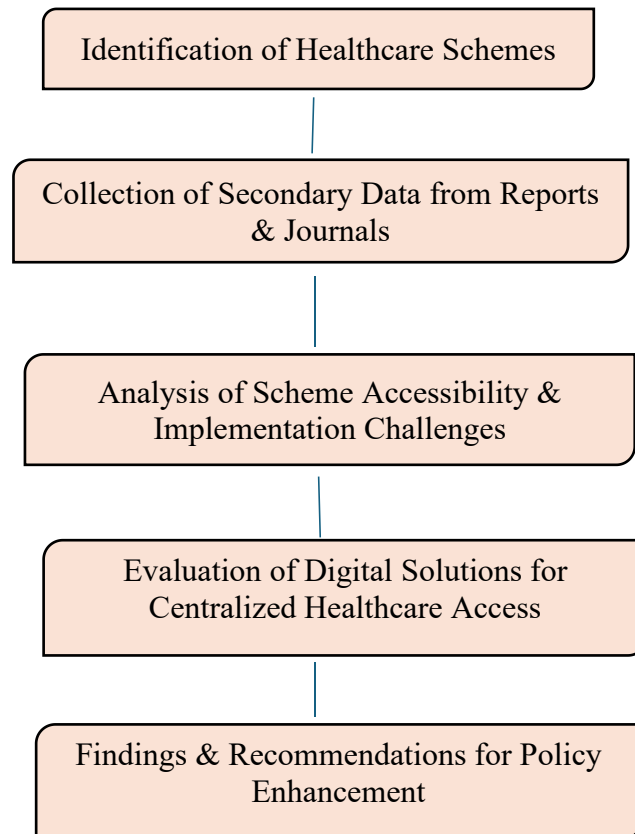
Conceptual Framework

The research is structured around three key aspects: Government healthcare schemes, which involve identifying existing programs and their benefits; challenges in accessibility,

focusing on digital and infrastructural barriers that limit scheme utilization; and digital integration, assessing how a centralized digital platform can improve awareness, accessibility, and efficiency in delivering healthcare benefits. By addressing this, the study aims to provide recommendations for enhancing women’s healthcare services in Tamil Nadu.

Flowchart Representation of the Research Process

The research process is systematically structured as follows:



Ethical Considerations

The study maintains objectivity, cites all sources, and relies only on publicly available data.

Limitations of the Study

It uses secondary data, does not test digital solutions in real-time, and may be impacted by future policy changes.

RESULTS AND DISCUSSION

This chapter analyses on women’s healthcare schemes in Tamil Nadu, focusing on accessibility, digital challenges, economic barriers and the need for a centralized platform. Despite a strong public healthcare system, many women face difficulties due to limited awareness, bureaucratic inefficiencies and complex eligibility criteria.

Accessibility and Utilization of Women's Healthcare Schemes

Despite the strong public healthcare system in Tamil Nadu, many women face challenges in accessing government schemes due to limited awareness, complex eligibility criteria, and bureaucratic inefficiencies.

Key Schemes and Their Accessibility Issues

- Dr. Muthulakshmi Reddy Maternity Benefit Scheme: Offers Rs. 18,000 for maternity care, but delays in fund disbursement and eligibility restrictions affect utilization.
- Pradhan Mantri Matru Vandana Yojana (PMMVY): Covers maternity expenses, but duplication in registration and low awareness (only 48% of eligible women benefit) limit its reach.
- Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS): Provides Rs. 5 lakh insurance coverage, yet many women struggle with claim processing due to bureaucratic inefficiencies.
- Menstrual Hygiene Scheme (MHS): Supplies subsidized sanitary napkins, but supply chain disruptions leave only 52% of rural adolescent girls with access.

Digital Challenges in Women's Healthcare Access

Tamil Nadu has advanced in e-governance, yet the absence of a unified digital platform hinders access. Reports indicate that only 35% of rural women actively use digital healthcare services due to dispersed government portals, redundant applications and low digital literacy. A single integrated healthcare platform can streamline these processes and improve accessibility.

Economic Barriers and Policy Gaps

Delays in fund allocation and policy inefficiencies reduce scheme effectiveness. Maternity benefits experience three-month delays, insurance claims remain underutilized due to lack of awareness, and menstrual hygiene product shortages persist due to supply chain issues. A real-time financial tracking system can enhance efficiency and timely allocation.

The Need for a Centralized Digital Healthcare Platform

A unified platform can enhance accessibility, transparency, and efficiency by consolidating schemes into a single portal. Key features include single-window access, real-time updates, automated alerts, multilingual support, and government monitoring for policy impact assessment.

Fragmented information and bureaucratic delays hinder accessibility, with only 60% of eligible women receiving full maternity benefits. Low digital adoption (35% in rural areas) limits online service utilization, while economic and supply chain barriers further impact scheme effectiveness. A centralized platform can address these issues, ensuring better

access, awareness, and service delivery. The study presents an in-depth analysis of secondary data on women's healthcare schemes in Tamil Nadu, focusing on accessibility, digital challenges, economic barriers, and the need for a centralized platform.

CONCLUSION

To be concluding, healthcare system in Tamil Nadu has demonstrated commendable progress in improving women's health indicators, making it one of the leading states in India in this domain. The state's proactive approach, backed by government policies and community-based programs, has facilitated better healthcare access for women, particularly in maternal and child health services. However, to address the existing challenges, a more holistic approach is required. Strengthening rural healthcare infrastructure, enhancing awareness regarding reproductive health, and addressing socio-economic barriers are crucial steps toward ensuring equitable healthcare for all women in the state. The study reaffirms that sustained investment in healthcare, alongside public-private partnerships and the active involvement of local communities, will be essential in overcoming existing disparities. By adopting an inclusive and adaptive healthcare model, Tamil Nadu can set a precedent for other states in India, ultimately contributing to the larger goal of women's empowerment and overall public health improvement.

REFERENCES

1. Government of Tamil Nadu, Department of Health and Family Welfare. (2023). Annual Report on Public Health Initiatives. Chennai: Government Press.
2. Gupta, R., & Sharma, P. (2021). Maternal Health Policies and Their Impact in India. *Journal of Public Health Policy*, 45(3), 210-228.
3. Nair, S., et al. (2020). Evaluating the Utilization of Health Insurance Schemes among Women in Tamil Nadu. *Health Economics Review*, 12(4), 150-165.
4. Krishnan, P. (2019). Menstrual Hygiene in Rural India: Policy Gaps and Solutions. *Indian Journal of Social Health*, 37(2), 90-102.
5. Patel, V., & Ramesh, K. (2018). The Role of Telemedicine in Women's Healthcare. *Journal of Digital Health*, 22(1), 50-65.
6. National Family Health Survey (NFHS-5). (2021). Ministry of Health and Family Welfare, Government of India.
7. World Health Organization (2021). Digital Health Strategies for Developing Countries. WHO Research Reports.
8. National Family Health Survey (NFHS-5). (2021). Ministry of Health and Family Welfare, Government of India.
9. World Health Organization (WHO). (2022). Maternal and Child Health in India: Progress and Challenges. Geneva: WHO Publications.
10. Ministry of Health and Family Welfare, Government of India. (2021). National Health Policy. New Delhi: Government of India Press.
11. Kumar, R., & Mehta, S. (2022). "Assessing Maternal Health Interventions in Tamil Nadu: A Policy Perspective." *Indian Journal of Public Health*, 66(3), 112-127.

12. Ramesh, P., & Srinivasan, V. (2021). "Impact of Public Healthcare Programs on Women's Well-being in Tamil Nadu." *Journal of Social and Economic Studies*, 58(2), 189-204.
13. National Health Mission, Tamil Nadu. (2023). Maternal and Child Health Initiatives. Retrieved from <https://nhm.tn.gov.in>
14. Ministry of Women and Child Development, Government of India. (2022). Empowering Women through Healthcare Policies. Retrieved from <https://wcd.nic.in>

About the Authors



Dr. V. Malarvizhi is the Professor of Economics in Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-43. With 19 years of teaching experience she has presented 60 papers in International, National and Regional level Seminars/Workshops/ Conferences. She has published 72 articles in Journals and edited 4 books. She is the Content Writer and Camera Presenter for 2 modules e-PG Pathshala project. She has conducted one International conference, 4 National Seminars and one Faculty Development Programme. She has guided M.A/ M.Phil/ Ph.d students and completed one Major Research Project funded by ICSSR. She acted as a Chairperson/ Rapporteur in the International and National Conferences. She is a reviewer for International Journals and also special editor in 4 International Journals. She received the Excellent Paper Award in 2nd International Conference on E-business, Management and Economics, organized by International Economics Development and Research Center (IEDRC) at Dubai in 2011 and also received the Best Paper Award from the Madras University Journal of Business and Finance in 2013. She also serves as a Captain in National Cadet Corps (NCC) in the same Institution.



Dr. R. Annapoorani is the Coordinator of Thiru T.S.Dhandapani Chettiar Chair in the field of Social Sciences in Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-43. She is Former Professor of Economics and Coordinator of Dr. Ambedkar Studies Centre in the same Institute. With 40 years of teaching experience, she has participated and presented 81 papers in various International, National, Regional and State level seminar/ conferences. She has published 2 books –one book in regional language- Tamil – for Micro Economics. She has edited 4 books. She has published 103 articles in Journals/ Books and Conference proceedings and organized 7 Seminars and 3 workshops. As a way of research experience she has guided M.A/ M.Phil/ Ph.d students and completed Major Research Projects funded by UGC, CSO and Ministry of Human Resource Development. She is also involved in the preparation of NET questions in Economics. She received a Best Teacher Award from Malcolm Elizabeth Adiseshiah Trust, Chennai in 2018.

About the Book

Women empowerment is a transformative force that shapes the foundation of a healthier, more sustainable world. Empowering women is not just a matter of social justice; it is an imperative for global progress. By eliminating gender disparities in education, employment and decision-making, societies can unlock the immense potential of women as innovators, entrepreneurs and leaders.

Health and sustainability are deeply interconnected, with women playing a pivotal role in family welfare, community well-being and ecological conservation. Ensuring access to healthcare, nutrition and reproductive rights not only improves individual well-being but also enhances the overall health of societies. Women leadership in sustainable development, including initiatives in renewable energy, organic farming and climate resilience, is instrumental in addressing global challenges and securing a balanced future for generations to come. Collaborative efforts among Governments, institutions and civil society are essential for creating an environment where women can thrive and contribute for sustainable development.

The theme “Women Empowerment for Health and Sustainability – A Pathway to Global Well-Being” highlights the indispensable role of women in fostering social equity and sustainability. The volume, “Women Empowerment for Health and Sustainability – A Pathway to Global Well-Being”, comprises 21 insightful papers exploring various dimensions of women empowerment, health and sustainable development. It highlights key challenges and opportunities, emphasizing women’s crucial role in driving social progress and environmental resilience. This initiative sheds light on their contribution to sustainable economic growth through inclusive policies, education and entrepreneurship.

The main themes covered in the volume are: Maternal health, food security, menstrual hygiene, women entrepreneurship in agri business, role of functional food in promoting health of women, financial inclusion of women etc. The volume will provide valuable input for the academicians, researchers, policy makers and Government officials.



Royal Book Publishing
contact@royalbookpublishing.com
+91 7598 141 199
www.royalbookpublishing.com

