

Digital Literacy among Kudumbashree SHG Members in Malappuram District

R. Sreeja ¹, R. Jayalakshmi ²

^{1,2} Department of Commerce, Karpagam Academy of Higher Education, Coimbatore, India.

¹ Corresponding author: sreejaravindran18@gmail.com

© Author(s)

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.

ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com

Also available at <https://www.ssm.com/index.cfm/en/oida-intl-journal-sustainable-dev/>

Abstract: The emergence of digital era has made drastic change in the entire lifestyle and habitat of the human population. This technological growth has the vital role to strengthen the process of financial inclusion and its impacts. Post Corona pandemic upsurge the usage of digital technology has been changing the whole SHGs and has the potential to enhance the welfare of women's SHGs groups in a variety of ways. And the Kerala government has implemented the project called KFON which take initiative to create digital state in coming years, and mainly focus on providing subsidized internet with optical fiber to BPL sectors of the community and government aiming to obviate the digital divide. With the serious attempt of studies and reports, the paper helps to explain the latest possibilities in digital platforms and its impact on the lives of women SHGs. Studies have shown on the outcomes in adopting such new digital technology by women SHGs. The study also mentions usage of payment applications and digital cards by women SHGs. The paper suggests to educate the women beneficiaries with digital tools for financial inclusion to acquire the maximum benefits of the digital revolution and enhance the digital knowledge among the members of SHGs.

Keywords: Self help groups, Kudumbashree, Digital Financial Inclusion, Payment Applications, KFON.

Introduction

Digital literacy is getting very much essential for the growth, development and continued strength of SHGs, especially after COVID-19 situation the sudden usage of digital technology in all day to day activities. As much a person is literate, today if they lack digital knowledge then they will find very much difficult to survive.

The continued strength and resilience of Self-Help Groups (SHGs) have become more vital than ever, especially in the aftermath of the COVID-19 pandemic, which made the use of digital technology in every aspect of daily life."

By equipping SHG members with the skills and knowledge to use digital technologies, digital literacy enhances communication within the group and with external stakeholders, facilitates access to financial services, and opens up new market opportunities. It also plays a crucial role in empowering women, who often comprise the majority of SHG members and networks that can significantly improve their social and economic status[2][4]. Furthermore, digital literacy enables SHG members to participate in e-governance, ensuring they can benefit from government services and schemes. Implementing digital literacy in SHGs can be achieved through targeted training programs, partnerships with NGOs and tech companies, and ensuring access to digital devices and reliable internet connectivity[6][8]. By prioritizing digital literacy, SHGs can leverage technology to enhance their effectiveness and broaden their impact, ultimately contributing to more inclusive and resilient communities. Integrating digital literacy into SHGs is vital for their growth and sustainability[10][12]. It not only empowers individual members but also strengthens the group's overall capacity to tackle socio-economic challenges[14][16]. By prioritizing digital literacy, SHGs can leverage technology to enhance their productivity, connectivity and impact. bank or non bank permitted to store electronic value.

Usage Pattern of Various Digital Payment System in SHG's

Digital Payment System	Primary Use	Example	Challenges
UPI	Payments for goods/services	Google Pay, PhonePe,	Digital literacy, security concerns
	- Fund transfers between members	Paytm	
MOBILE WALLET	E-commerce transactions - Promotional fairs	Paytm, Mobikwik	Language barriers, app navigation
AePS (Aadhar enabled payment system)	Direct Benefit Transfers (DBT) - Subsidies and grants	Aadhaar-linked banking services	Infrastructure in rural areas
Digital savings	Group savings - Microloan tracking	SHG-focused digital platforms	Adoption by older members
Debit card/credit card	POS transactions - Bulk purchases of raw materials	Card machines at Kudumbashree shops	Connectivity issues in remote areas
Internet banking	Fund transfers - Loan and EMI payments	Net banking portals	Access to digital infrastructure
Micro ATM services	Cash withdrawals - Account balance checks	Cash withdrawals -Account balance checks	Device unavailability

Financial literacy

Financial literacy means the knowledge and skill of dealing with money or finance and assisting them to manage finance like saving, borrowing and investing. Financial literacy also helps in decision making, increase income generating ideas and handle risks. By enhancing the principles of finance and money, one can ensure the use of it. SHG members can use transparent and productive groups fund and build creditworthiness of the group by promoting timely loan repayment and enhancing access to larger financial opportunities. Generally financial literacy empowers, SHG members to achieve economic independence and to improve standard of living and contribute to community development.

Financial products used for data collection:

SLNO	Digital Financial products
1	BANKING APPS
2	UPID
3	GOOGLE PAY
4	E-WALLETS
5	ATM CARDS

KFON Project

KFON (KERALA FIBRE OPTIC NETWORK) is a project started by the kerala government in 2020 to make internet available to everyone, especially in rural and remote areas. The main aim is to reduce the gap between people who have internet access and those who don't. With KFON, the government wants to give fast and reliable internet to schools, offices, homes and public places. It will also help people use online services like education, healthcare and government support more easily. One of the most important goals of KFON is to give free internet to families who cannot afford it, so that everyone can be part of the digital world. This project supports the idea that internet is a basic right, just like water or electricity.

Literature Review

Prabhala K and et al (2019) conducted a study focusing on how digital tools, especially mobile phones, are transforming Self-Help Groups (SHGs) in India. The key goals of their research were to highlight the growth and progress of SHGs in the country, explore how digitalization particularly mobile technology- is being integrated into SHG operations, and to discuss the challenges and offer relevant suggestions. The study relied mainly on secondary data, drawing from recent literature and official reports by institutions like NAMARD and SERP. According to NABARD, there are over 11 crore households involved in SHGs across India, forming more than 87 lakh groups that collectively hold deposits exceeding Rs 195 billion. This research explains the significant shift taking place as SHGs embrace digital methods, pointing to new era of empowerment and efficiency through mobile based technology.

Shen, Y., Hueng and et al (2020) explored how financial literacy, internet usage and the adoption of digital financial products collectively influence financial inclusion. Researchers findings revealed that while internet usage alone does not directly enhance financial inclusion, it indirectly contributes by promoting the use of digital financial services-especially when paired with strong foundation in financial literacy and financial inclusion. The study underscores that for digital initiatives to truly broaden financial access, efforts must first focus on improving financial literacy and encouraging the effective use of digital financial products. The researcher suggest that policy makers in china should prioritise educational and digital engagement strategies to strengthen financial inclusion outcome.

Mishra, D. K. and et al (2021) investigated the key factors influencing financial literacy and financial inclusion among women associated with Self-Help Groups (SHGs) in India. The study surveyed 100 women, aged between 18 and 59 years, using a structured questionnaire. The collected data were analysed using factor analysis and component analysis to identify the underlying determinants. The findings provided valuable insights for both bankers and policymakers, highlighting specific areas that can enhance the effectiveness of financial interventions targeting women in SHGs. By understanding these critical factors, stakeholders can design more informed and impactful strategies to support women's financial empowerment through SHGs.

Vyas and Jain (2021) explored the crucial role of the digital economy and technology adoption in promoting financial inclusion in India. Their study introduced a three-dimensional hypothetical model that conceptualised the digital economy as both participation in and adoption of financial inclusion. Taking an empirical approach, the research offers valuable insights from both the perspectives of end-users and service providers, highlighting the growing relevance of digital tools in achieving inclusive financial systems.

Khan et al (2022) conducted a comprehensive study on the role of financial literacy in promoting financial inclusion, using scientometric and content analysis methods. The study is notable for its vast scale, incorporating data from 850000 respondents globally. By analysing 10,091 research studies conducted over a span of 45 years, the paper provides a rich understanding of the interrelationship between financial literacy and financial inclusion. . It offers a valuable knowledge base for policymakers, regulators, and academics, helping them identify key trends and gaps in existing research and guiding future strategies in this domain.

Aithal (2024) examined how financial literacy, particularly when improved through microfinance programs, contributes to the employment of women involved in Self-Help Groups (SHGs) in India. The researched used secondary data from academic sources and government reports and using ABCD analysis, the study underscores, the significant role such programs play in boosting economic empowerment and expanding financial access, especially for women in rural and underserved areas.

Siddiqui and et al (2020) investigated the impact of telecommunication infrastructural on financial inclusion across various regions of India. The study focuses on how improved telecom access can enhance people's lives by enabling broader financial participation. The research calls for the promotion of holistic policies that strengthen

telecommunication networks, which in turn can support the spread of financial services to the remotest parts of the country.

Statement of the Problem

Enhancing digital literacy in SHGs can significantly boost their effectiveness, promote financial inclusion and empower members both economically and socially. The study is aimed to examine the digital literacy of financial products among kudumbashree SHG'S members and also identifies the usage of various digital payment system among them to analyse the digital literacy.

Scope of the Study

The area covered is Perinthalmanna municipality in Malappuram district, Kerala. The study on digital literacy in SHGs will examine the current state, challenges and potential solutions for enhancing digital skills among SHG members, particularly in rural and semi-urban areas. The study will assess existing digital literacy levels through surveys and interviews identify barriers such as lack of access to devices and internet connectivity. The study mainly aims to examine the level of digital literacy of financial products and various digital payment system used by SHGs members. Based on these findings, actionable recommendations will be offered to stakeholders to enhance digital literacy among SHG members, fostering greater digital inclusion and empowerment.

Objectives

1. To identify the digital literacy of financial products among SHG'S members.
2. To analyse the usage of various digital payment system among the SHG'S members.

Research Methodology

Primary and secondary data were collected for conducting the study. Questionnaire, one of the primary data used to collect information from the SHG members through direct interviews. Direct Interview was made with the members of Kudumbashree to gather information and interaction was done in an informal way. The four units from Perinthalmanna municipality named Ushasree unit, Nakshatra unit, Velaku unit and Sreyas unit members have been used to interview and gather information and data. Secondary data are collected from internet, websites and journals.

Research Design

Descriptive and exploratory research has been used for the research purpose. Descriptive research, describes the composition, demographic activities and exploratory research, explores the experience, motivation and challenges faced by SHGs members.

Sample Design

Self-help groups listed under kudumbashree malappuram district is the sample selected for conducting the study. Kudumbashree is the poverty eradication and women empowerment programme implemented by kerala state government mission. Simple random sampling were used for the study. 64 Self Help Group members were selected.

Analysis and Interpretation

Table 1: Qualification of Self Help Groups members:

SLNO	QUALIFICATION	NO:OF MEMBERS	PERCENTAGE
1	MATRICULATION	21	32.8%
2	DIPLOMA	17	26.6%
3	UG	10	15.6%
4	PG AND MORE	16	25.0%
5	TOTAL	64	100%

Source: primary data

The above table explains that 32.8% of the members belongs to matriculation, 26.6% of the members belongs to diploma qualification, 15.6% of the members belong to undergraduate and 25.0% of the members belongs to PG and more.

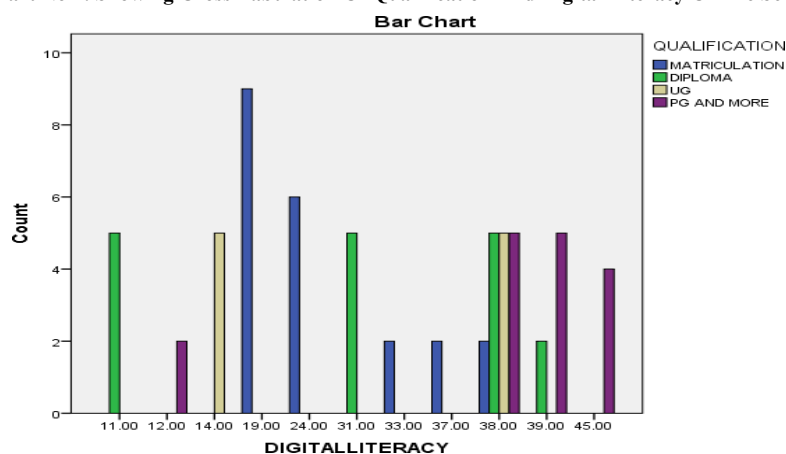
Table 2: Cross tabulation of digital literacy and qualification of Self-Help group Members

DIGITAL LITERACY * QUALIFICATION							
Digital financial products usage score			QUALIFICATION				Total
			MATRICULATION	DIPLOMA	UG	PG AND MORE	
DIGITAL LITERACY	11.00	Count	0	5	0	0	5
		% within DIGITAL LITERACY	0.0%	100.0%	0.0%	0.0%	100.0%
		% within QUALIFICATION	0.0%	29.4%	0.0%	0.0%	7.8%
	12.00	Count	0	0	0	2	2
		% within DIGITAL LITERACY	0.0%	0.0%	0.0%	100.0%	100.0%
		% within QUALIFICATION	0.0%	0.0%	0.0%	12.5%	3.1%
	14.00	Count	0	0	5	0	5
		% within DIGITAL LITERACY	0.0%	0.0%	100.0%	0.0%	100.0%
		% within QUALIFICATION	0.0%	0.0%	50.0%	0.0%	7.8%
	19.00	Count	9	0	0	0	9

Table continued below

		% within DIGITALLITERACY	100.0%	0.0%	0.0%	0.0%	100.0%
		% within QUALIFICATION	42.9%	0.0%	0.0%	0.0%	14.1%
	24.00	Count	6	0	0	0	6
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	0.0%	100.0%
		% within QUALIFICATION	28.6%	0.0%	0.0%	0.0%	9.4%
		Count	0	5	0	0	5
	31.00	% within DIGITALLITERACY	0.0%	100.0%	0.0%	0.0%	100.0%
		% within QUALIFICATION	0.0%	29.4%	0.0%	0.0%	7.8%
		Count	2	0	0	0	2
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	0.0%	100.0%
	33.00	% within QUALIFICATION	9.5%	0.0%	0.0%	0.0%	3.1%
		Count	2	0	0	0	2
	37.00	% within DIGITALLITERACY	100.0%	0.0%	0.0%	0.0%	100.0%
		% within QUALIFICATION	9.5%	0.0%	0.0%	0.0%	3.1%
		Count	2	5	5	5	17
		% within DIGITALLITERACY	11.8%	29.4%	29.4%	29.4%	100.0%
	38.00	% within QUALIFICATION	9.5%	29.4%	50.0%	31.2%	26.6%
		Count	0	2	0	5	7
	39.00	% within DIGITALLITERACY	0.0%	28.6%	0.0%	71.4%	100.0%
		% within QUALIFICATION	0.0%	11.8%	0.0%	31.2%	10.9%
Total		Count	21	17	10	16	64
		% within DIGITALLITERACY	32.8%	26.6%	15.6%	25.0%	100.0%
		% within QUALIFICATION	100.0%	100.0%	100.0%	100.0%	100.0%

Chart No 1: Showing Cross Tabulation Of Qualification And Digital Literacy Of The Self Help Group Members.



Source: primary data

The above table and bar chart explains that the majority of the population in SHGs belongs to matriculation, and it is very much evident that the undergraduate and post graduated people are digitally getting literate and they learn digitalization very soon than people belonging to matriculation.

Various digital financial products used for the study.

SLNO	Digital Financial products
1	BANKING APPS
2	UPID
3	GOOGLE PAY
4	E-WALLETS
5	ATM CARDS

Next Page

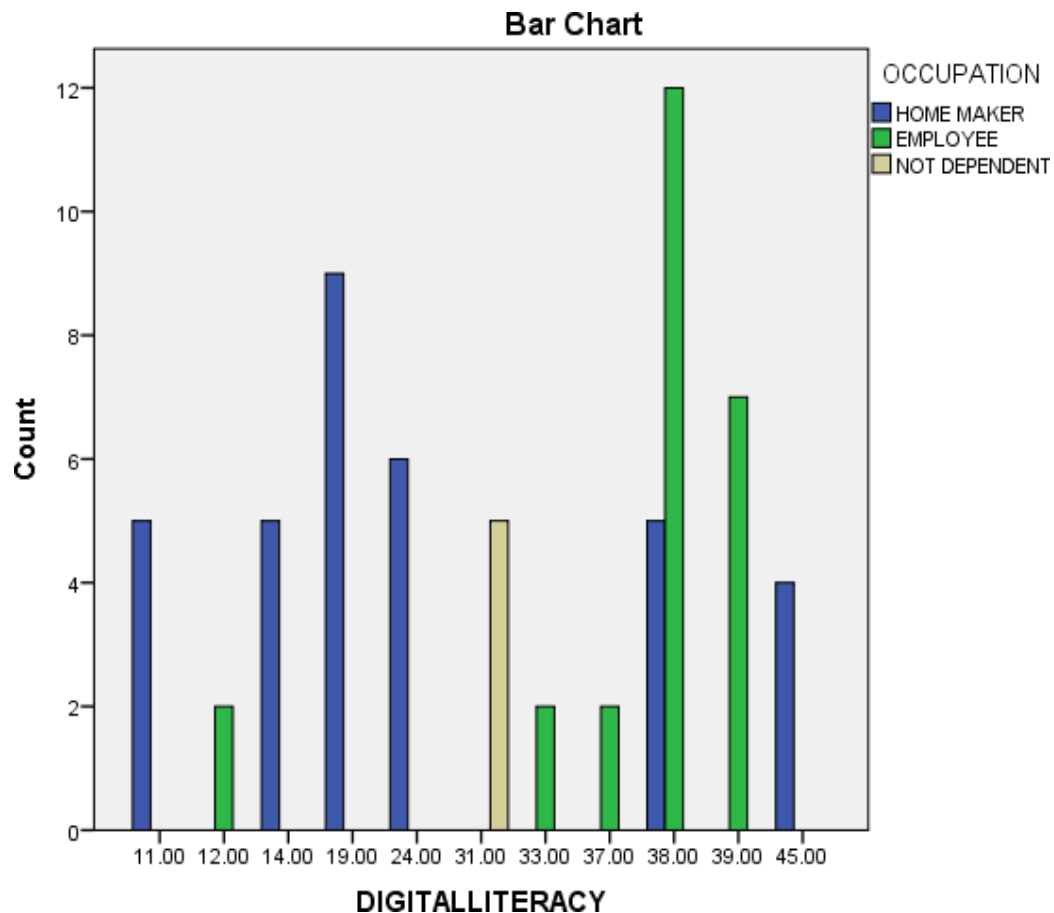
Table no 3: Cross tabulation of occupation and digital literacy of Self Help Groups members.

DIGITAL LITERACY * OCCUPATION Crosstabulation						
			OCCUPATION			Total
			HOME MAKER	EMPLOYEE	NOT DEPENDENT	
	Digital financial products usage score					
DIGITAL LITERACY	11.00	Count	5	0	0	5
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	100.0%
		% within OCCUPATION	14.7%	0.0%	0.0%	7.8%
	12.00	Count	0	2	0	2
		% within DIGITALLITERACY	0.0%	100.0%	0.0%	100.0%
		% within OCCUPATION	0.0%	8.0%	0.0%	3.1%
	14.00	Count	5	0	0	5
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	100.0%
		% within OCCUPATION	14.7%	0.0%	0.0%	7.8%
	19.00	Count	9	0	0	9
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	100.0%
		% within OCCUPATION	26.5%	0.0%	0.0%	14.1%
	24.00	Count	6	0	0	6
		% within DIGITALLITERACY	100.0%	0.0%	0.0%	100.0%
		% within OCCUPATION	17.6%	0.0%	0.0%	9.4%
	31.00	Count	0	0	5	5
		% within DIGITALLITERACY	0.0%	0.0%	100.0%	100.0%
		% within OCCUPATION	0.0%	0.0%	100.0%	7.8%
		Count	0	2	0	2

	33.00	% within DIGITALLITERACY	0.0%	100.0%	0.0%	100.0%
		% within OCCUPATION	0.0%	8.0%	0.0%	3.1%
		Count	0	2	0	2
	37.00	% within DIGITALLITERACY	0.0%	100.0%	0.0%	100.0%
		% within OCCUPATION	0.0%	8.0%	0.0%	3.1%
		Count	5	12	0	17
	38.00	% within DIGITALLITERACY	29.4%	70.6%	0.0%	100.0%
		% within OCCUPATION	14.7%	48.0%	0.0%	26.6%
		Count	0	7	0	7
	39.00	% within DIGITALLITERACY	0.0%	100.0%	0.0%	100.0%
		% within OCCUPATION	0.0%	28.0%	0.0%	10.9%
		Count	4	0	0	4
	45.00	% within DIGITALLITERACY	100.0%	0.0%	0.0%	100.0%
		% within OCCUPATION	11.8%	0.0%	0.0%	6.2%
Total		Count	34	25	5	64
		% within DIGITALLITERACY	53.1%	39.1%	7.8%	100.0%
		% within OCCUPATION	100.0%	100.0%	100.0%	100.0%

Next page

Chart no 2: Showing Cross tabulation of occupation and digital literacy of Self Help Groups members.



Source: primary data

Interpretation

From the above charts and table is very evident and shows that the majority of population are home makers and employees in SHGs. And digital literacy is very much high in employed population than homemakers. It is clear that educated homemaker are also lacking digital literacy

Next page

Table no 4: Relationship between the employed and unemployed kudumbashree members digital financial product usage and analysis

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
HOME MAKER	34	23.8235	11.43220	1.96061	19.8346	27.8124	11.00	45.00	52.44498
EMPLOYEE	25	35.7200	7.30593	1.46119	32.7043	38.7357	12.00	39.00	
NOT DEPENDENT	5	31.0000	.00000	.00000	31.0000	31.0000	31.00	31.00	
Total	64	29.0313	11.02230	1.37779	26.2780	31.7845	11.00	45.00	
Fixed Effects			9.57625	1.19703	26.6376	31.4249			
Model									
Random Effects				4.95548	7.7095	50.3530			

Hypothesis

H0: There is no S . G . N (significant) relationship between the employed and unemployed kudumbashree members on digital usage of financial products.

Digital Literacy

Tukey B

OCCUPATION	N	Subset for alpha =0.05	
		1	2
HOME MAKER	34	23.8235	
NOT DEPENDENT	5	31.0000	31.0000
EMPLOYEE	25		35.7200

Means for groups in homogeneous subsets are displayed.

Uses H.M (Harmonic Mean) Sample Size = 11.135.

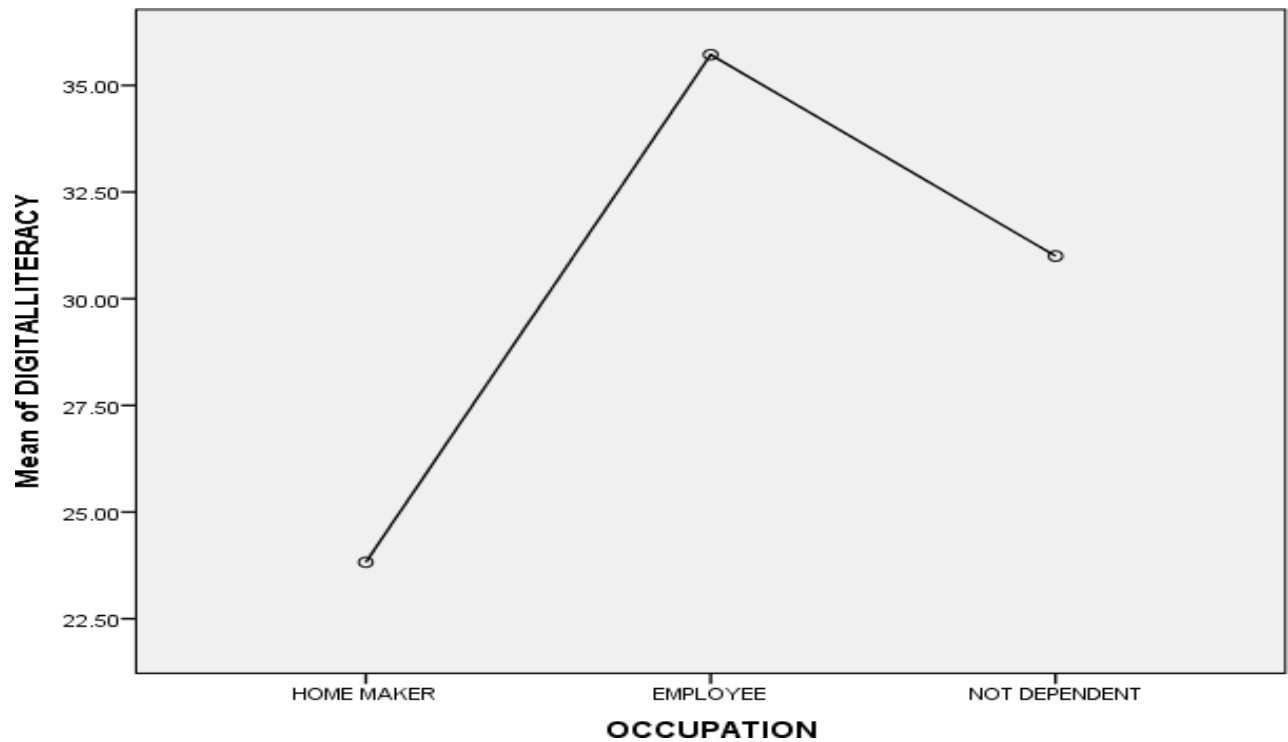
ANOVA analysis

Digital Literacy

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2059.956	2	1029.978	11.231	.000
Within Groups	5593.981	61	91.705		
Total	7653.937	63			

The group sizes are unequal. The H.M(harmonic mean) of the group sizes is used. Type I error levels are not guaranteed.

Next page

Chart no 3: Showing the digital literacy and occupation

Source: Primary data

Interpretation

From the above analysis with the hypothesis it is fought that there is no significant difference between employed and unemployed members in the usage of digital products. And according to the mean it is found that employed members use the digital products more often than unemployed.

Hypothesis 2:

There is no significant relationship between academic qualification and digital literacy among kudumbashree members.

Next page

Table no 4: Relationship between academic qualification and digital literacy among kudumbashree members and analysis

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
MATRICULATION	21	25.2857	7.35624	1.60526	21.9372	28.6342	19.00	38.00	22.43668
DIPLOMA	17	28.1176	11.81039	2.86444	22.0453	34.1900	11.00	39.00	
UG	10	26.0000	12.64911	4.00000	16.9514	35.0486	14.00	38.00	
PG AND MORE	16	36.8125	10.10095	2.52524	31.4301	42.1949	12.00	45.00	
Total	64	29.0313	11.02230	1.37779	26.2780	31.7845	11.00	45.00	
Fixed Effects			10.23433	1.27929	26.4723	31.5902			
Random Effects				2.75416	20.2663	37.7962			

ANOVA analysis

Digital Literacy

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1369.450	3	456.483	4.358	.008
Within Groups	6284.488	60	104.741		
Total	7653.938	63			

Digital Literacy**Tukey B**

QUALIFICATION	N	Subset for alpha = 0.05	
		1	2
MATRICULATION	21	25.2857	
UG	10	26.0000	
DIPLOMA	17	28.1176	28.1176
PG AND MORE	16		36.8125

Source: primary data

Means for groups in homogeneous subsets are displayed.

- Uses H.M(Harmonic Mean) Sample Size = 14.873.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Interpretation:

From the above analysis it is found that there is no S.G.N (significant) difference between academic qualification and digital literacy among the kudumbashree members but the mean explains that digital literacy have a significant relation on highly qualified members, those completed PG and above.

Findings

- Majority employed sectors uses digital product than homemakers and not dependents. The study helps to find out that employed and self independent women are getting digital enhancement.
- Majority of the respondents are home makers and are unaware about the digital service. The charts and bar diagram explains that the homemakers are unaware about new technologies.
- It is also found that most of the employed women are actively using digital products and services for their transactions for their daily needs.
- It is also found that employed women can meet their daily requirements in ease than homemakers and others.

The mean of employed women shows that there is a (S.G.N) significant positive difference in digital usage.

- The null hypothesis is accepted here, there is no S.G.N (significant) relationship between the employed and unemployed women in digital usage of products.
- The null hypothesis is accepted here, there is no S.G.N (significant) relationship between academic education and digital literacy.
- Majority of the respondents academic qualification belongs to matriculation.
- It is found that the mean of academic qualification ranging PG and above are digitally literate.
- Mainly Digital literacy is lacking in those education groups mainly belonging in matriculation and below. So it is very clear that education and digital literacy are dependent.

Recommendation and suggestion

- Kudumbashree unit must take necessary initiatives to bring digital experts to teach the heads in each units about the various digital service.
- Cooperative as well as nationalized bank must introduce programmes to educate about their online bank apps among SHGs for secured transactions.
- Monthly meeting must be formed among the units to build digital divide among the members.
- Employed and qualified women from each units can be selected by the heads to impart digital workshops within their groups.
- Providing some digital skill training programmes can develop empowerment and economic growth.
- With the analysis is found even the educated people are unaware about digital service, so homemakers need

to be include in entrepreneurship activities, since illiterate people who works are aware of the technology.

7. Annova analysis suggests and recommends for women empowerment is the key to digital upgradation as well for all economical growth and stability of our nation.

Conclusion

By equipping SHG members with necessary knowledge and skills, they can confidently leverage digital financial products and payment systems to enhance their businesses, manage finances effectively and participate fully in the digital economy. This in turn contribute to the overall development and sustainability of SHGs and their communities. The digital literacy level of SHG members recognize the convenience and efficiency of digital payments but they still find some trust issues and lack of technology access and insufficient payment platforms.

Scope for Further Research

Digital literacy among kudumbashree SHG members is extensive and have many aspects and it is multifaceted. Further studies can focus on comparing digital literacy levels across different regions or rural-urban divides to identify disparities and contributing factors. Longitudinal studies the long-term socio-economic impact of digital skills on SHG members and their operations. Intersectional analyses might explore how age, education, caste, and economic status influence digital adoption. They can also examine the effectiveness of specific digital tools like mobile banking, e-commerce or e-governance platforms and their role in fostering entrepreneurship and income generation. They can also bring out policy initiatives and training programmes which could highlight gaps and suggest improvements, while exploring technological innovations such as AI- driven solutions and local-language platforms, could enhance accessibility.

Reference

1. Prabhala, K., & Rao, T. U. (2019). A review on digitalization of SHG with mobile usage in India. *Confernece at Acharya Nagarjuna University, Department of Sociology and Social Work*, 5(3), 1798-1802.
2. Priyalatha S. (2024). Effect of State of Fabric on Wicking Characteristics of Knitted Fabrics Suitable for Sports Applications. *Archives for Technical Sciences*, 2(31), 1-8. <https://doi.org/10.70102/afts.2024.1631.001>
3. Tejwani, S. (2018). Vocational training and financial literacy: Blending digitization process of self help groups in India.
4. Udayakumar, R., Chowdary, P. B. K., Devi, T., & Sugumar, R. (2023). Integrated SVM-FFNN for Fraud Detection in Banking Financial Transactions. *Journal of Internet Services and Information Security*, 13(3), 12-25.
5. Mishra, D. K., Malik, S., Chitnis, A., Paul, D., & Dash, S. S. (2021). Factors contributing to financial literacy and financial inclusion among women in Indian SHGs. *Universal Journal of Accounting and Finance*, 9(4), 810-819.
6. Nasirian, M., & Tahami, S. M. B. (2019). Development of human resource training coaching models and its effect on the performance of the Islamic Republic of Iran Broadcasting. *International Academic Journal of Organizational Behavior and Human Resource Management*, 6(1), 58-68. <https://doi.org/10.9756/IAJOBHRM/V6I1/1910007>
7. Raut, V. D., Raut, D. D., & Deshpande, S. K. DIGITAL EMPOWERMENT OF RURAL PEOPLE.
8. Ubid, B. K. (2022). Analyzing and Measuring the Relationship between Public Spending and the Parallel Exchange Rate in the Iraqi Economy for the Period 2004-2022. *International Academic Journal of Accounting and Financial Management*, 9(1), 01-14. <https://doi.org/10.9756/IAJAFM/V9I1/IAJAFM0901>
9. Malhotra, N. (2024). Digitisation of the Self-Help Groups. In *Sustainable Pathways: The Role of Indigenous Tribes and Native Practices in India's Economic Model* (pp. 161-178). Emerald Publishing Limited
10. Jaiswal, H., & Pradhan, S. (2023). The Economic Significance of Ecosystem Services in Urban Areas for Developing Nations. *Aquatic Ecosystems and Environmental Frontiers*, 1(1), 1-5.
11. Kadaba, D. M. K., Aithal, P. S., & KRS, S. (2023). Impact of Digital Financial Inclusion (DFI) initiatives on the self-help group: For sustainable development. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 8(4), 20-39.

12. Verma, M., & Banerjee, N. (2024). A Review of Sustainable Development and Women's Empowerment. *International Journal of SDG's Prospects and Breakthroughs*, 2(4), 13-17.
- Vyas, V., & Jain, P. (2021). Role of digital economy and technology adoption for financial inclusion in India. *Indian Growth and Development Review*, 14(3), 302-324.
13. Subramanian, M. V., & Malhotra, R. (2023). Bioinspired Filtration Systems for Heavy Metal Removal from Industrial Effluents. *Engineering Perspectives in Filtration and Separation*, 1(1), 1-4.
14. Das, R. K., Patra, M. R., & Misra, H. (2013, October). E-governance and digital inclusion: Creating smart rural women in India. In *Proceedings of the 7th International Conference on theory and practice of electronic governance* (pp. 144-149).
15. Menon, K., & Patil, S. (2023). Assessing Terminology Gaps in Global Health Guidelines: A WHO Terminology Audit. *Global Journal of Medical Terminology Research and Informatics*, 1(1), 5-8.
16. Nayyar, T., Aggarwal, S., Khatter, D., Kumar, K., Goswami, S., & Saini, L. (2019). Opportunities and challenges in digital literacy: Assessing the impact of digital literacy training for empowering urban poor women. *University of Delhi*.
17. Khan, F., Siddiqui, M. A., & Imtiaz, S. (2022). Role of financial literacy in achieving financial inclusion: A review, synthesis and research agenda. *Cogent Business & Management*, 9(1), 2034236.)
18. Aithal, P. S. (2024). Financial Literacy for Economic Empowerment: Microfinance Initiatives in Indian SHGs. *Poornaprajna International Journal of Teaching & Research Case Studies (PIJTRCS)*, 1(1), 80-91.
19. Shen, Y., Hueng, C. J., & Hu, W. (2020). Using digital technology to improve financial inclusion in China. *Applied Economics Letters*, 27(1), 30-34.
20. Khairnar, P. D. A. P., Sonawane, K. D., & Meshram, A. S. DIGITAL LITERACY AND WOMEN EMPOWERMENT.

