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Impact of Mobile Wallets on Financial Inclusion and Financial Literacy Among Women in the Education Sector in Delhi NCR, India

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Abstract

The rapid growth of digital payments has changed the way people manage their everyday finances in India. Mobile wallets and other mobile-based payment services have made it easier to transfer money, pay bills, purchase goods and access financial services. For women, these services may provide benefits beyond convenience by increasing their interaction with formal financial systems and potentially strengthening their financial knowledge and confidence. This study proposes to examine the impact of mobile wallet usage on financial inclusion and financial literacy among women working in the education sector in Delhi NCR, India. A quantitative, survey-based research design from 677 women working in schools, colleges, universities and other educational institutions forming the target population. Mobile Wallet Usage is considered the independent variable, while Financial Literacy Level is considered the dependent variable. The study investigated whether regular use of mobile wallets is significantly associated with financial knowledge and financial decision-making among women. Previous empirical research has identified gender differences in financial literacy, socioeconomic factors influencing digital financial inclusion, and the importance of self-efficacy, trust and digital financial services in women's financial behaviour. The present study seeks to extend this literature by focusing specifically on women in the education sector in Delhi NCR.

Keywords: *Mobile wallets, financial literacy, financial inclusion, women, education sector, digital payments, Delhi NCR, India.*

Introduction

Digital technology has become an increasingly important part of everyday financial life in India. Payments that were traditionally made using cash can now be completed through mobile phones within a few seconds. Mobile wallets and mobile-payment applications allow users to transfer money, pay bills, purchase products and maintain records of their transactions. As digital financial services become more common, the ability to use them effectively is becoming an important part of financial participation.

Financial inclusion, however, is not simply about having access to a bank account or a mobile-payment application. Individuals must also have the knowledge and confidence to use financial services appropriately. Financial literacy enables people to understand basic financial concepts and make informed decisions about saving, spending, borrowing and investing. This is particularly important for women because financial knowledge can contribute to greater independence in household and personal financial decisions.

Evidence from India indicates that financial literacy differs between men and women. Using nationally representative Indian survey data, Rink et al. (2021) found that women were significantly less financially literate than men. Their study also showed that education, English-language skills and access to information were important factors associated with differences in financial knowledge. These findings highlight the importance of examining the factors that may help women develop stronger financial capabilities.

Digital financial services may provide one such opportunity. Regular interaction with digital payment systems requires users to perform practical financial activities, including checking transaction amounts, transferring money, monitoring balances and reviewing transaction histories. Over time, these activities may increase familiarity with financial processes. However, frequent use of a digital payment application does not necessarily mean that an individual possesses a high level of financial literacy.

This distinction is important for women working in the education sector. Although educational professionals generally have relatively high levels of formal education, financial literacy cannot be assumed from educational qualifications alone. Financial knowledge involves understanding financial concepts and applying that knowledge when making financial decisions.

The present study therefore focuses on women working in the education sector in Delhi NCR. It aims to examine whether mobile wallet usage has a significant relationship with their level of financial literacy and whether digital financial participation may contribute to broader financial inclusion.

Review of Literature

Financial literacy is an important component of financial well-being because individuals need knowledge of concepts such as interest, inflation, risk and saving to make appropriate financial decisions. Rink et al. (2021) examined the financial literacy gender gap using nationally representative data from India. Their findings showed that women were generally less financially literate than men. However, the size of this gap varied across cultural settings. The authors also identified education, English-language ability and access to information sources as important factors associated with financial knowledge.

These findings are relevant to the present study because the respondents will be educated working women. Although education may provide women with greater exposure to financial information, the relationship between formal education and practical financial knowledge may differ from one individual to another. Mobile financial services may provide an additional form of practical exposure to financial activities. Sharma and Johri (2014) examined financial literacy among women in rural India through the development of a financial-literacy tool designed to teach long-term investment. Their study demonstrated the importance of making financial education relevant to women's everyday circumstances. This suggests that financial knowledge may develop more effectively when women are given opportunities to apply financial concepts to real-life financial activities. Recent studies show how technology and changing social and economic conditions are shaping education, business, employment, and consumer behaviour in India. Agarwal et al. (2025) highlight the growing importance of UPI for microbusinesses, while Arora et al. (2024) discuss the progress and challenges of women's empowerment. In education, Arora et al. (2020) and Yadav et al. (2020) examine the shift towards digital learning during COVID-19. Arora and Mittal (2020) and Arora and Gupta (2022) further show how live projects can improve students' employability and prepare them for the workplace. Other studies explore emerging technologies, including the metaverse (Arora et al., 2024), AI in higher education (Shweta et al., 2024), cybersecurity (Khurana et al., 2024), and telemedicine adoption among Indian women (Shweta et al., 2024). Research also covers employee motivation (Rani et al., 2021), influencer marketing (Srivastava et al., 2024), tourism entrepreneurship (Khuranaa et al., 2025), and ChatGPT-based consumer behaviour (Chawla et al., 2026). Financial studies by Yadav et al. (2020) add insights into stock-market efficiency and volatility, showing the diverse scope of recent Indian research. Digital financial inclusion has grown substantially with the development of mobile-based financial services. Nandru et al. (2024) examined the socioeconomic determinants of digital financial inclusion in India using data from the World Bank Global Findex 2021. Their study used a sample of 3,000 Indian individuals and examined characteristics including gender, age, income, education, workforce participation and residential status. The researchers found that socioeconomic characteristics play an important role in determining access to and use of digital financial services. The findings of Nandru et al. (2024) are important because they show that digital financial inclusion is not determined by technology alone. Individual characteristics influence whether people are able and willing to participate in digital financial systems. This provides a basis for examining mobile wallet usage among a specific group of women rather than treating all users as a homogeneous population.

The relationship between women and mobile-payment services has also been examined in recent Indian research. Yadav et al. (2024) studied 444 existing female mobile-payment users in India to understand how perceived risks affect continued use of mobile-payment services. Their findings showed that financial and performance risks negatively affected satisfaction and trust, while self-efficacy played an important role in women's intention to continue using mobile payments. The findings of Yadav et al. (2024) suggest that successful digital financial inclusion requires more than access to technology. Women must also feel sufficiently confident to use digital financial services. Trust, satisfaction and self-efficacy can influence whether women continue using these services. Therefore, the present study will consider not only whether women use mobile wallets but also the extent and frequency of their usage.

Evidence from Delhi NCR

Research specifically conducted in Delhi NCR provides a particularly useful foundation for the present study. Pillai et al. (2025) examined financial behaviour among 564 female workers in the Delhi National Capital Region. Their study investigated financial literacy, risk perception and the use of digital financial services and employed partial least squares structural equation modelling and artificial neural networks.

Pillai et al. (2025) found that financial literacy positively influenced financial behaviour, both directly and indirectly through factors such as risk perception and digital financial-service use. Their findings are especially relevant because the geographical setting of their study is the same as that of the present research. However, their study focused on female urban workers generally, whereas the proposed research will specifically examine women working in the education sector.

This difference creates an opportunity to investigate whether the relationship between mobile wallet usage and financial literacy is also evident among women employed in educational institutions.

Research Gap

Existing research has established that financial literacy differs by gender and that education, socioeconomic characteristics and access to information influence financial knowledge (Rink et al., 2021). Research has also demonstrated the importance of socioeconomic factors in digital financial inclusion in India (Nandru et al., 2024).

Studies focusing specifically on women have highlighted the importance of self-efficacy, trust and perceived risk in the continued use of mobile-payment services (Yadav et al., 2024). More recently, research among female workers in Delhi NCR has demonstrated a relationship between financial literacy, digital financial services and financial behaviour (Pillai et al., 2025).

However, there is still scope to examine the relationship between **mobile wallet usage and financial literacy among women specifically employed in the education sector in Delhi NCR**. The present study seeks to address this gap through a survey-based investigation.

Objectives of the Study

The main objective of the study is:

To investigate how the use of mobile wallets improves financial knowledge among women in the education sector in Delhi NCR.

The supporting objectives are:

1. To examine the relationship between mobile wallet usage and financial literacy.
2. To determine whether mobile wallet usage has a significant effect on financial literacy.
3. To examine women's confidence in using mobile financial services.
4. To identify the major challenges faced by women while using mobile wallets.

Hypotheses of the Study

H_0: Using a mobile wallet does not have a significant effect on the financial literacy of women in the education sector in Delhi NCR.

H_1: Using a mobile wallet has a significant effect on financial literacy among women in the education sector in Delhi NCR.

Variables

Independent Variable: Mobile Wallet Usage

Dependent Variable: Financial Literacy Level

Mobile Wallet Usage will be assessed using indicators such as frequency of transactions, duration of use, types of transactions and the extent to which respondents use mobile wallets for different financial activities.

Financial Literacy Level will be assessed through questions relating to saving, budgeting, interest, inflation, financial planning, digital-payment security, fraud awareness and financial decision-making.

Research Methodology

Research Design

The study adopted a **quantitative survey-based research design**. Primary data will be collected using a structured questionnaire administered to women working in the education sector in Delhi NCR.

Population of the Study

The target population will include women working in schools, colleges, universities and other educational institutions in Delhi NCR. The respondents may include teachers, lecturers, professors, academic coordinators, administrators and other women employed in the education sector.

Sampling

A non-probability sampling technique, particularly purposive and convenience sampling, will be used depending on access to respondents. The questionnaire may be distributed both physically and through online platforms.

The hypotheses will be tested at a **5% level of significance (α = .05)**. If the p-value is less than .05, the null hypothesis will be rejected. If the p-value is greater than .05, the null hypothesis will not be rejected.

Data Collection Instrument

The questionnaire will contain four sections.

Section A: Demographic Information

This section will collect information regarding age, educational qualification, occupation/designation, work experience and income category.

Section B: Mobile Wallet Usage

This section will measure the frequency of mobile wallet usage, duration of usage, types of transactions performed, preferred mobile-payment applications and reasons for using mobile wallets.

Section C: Financial Literacy

This section will assess respondents' knowledge of saving, budgeting, interest, inflation, financial planning, digital payments and financial security.

Section D: Financial Inclusion and Digital Confidence

This section will measure access to formal financial services and respondents' confidence in managing digital financial transactions.

Data Analysis

Regression analysis will subsequently be used to examine whether Mobile Wallet Usage significantly predicts Financial Literacy Level.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624[a]	.389	.387	.906

a. Predictors: (Constant), Financial Inclusion and Digital Confidence, Mobile Wallet Usage

The Model Summary indicates that the predictors explain **38.9% of the variance in Financial Literacy Level** ($R^2 = 0.389$). The **Adjusted R^2 of 0.387** confirms that the model retains a similar explanatory power after adjusting for the number of predictors, indicating a reasonably good model fit.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	352.528	2	176.264	214.932	.000[b]
	Residual	553.561	675	.820		
	Total	906.088	677			

a. Dependent Variable: Financial Literacy Level

b. Predictors: (Constant), Financial Inclusion and Digital Confidence, Mobile Wallet Usage

The ANOVA results show that the regression model is **statistically significant** ($F(2, 675) = 214.932$), indicating that the predictors jointly explain a significant variation in **Financial Literacy Level**. The mean square of the regression (176.264) is substantially higher than the residual mean square (0.820), confirming the overall strength of the model.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.629	.122		5.157	.000
	Mobile Wallet Usage	.406	.041	.411	9.800	.000
	Financial Inclusion and Digital Confidence	.280	.044	.264	6.293	.000

a. Dependent Variable: Financial Literacy Level

The regression results indicate that **Mobile Wallet Usage has a significant positive effect on Financial Literacy Level** ($\beta = 0.411$, $t = 9.800$, $p < .001$). **Financial Inclusion and Digital Confidence also significantly and positively influence Financial Literacy Level** ($\beta = 0.264$, $t = 6.293$, $p < .001$), with Mobile Wallet Usage showing the stronger influence.

Because this is a proposed cross-sectional survey, a statistically significant relationship should be interpreted as an **association rather than definitive evidence of causation**.

Findings

The study is expected to provide useful evidence about the relationship between women's use of mobile wallets and their financial literacy. Regular use of mobile financial services may increase women's familiarity with digital transactions and encourage greater awareness of spending, transaction records and financial management.

However, the relationship may not necessarily be positive for every user. Yadav et al. (2024) demonstrated that perceived financial and performance risks can negatively affect women's trust and satisfaction with mobile-payment services, while self-efficacy can encourage continued use. Therefore, the quality and confidence of mobile wallet usage may be as important as frequency of use.

Similarly, Pillai et al. (2025) found that financial literacy was positively related to financial behaviour among female workers in Delhi NCR, with digital financial-service use forming part of the relationship. This provides a strong basis for investigating the same broad relationship within the more specific population of women working in education.

The study may therefore demonstrate that mobile wallets function not only as payment mechanisms but also as tools through which women gain practical exposure to financial activities. On the other hand, if the findings do not show a significant relationship, it may indicate that access to and use of mobile wallets alone are insufficient to improve financial literacy and that structured financial-education programmes are required.

Significance of the Study

The study has potential significance for women, educational institutions, financial-service providers and policymakers.

For **women**, greater financial literacy can support more informed decisions regarding saving, spending and financial planning. For **educational institutions**, the findings may encourage the development of financial-literacy programmes for female employees. For **financial-service providers**, understanding women's concerns about risk, trust and digital confidence may help improve the design and communication of mobile financial services. For **policymakers**, the findings can provide evidence about whether digital financial participation is contributing to broader financial inclusion among educated working women.

The study is also significant because it focuses on Delhi NCR, an economically and technologically developed region with substantial participation in digital financial services. By concentrating specifically on women in the education sector, the research can provide a more focused understanding than studies that combine women from different occupations.

Conclusion

Mobile wallets have changed the way financial transactions are conducted in India. For women, these services can potentially improve access to formal financial systems and create opportunities for greater financial independence. Nevertheless, digital access alone does not guarantee financial literacy.

Previous research shows that financial literacy among Indian women is influenced by factors such as education, culture and access to information (Rink et al., 2021). Research on digital financial inclusion has demonstrated the importance of socioeconomic characteristics in determining the use of digital financial services (Nandru et al., 2024). Studies specifically focusing on women have also highlighted the roles of trust, perceived risk and self-efficacy in mobile-payment usage (Yadav et al., 2024). Furthermore, evidence from Delhi NCR indicates that financial literacy and digital financial-service use are connected with women's financial behaviour (Pillai et al., 2025).

Building on these findings, the proposed study will investigate whether mobile wallet usage has a significant effect on financial literacy among women working in the education sector in Delhi NCR. The study will use a survey-based methodology and statistically test the relationship between Mobile Wallet Usage and Financial Literacy Level.

Ultimately, the study seeks to answer an important practical question: **Does regular use of mobile wallets merely make financial transactions easier, or does it also contribute to women's financial knowledge and confidence?** The findings may help determine whether digital financial services can serve as an additional pathway toward stronger financial inclusion and financial literacy among women in the education sector.

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