

**INFLUENCE OF FINANCIAL ATTITUDE AND FINANCIAL
SOCIALIZATION ON WOMEN’S PERSONAL FINANCIAL
MANAGEMENT BEHAVIOUR IN PUNJAB: THE
MEDIATING ROLE OF DIGITAL FINANCIAL LITERACY**

Thesis Submitted for the Award of the Degree of

DOCTOR OF PHILOSOPHY

in

Commerce

By

Kuldip Kaur

Registration Number: 42000554

Supervised By

Dr. Nancy Sahni (11921)

Mittal School of Business (Associate Professor and Head of Accounting and Business Law)

Lovely Professional University, Phagwara, Punjab.

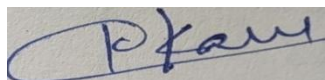


LOVELY PROFESSIONAL UNIVERSITY, PUNJAB

2025

DECLARATION

I, hereby declared that the presented work in the thesis entitled “Influence of Financial Attitude and Financial Socialization on Women’s Personal Financial Management Behavior in Punjab: The Mediating Role of Digital Financial Literacy” in fulfilment of the degree of Doctor of Philosophy (Ph.D.) is the outcome of research work carried out by me under the supervision of Dr. Nancy Sahni, HOD & Associate Professor, Mittal School of Business, Lovely Professional University, Punjab, India. In keeping with the general practice of reporting scientific observations, due acknowledgments have been made whenever the work described here has been based on the findings of another investigator. This work has not been submitted in part or full to any other university or institute for the award of any degree.



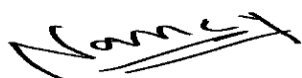
Kuldeep Kaur

Registration No.: 42000554

Mittal School of Business,
Lovely Professional University,
Punjab, India

CERTIFICATE

This is to certify that the work reported in the Ph.D. thesis entitled “Influence of Financial Attitude and Financial Socialization on Women’s Personal Financial Management Behavior in Punjab: The Mediating Role of Digital Financial Literacy” submitted in fulfilment of the requirement for the award of Ph.D. degree in the Department of Commerce, Mittal School of Business, Lovely Professional University, Punjab, India, is a research work carried out by Kuldip Kaur, Registration No. 42000554, is a bonafide record of her original work carried out under my guidance and that no part of the thesis has been submitted for any other degree, diploma or equivalent course.



Dr. Nancy Sahni

HOD, Associate Professor

Mittal School of Business,

Lovely Professional University, Phagwara

Abstract

The transformation of Indian society brings advancements in almost all facets of life especially technology, education and financial decisions. The digital technology revolution transformed the financial products into digital financial products which makes the financial decision more complex. Earlier people learn financial literacy skills to make themselves aware about financial products and services but now there is a need to learn digital financial literacy skills in place of only financial literacy skills. The previous studies shown that there is a gender gap in financial literacy (Atkinson & Messy 2012; OECD 2013) as males are more financially literate than women as they are ignorant and less aware about financial matters and still dependent upon male members for their financial decisions. There is a need of personal financial management by women so that they can take their important financial decisions on their own. Moreover, personal financial management also contributes towards women empowerment and their active participation in each and every economic activity to improve their financial well-being (OECD/INFE 2013). They become more financially independent by acquiring digital financial literacy skills to use various digital platforms for money transfers, shopping, banking and many other purposes which gives them more confidence to manage and handle their finances (Klapper & Singer 2014). Financial literacy is a global concern as it varies from country to country. The survey highlight that India has 27% financial literacy as compared to Europe, US and Australia which is around 55% to 75% (NCFE Financial Literacy Survey, 2019). Therefore, it is a matter of great concern as financially literate individuals are able to make informed financial decisions and manage their finances more efficiently.

Women are the greater contributor in economy as they contribute about 50% share of the world economy. They play multiple roles from house core activities to perform their assigned jobs and many women in rural areas do farming and allied activities and contribute equally towards earning of family. They do their personal financial management but most of the time their financial decisions are influenced by their family members as they show fear and lack of confidence in taking financial decisions on their own. There is a big gender financial literacy gap as per the survey of (UNESCO 2022) which showed that Female literacy rate in India is 70.3% as against 84.7% male literacy rate. The present study is conducted on the women living in Punjab. The female literacy in Punjab as shown by survey report of (www.esopb.govt.in 2011) is 82,71,081 which is 70.7% as against male literates 1,04,36,056 which is about 80.4%. This showed a big gender gap in financial literacy in India including Punjab. There is a need to develop personal financial management behaviour among women so that they can build their

financial attitude and socialize themselves to make their informed choices. The present study is conducted in Punjab state covering 22 districts of Punjab by taken 546 women working and non-working as sample population. This study is a descriptive and cross- sectional study. The study instrument questionnaire is used to collect responses through purposive sampling technique which is a non-probability sampling technique. The current study aimed to examine the influence of financial attitude and financial socialisation on personal financial management behaviour of women in Punjab and further, the study aimed to examine the mediating effect of digital financial literacy on the relationship among financial attitude, financial socialisation and personal financial management behaviour.

Structural Equation Modelling (SEM) was applied using Smart PLS 4.0 for analysis and to study the structural relationships between financial attitude, financial socialisation and personal financial management behaviour and to study the mediation effect of digital financial literacy on the relationships among financial attitude, financial socialisation and personal financial management behaviour. PLS SEM comprises of both measurement model and structural model assessment. The measurement model assesses the reliability and validity of the measurement instruments used to operationalize the latent constructs in the theoretical framework. This involves examining factor loadings, composite reliability, convergent validity, and discriminant validity of the measurement model. The structural model, on the other hand, examined the relationships between latent constructs and tests the overall fit of the proposed theoretical model to the observed data. This includes assessing the significance and strength of path coefficients, as well as evaluating the overall goodness-of-fit of the structural model using fit indices such as chi-square, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR).

The findings revealed that financial attitude has a direct and significant influence on personal financial management behaviour of women; financial socialisation has a direct and significant influence on personal financial management behaviour; digital financial literacy has a significant influence on personal financial management behaviour; financial attitude has a direct influence on digital financial literacy; financial socialisation has a direct influence on digital financial literacy; financial attitude and financial socialisation influence each other and digital financial literacy mediates the relationship among financial attitude, financial socialisation and personal financial management behaviour. Further, The R-square value for Personal Financial Management Behaviour (PFMB) is 0.609, indicating that the independent

variables in the model can explain 60.9% of the variance in PFMB. The adjusted R-square value of 0.607 further refines this estimate, accounting for the number of predictors in the model, and suggests that even with adjustments for potential overfitting, 60.7% of the variability in PFMB is still explained by the model. Both values reflect a strong model fit, indicating that the predictors used are highly relevant in explaining variations in PFMB.

Finally, IPMA analysis showed that more focus need to be given on Financial Socialization as it is shown in the lower quadrant. Its importance is significant but performance may highlight the gaps in the performance of financial socialisation practices within the community which highlighted that women's financial decisions are more influenced by their family, peer groups and social media. There is a need to frame more financial socialisation strategies to spread financial awareness among women so that they can acquire more financial skills and knowledge through different financial socialisation techniques. Financial Attitude holds the lowest importance but has average performance. There is a need to increase the importance of financial attitude by imparting financial education to women to develop their financial attitude as women with a positive and proactive financial attitude are more likely to manage their finances effectively. Digital Financial Literacy has a relatively lower importance but its performance is very high which is critical in today's digital age, where the ability to navigate online financial platforms can greatly enhance financial management. The performance of Digital Financial Literacy pointing to the need for targeted interventions to improve women's digital financial skills through awareness campaigns even in villages and backward areas and also there is need to impart digital financial education to women who work at lower level and to households and also to make them aware about various digital financial apps, digital financial frauds and how to protect themselves from digital financial frauds, the procedure and authorities where to file a complaint in case of digital financial frauds. Overall, the IPMA suggests that while Financial Socialisation is the most critical factor, there is a need to enhance the importance of both Financial Attitude and Digital Financial Literacy to improve Personal Financial Management Behaviour among women in Punjab.

The results of the Descriptive analysis showed a significant association among different demographic variables and financial management of women. The analysis showed a strong correlation between income levels, education and financial attitude as higher-paid and better-educated women typically have more optimistic financial attitudes, which are linked to more methodical and calculated personal financial management techniques. Further, the analysis showed that marital status has significant effect on income levels of women as higher incomes

are more prevalent among married women than unmarried women. Moreover, the analysis showed no significant effect of type of family on income levels of women rather it has a strong association with education attainment of women as the analysis showed that women in joint families get more opportunities for higher education as compared to women belong to nuclear families due to better time management, family interaction & relationships and financial support of joint family. These financial socialisation skills acquired through family further, improve their personal financial management behaviour.

The findings of the thesis open up several avenues for future research on personal financial management behaviour among women in Punjab. Future studies could expand the sample size and demographic diversity to include a broader range of participants from different regions, age groups, and socioeconomic backgrounds. Another area for future research could involve a deeper exploration of the cultural, social, and psychological factors influencing financial behaviour among women in Punjab. Understanding how traditional norms, family dynamics, and societal expectations impact financial decision-making could provide valuable insights for developing targeted financial education and empowerment programs. Future studies could also investigate the role of informal financial systems, such as community savings groups or microfinance institutions, in shaping the financial behaviour of women, particularly in rural areas where access to formal financial services may be limited. Moreover, there is potential to explore the impact of technological advancements, such as digital banking and mobile payment systems, on the financial management practices of women in Punjab.

Keywords: Financial Attitude, Financial Socialisation, Digital Financial Literacy, Personal Financial Management Behaviour, Women, Punjab

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Acknowledgement

The work is accomplished with the guidance and kind support of the thesis Chair, my guide Dr. Nancy Sahni, HOD & Associate Professor, Mittal School of Business, Lovely Professional University, who has helped me during the research work. It is a matter of great honour and lifetime achievement. I would like to thank the Research and Development branch of Lovely Professional University, for the assistance and kind co-operation in administrative queries, whenever and wherever required during the study. No words can measure my gratitude to the Panel Members who evaluated and advised during the evaluations of my work at Mittal School of Business, LPU. My special thanks to Dr. Rekha Venugopal and Dr. Muzammil Rehman for their continuous support and guidance throughout my journey of research. I am also thankful to research scholars who guide me whenever required. The blessings of my parents and my parent in laws have always been driving force to me. My husband S/ Baljit Singh remains a constant support and strength to me. His faith in my capability of working has always pushed me to keep moving ahead. Special thanks to my son Damanpreet Singh and my daughter Sehajpreet Kaur for always being my strength.

Above all, I thank the Almighty for giving me the power and strength to complete this journey.

(Kuldip Kaur)

Chapter 1

1.1 Introduction

The upsurge in the Indian economy during the recent years due to covid pandemic transform the financial system of country from physical to digital and bring the innovated and advanced financial products in the market which makes the financial choices more complex. Further, people also face financial crunch during this period due to sudden job losses, salary cuts and lockdowns. No doubt the people have saving habits but they realize that how financial management could help to save their future by providing security of survival from this financial crisis. Furthermore, a number of socioeconomic shifts have also taken place in society recently, such as the transition from joint families to nuclear, international migration, the entry of women into the workforce, improvements in living standards, and changes in people's personal financial habits brought about by technological advancements (Xu and Zia 2012). People frequently struggle with money management since earning money alone is insufficient; instead, prudent financial planning is crucial for investing and saving money; otherwise, poor financial choices could have dire repercussions (Estelami, H. 2014). Little financial understanding restricts the choices of individuals to debt and less expensive options, as compared to those with higher financial knowledge who are more at ease using costly borrowing plans to enhance their own financial decisions and achieve better financial results (Banerjee, Kumar, and Philip 2017). One major issue in finance that affects both financial and personal satisfaction and well-being is personal financial behaviour (Riitsalu et al., 2018). Financial management helps to plan finances to meet home budget, unexpected expenditures, and stress-free retirement planning (Copur & Gutter 2019; Lee et al 2020). There are differences in financial literacy level around the world which affect financial management decision. As per S&P (Standards & Poor) global financial literacy survey, undertaken in more than 140 nations, the worldwide financial literacy rates of established and emerging economies differ significantly.

Table 1.1: Global Average Financial Literacy Score

Advanced and Emerging Economies	Average Financial Literacy
Canada, France, Germany, Italy, Japan, UK, USA	55% (varies widely 37% in Italy and 68% in Canada)
Brazil, Russia, India, China, South Africa	28% (24% in India and 42% in South Africa)

Source: S&P Global Fin Lit Survey (Klapper et al 2015)

The above data shows that in advanced economies %age of financial literacy of adult on an average is 55% which is highest in Canada 68% comparative to Italy 37%. Similarly in

emerging economies average %age of adult financial literacy is 28% which is least in India 24% as compared to South Africa 42%. These figure shows a huge disparity of financial literacy level among countries at global level. Moreover, there is also difference in financial literacy as per age in these economies. The following table 1.2 shows this difference:

Table 1.2: Financial Literacy as per Age

Economies	Age	Financial Literacy
Advanced Economies	15-36	56%
	36-50	63%
	50-65	50%
	65 & above	40%
Emerging Economies	15-36	32%
	36-50	25%
	50-65	20%
	65& above	17%

Source: S&P Global Fin Lit Survey (Klapper et al 2015)

The above table showed that in major advanced economies financial literacy is affected by age as youngsters with age 36-50 are more financially literate as compared to youngers below 36 and the financial literacy is lowest among the old age people above 65 years of age than the people between 50-65 years of age but in major emerging economies youngers between age 15-36 are more financially literate comparative to all other people from age 36 & above. This shows that age has a greater effect on financial literacy of individual. Further, OECD conduct financial literacy survey in G20 countries and the scores are clearly shown in the following table:

Table 1.3: G20/OECD INFE Financial Literacy Score (G20 Countries)

Countries	Financial Literacy Score (Max Score: 21)
France	14.9
Canada	14.6
People's Republic of China	14.1
Norway	14.0
Republic of Korea	13.9
Germany	13.8

Indonesia	13.4
United Kingdom	13.1
Turkey	12.5
Russian Federation	12.2
Brazil	12.1
Mexico	12.1
India	11.9
Argentina	11.4
Italy	11.0
Saudi Arabia	9.6

Source: <https://www.fincap.org.uk> › insights › g20-oecd-infe-report 2017.

The above financial literacy score of G20 countries indicates that India earned less than 12 points on the adult financial literacy scale. In contrast, other nations scored higher than 14 points. This score needs to be raised to match the financial literacy at global level. There is also difference of financial literacy in socio-economic settings as shown in the following table:

Table 1.4: Socio-Economic Distribution of FL

Socio-economic Categories	FL as per NISM Report 2015	FL as per NCFE Report 2019
Urban	25%	33%
Rural	15%	24%
Male	18%	29%
Female	15%	21%
Age Group	25-49 years	18-29 years
Overall Financial Literacy	22%	27%

Source: <https://ncfe.org.in> › NISM Final-Report-All-India

<https://www.ncaer.org> › NCFE-2019_Final_Report

The above table indicates the financial literacy reports of NISM (National Institute of Security Market 2015) and NCFE (National Council for Financial Education 2019). The findings of final report of NISM state that the overall financial literacy of India is 22% based on financial attitude, behavior and financial knowledge whereas NCFE Report on financial literacy, shows only 27% of people are financially literate. The above table also cover the socio-economic distribution of FL which clearly indicated that financial literacy is more in urban areas than

rural areas, there is gender differences in financial literacy as males are more financially literate as compare to women and in 2015 highest financial literacy is at age 25-49 years but in 2019 financial literacy started in early years of age 18-29 years. The above data shows the improvement in financial literacy level from 2015 to 2019, but still there is not much improvement and more efforts need to be made to improve financial literacy.

Acquiring financial literacy as a life skill has become indispensable, particularly for individuals who maintain bank accounts and are involved in savings, investments, payments, and credit-related activities. At a broader global level, financial literacy serves as a crucial tool to empower individuals and societies in making sound financial decisions, thereby enhancing and sustaining financial well-being (Demirguc Kunt et al 2015; OECD, 2020). These financial literacy abilities encompass the financial behaviour, attitude, and understanding required for prudent financial management. Additionally, the intricacy of financial assets brought on by Covid and the rise in digital financial crime and scams necessitated that people acquire these digital and financial literacy abilities. According to the OECD's 2023 research, which was based on a survey that was performed in 39 different countries and economies, adults may not have the necessary knowledge and proficiency with digital financial literacy and fundamental financial abilities to make wise financial decisions.

Table 1.5: Financial Literacy Skills among adults

Financial Literacy Skills	Awareness of skills	Application
Financial Knowledge	84%	63%
Financial Attitude	77%	42%
Financial Behavior	70%	50%
Digital Financial Knowledge	41%	38%
Digital Financial Frauds	103%	86%

Source: OECD/INFE (2023), *International Survey of Adult Financial Literacy*.

he above data indicates that individuals do not adequately utilize their financial skills. In addition to traditional financial literacy, it has become imperative to acquire digital financial literacy, especially in the post-Covid era marked by the rapid digitalization of financial services. However, adults often fail to effectively apply these skills in managing their finances. The above figures shows that 103% of adults are aware not to share their pin or passwords with anyone but applied by only 86% and similarly 41% of adults know how to manage their

finances online but managed only by 38% adults. This data can be improved by financial education.

1.2 Gender Financial Literacy Score of India

Today, women enjoy greater financial independence and empowerment as they actively participate in the workforce and earn their own income. Their role in society has evolved significantly, shifting from traditional homemakers to working professionals who contribute as an additional source of income for their families. However, despite this financial empowerment, many women still rely on family members, colleagues, friends, the internet, or even social media when making financial decisions (Ward 1974; Hilgert et al 2003; Montalto, 2004). The studies showed a significant gender difference in financial management skills as males are more confident in financial decision-making than females. The worldwide survey of financial literacy showed that against 35% men only 30% women are financially literate (Lusardi & Mitchell 2014). The reason for lower financial literacy among women might be due to lack of money related discussions at home or office, less knowledge about innovative financial products & services and lack of financial education (Lusardi, & Scheresberg, 2017; Roy & Jain 2018). In general, working women are more involved and under pressure to manage their jobs, homes, and other obligations (Kasman, Heuberger, and Hammond, 2018). Due to their low level of financial awareness to comprehend numerous financial issues such as inflation, interest rates, and rates of return, Indian women have poor personal financial management (Singh and Kumar, 2017; Bhutani, Kamini & Rajni, 2022). The gender literacy disparity in Punjab and India was displayed in the following table.

Table 1.6 Gender Literacy gap

	Censuses 2011	PLFS 2020-21	Censuses 2011	PLFS 2020-21
Financial Literacy	Punjab	Punjab	India	India
Male	80.4%	86.0%	80.8%	85.9%
Female	70.7%	79.1%	64.6%	72.3%
Overall	75.8%	82.6%	72.9%	79.2%

Source: (www.esopb.govt.in 2011); (<https://mospi.gov.in> 2021)

Female literacy rate in India as per the Periodic Labour Force Survey 2020-21 is 72.3% as against 85.9% male literacy rate (<https://mospi.gov.in> 2021) and against this the survey report of (www.esopb.govt.in 2011) shows female literacy in Punjab is 70.7% as against male literacy

of about 80.4%. The Periodic Labour Force Survey 2020-21 shows improvement in financial literacy level than 2011 survey and shows female literacy rate 79.1% as compared to male literacy rate which is 86.0% and overall financial literacy of Punjab is 82.6% and of India is 79.2%. This shows a big gender difference in financial literacy in India including Punjab. Therefore, there is a need to motivate women for personal financial management to fill this gender financial literacy gap.

1.3 Need of Personal Financial Management

Advancements in technology, the growing complexity of digital goods and services, limited social security, rising income and savings, and inadequate awareness of financial matters highlight the need for learning personal financial management. It is a global concern, as the level of financial knowledge differs significantly across individuals and nations. In the Indian context, personal financial management plays a crucial role in promoting financial inclusion and ensuring economic stability. The various studies show that the gender gap also plays a major role in financial management as male members have more knowledge and confidence of financial matters as compared to female members (Atkinson & Messy 2012; OECD 2013). The financial decisions of females depend upon their income, age, education level, job status, emotions, role in the family, experience in handling finances, and changes in their life positions due to divorce, separation or death of a partner. Lower levels of financial literacy reduce women's economic power and active participation within the society, household and knowledge transmission to the next generation, which worsens the existing social disparities (Hung, Yoong and Brown, 2012). The importance of improving financial literacy of women has been acknowledged by G20 leaders to empower and enhance their financial well-being (OECD/INFE, 2013). Women become more empowered with the use of digital payments by having greater access and control on their finances (Klapper & Singer 2014). Therefore, Personal financial management is important to learn not only for investors but for everyone in the community as it helps individuals to take appropriate financial decisions without committing mistakes and errors (Kapoor et al 2014). According to recent survey report of IBEF (2022) (India Brand Equity Foundation), approximately 76% of adults in India, in a country of 1.3 billion population, still lack financial literacy. Their fundamental understanding of financial matters has not yet been enhanced. To raise people's financial literacy level, regulatory bodies such as the RBI, SEBI, IRDAI, and PFRDA work to raise awareness through financial literacy guides, diaries, and posters; by celebrating financial literacy week; and by organising financial awareness campaigns that disseminate information about Ponzi schemes, cybercrime, and other

related topics. As per the report of IBEF 2022 India may become the world's most financially literate country as 27.6% of individuals in the 25–44 age range take part in financial inclusion initiatives through financial education. Therefore, financial education and personal financial management are required to increase this ratio. Similarly, according to the recent report of SEBI, only 27% Indian people are financially literate. Moreover, during and after covid pandemic number of transactions concerning digital payments in India from 2016-17 to 2020-21 grew 5x (from 10.04 to 55.54 billion). Furthermore, in 2019 the financial technology transactions were US\$ 66 billion and the expected rise in the value in 2023 at a CAGR of 20% to US\$ 138 billion (IBEF Report 2022). According to IBEF Economic Survey Report 2023, UPI transactions between 2019-22 grew in value 121% and in volume 115%. As per (NISM Newsletter-July-2024) UPI transactions hit the previous record of 13.89 billion by marking a 49% increase in June 2024 with transaction volume at Rs 20.45 lac cr. Therefore, it becomes necessary now to have digital financial literacy instead of only financial literacy. As per Global Financial Index 2024, in March 2025 number of bank accounts increased from 62% to 69%, but still there are many people without holding an account. According to the RBI's newly released Financial Inclusion Index, the country's financial inclusion score significantly improved from 60.1 to 64.2 between March 2023 and 2024 and further increase to 67 in March 2025, which reflects a steady progress in access, usage and quality of financial services (<https://www.phdcci.in> July 2024). Although the RBI and other authorities are always working to increase people's financial literacy, more work is still required.

1.4 Rationale of Study

As per the recent statistics about 40% of young millennials have more savings than their earnings. India stands in top 30 countries where people savings are 30 to 39% of their income which indicates that people are more interested in savings than consumption. The survey done by (NCAER 2021), which is National Council for Applied Economic Research in coordination with Max New Life Insurance, shows that almost 60000 surveyed people save 40% of their income as investment. However, because of lack of financial planning they are not able to make right investment decision. Many researchers have researched in these areas by taking young investors, university students, millennials as their sample population but there is lack of studies on women signalling a need to research in this area (Goyal et al 2021). There are lack of comprehensive studies so far that shows overall personal financial planning behaviour of women especially the women in Punjab. Furthermore, there is not sufficient research on digital financial literacy therefore, more research is required to study the impact of digital financial

technologies on people's financial management behaviour (Goyal et al, 2021; Xiao and Tao 2020). To address these gaps, the current study examined the relationship between financial attitude, socialization, digital financial literacy, and personal financial management behaviour.

1.5 Background of study

According to Schuchard et al. (2007), personal financial management is an interdisciplinary field having origins in economics, psychology, sociology, and finance. The foundation of consumer and family economics was established by Hazel Kyrk's in 1920, which was the first to focus on personal finance. One of the pioneers in this area of household behaviour is Margaret Reid. The 2008 financial crisis demonstrated that people's financial decisions are not always logical. Hence, individuals require training in personal finance to evaluate their finances in a better way. The professionals, educators, government and policymakers take the initiative to develop certain financial programs to give knowledge and make the people aware about rational financial decisions. However, certain American universities have started financial education programmes at graduate and undergraduate levels and published research work in journals like Journal of Personal Finance, Journal of Financial Planning and Counselling. In addition, two professional bodies, took the lead in promoting this field one is American Association of Family and Consumer Sciences and other is American Council on Consumer Interests, established between 1950 and the 1970s. Further, the Association of Financial Counselling and Planning Education (AFCPE) started at Iowa State University in 1984 and the Academy of Financial Services (AFS) in 1985 are regarded as significant turning points in the development of personal financial planning. This association & academy offer various certification programs for professionals and financial planners. In order to promote the concept and importance of financial literacy US President's Advisory Council on Financial Capability was established in 2008. In 2006 Campbell used the term "household finance" and Xiao in 2008 used the phrase "consumer finance" which identified the integration of this subject into the field of economics. Each discipline has diverse studies on household financial behaviour and financial management (Copur and Gutter, 2019). The terms personal finance, family finance, consumer finance, home finance are highlighted by (Xiao & Tao, 2020) in his research and after that the term commonly used is personal financial management. Currently, NCFE (National Council for Financial Education) and NISM (National Institute of Security Market) work in this direction by providing various training and financial educational programs to youngsters and adults to enhance their financial literacy skills. Further, OECD (Organisation for Economic Cooperation and Development) conducts surveys in different countries by

developing financial literacy questionnaires to judge the financial and digital financial literacy of individuals in different countries. At present, the government also run various campaigns and educational programs for general public in order to aware them regarding financial management and these programs are covered under ‘financial literacy’.

1.6 Theoretical Background

There are various studies in the literature which need to be studied to understand the factors driving personal financial management behaviour, like **Theory of Planned Behaviour (TPB)** given by **Ajzen (1991)**, This theory established the groundwork for personal financial management behaviour and clarified a person's mindset, social conventions, and sense of control over his actions that influence his behaviour and goals. He acts logically based on all the facts at his disposal. This hypothesis holds that people's financial behaviour is based on their attitudes. (Arianti, 2017; Meyliana et al., 2019; Daragmeh et al., 2021; Normawati et al., 2021) The relationship between DFL and financial management practices was also examined using this theory. **The Theory of Consumer Socialisation (TCS), pioneered by Moschis (1987)**, states that family members significantly influence financial behaviour within the context of family norms. Apart from family, teachers, friends, and the media also contribute largely to forming financial behaviour. This theory suggests that social status, caste and ethnicity play an important role in the learning procedure by influencing socialisation, which in turn influences financial literacy and behaviour. (Shim et al 2010) considered formal and observational learning as important to explain financial socialization. Another remarkable theory is the **Social Learning Theory (SLT)** by **Bandura (1986)** he proclaims that observational learning through social interactions helps in shaping financial management behaviour by influencing their financial attitudes and knowledge. The **Theory of Reasoned Action (TRA)** of **Fishbein & Ajzen (1975)**, contends that motivation serves as a driving force behind all actions of an individual. Further, **life cycle theory** explained that mostly individuals do not inherit anything, they spend a consistent proportion of their income through -out their life and die without leaving a will, that's why many young people borrow money for their requirements of education and marriage. Only middle- aged people think about saving for future and paying off their debts.

1.7 Personal Financial Management Behaviour

Personal Finance is the term used to describe individual's financial spending, their savings & investment to meet their financial goals after taken into consideration the risk and return

attached with their investment. It is the personal skill and knowledge used to manage finances. (Alttest 2004), All aspects of financial interest, including cash flow management, saving and investing, tax management, retirement and estate planning, are included in personal financial management. (Dew & Xiao 2011) offer a multifaceted scale of behaviour related to management of investment, credit, insurance, cash flow implementation and evaluation, saving and spending behaviour, and money management. (Kholiah & Iramani 2013) these are the skills to govern daily financial budgets, control of expenditure, search, and storage. It is considered to be one of the key elements of financial literacy, which is necessary to handle a range of financial competencies, including investing, budgeting, and financial management. Every person and family have both short-term and long-term goals, such as getting married, having kids, taking vacations, attending events and festivals, purchasing a home, vehicle, or other durable item, retiring comfortably, and many more. Adequate personal financial management is crucial in achieving all of these goals. (Kapoor et al 2014), Financial management includes the range of activities by which people effectively manage their personal resources in order to achieve their life goals.

1.8 Advancement in Personal Financial Management

Today there are various mobile banking apps and software which help to manage personal finances like management of bank records, savings and investment plans, portfolios and track various expenditures, investments, income etc as per user requirements (Garman & Forgue 2011). Although traditional ways of financial management are still used by most of the people either because they have no knowledge of advanced financial management tools or due to security reasons (Kaye et al 2014) but digital transformation came up with various advanced financial management tools that influence financial management behaviour of individuals (Arner et al 2015; Seldal & Nyhus 2022). The financial technologies like Data Analytics, AI, E- Banking, Machine Learning, crowdfunding, Robo Advisors and various mobile applications for smartphones which help banks and other business houses to make in depth analysis of customer's data including their spending habits, bank accounts, budgeting etc and make them ready with various kinds of offers in financial services like financial counselling, investment advice and associated services (Fact. MR 2021). These tools also assist individuals in managing their financial goals, major life events like marriage, retirement, taxes, holiday planning etc. along with advice on various financial matters. They are now able to customise their financial services as per their requirements. India is expected to grow from INR 2.30 trillion in 2020 to 8.35 trillion till 2026 at a compound annual growth rate (CAGR) of 25%, making it the third-largest and fastest-adopting fintech nation in the world after the US and China (Invest India

2022). It is also expected to earn \$200 billion revenue by 2030. Additionally, there are a number of government programs that accelerate the digitalization of financial management and inclusion, such as the Pradhan Mantri Jan Dhan Yojna, Atal Pension Yojna, and Direct Benefit Transfer, are prominent among others. Personal financial management practices are now being performed digitally as a result of the digital transformation of traditional financial services (Lewis & Perry 2019). Digital financial technologies contribute towards financial inclusion through developing markets and serve as a powerful tool to provide access to individuals towards financial products & services and impact favourably on the growth of the economy (Telukdarie, A., & Mungar, A. 2023). The following figure 1.1 depicts various indicators of personal financial management behaviour used in the study:

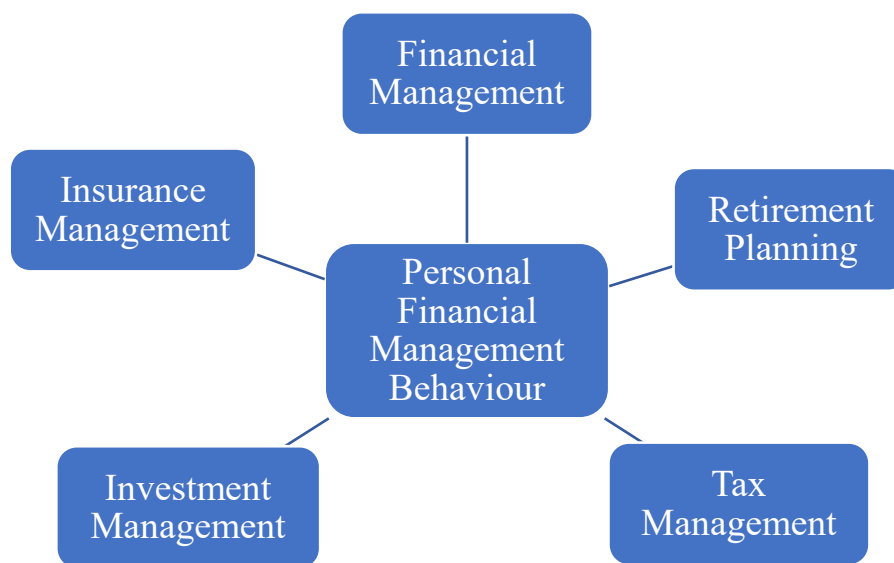


Figure 1.1 Dimensions of Personal Financial Management Behaviour

1.9 Operational Definitions of Various Constructs

1.9.1 Financial Attitude

Attitudes are a person's psychological state of mind made up of their beliefs, feelings, and intentions to gauge and assess both favourable and unfavourable comments about events, things, and people. Financial Attitude is seen as an essential element in the process of making financial decisions and a major contributor to financial success or failure. It assists people in determining their future behaviour through financial management. Whether a person has a favourable attitude toward short-term gains or long-term rewards, their financial attitude influences their saving and investing decisions. (Adiputra and Patricia, 2019; Siswanti et al. 2020) conducted the studies on workers in various nations, including Malaysia, Indonesia, and

Bali province, have shown that financial attitude has a significant favourable impact on financial management behaviour. Similarly, numerous other research (Yahaya et al. 2019; Yong et al. 2018; Coskun et al. 2020; Yogasnumurti et al. 2020) on university students across various nations have shown that financial courses influence financial knowledge, which further, influences financial behaviour and attitude. Anxiety seeking, financial planning, contentment with current financial circumstances, inclination to save for the future, and risk attitude are some of the different aspects of financial attitude.

The figure 1.2 shows the dimensions of Financial Attitude:

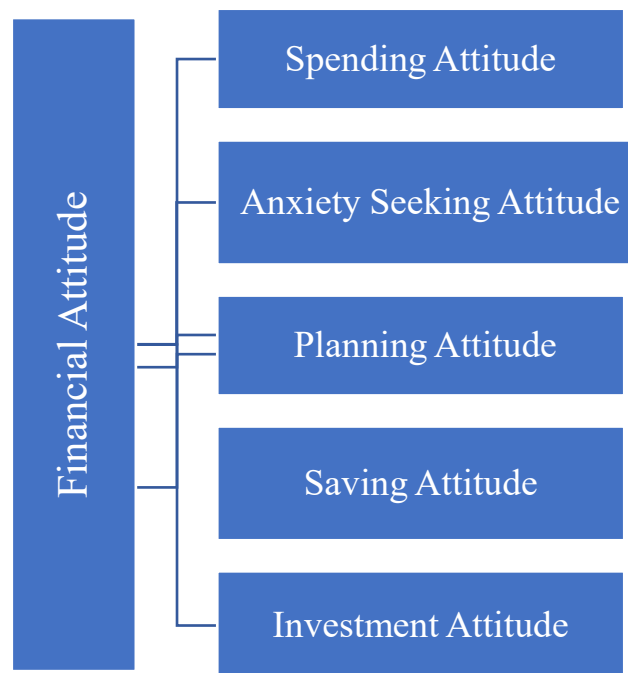


Figure 1.2 Dimensions of Financial Attitude

1.9.2 Financial Socialization

According to Ward (1974), financial socialization encompasses all methods by which people acquire financial knowledge and attitudes from their surroundings in order to optimize their position as financial market consumers. (Shim et al 2010; Gudmunson and Danes 2011) elucidated how families sort out information from the outside world and set a groundwork for lifelong financial socialization. (Hilgert et al. 2003), A higher degree of financial management is found in many households that learn from friends and family in addition to the media or the internet, television, and radio. (Hira & Loibl 2005) Apart from family, other socialization agents include partners, friends, peers, the media, teachers, formal financial education, financial consultants, and schools, all of which influence people to make financial decisions.

(Gudmunson and Danes 2011; LeBaron, Marks, Rosa & Hill 2020) outlined by the Theory of Financial Socialization, which holds that children learn financial knowledge while observing their parents talk about a variety of financial topics. This knowledge develops into financial competence, behaviour, and overall financial wellness. (Shim et al., 2015; Kagotho et al., 2017; Antoni et al, 2019; Lebaron et al, 2020; Suyanto et al., 2021) Researchers demonstrate that parental financial socialization has a significant effect on personal financial management behaviour of young adults . Family connection and relationships, financial socialization agents, and financial aptitude are the components of constructing financial socialisation.

Figure 1.3 indicated the dimensions of Financial Socialisation:

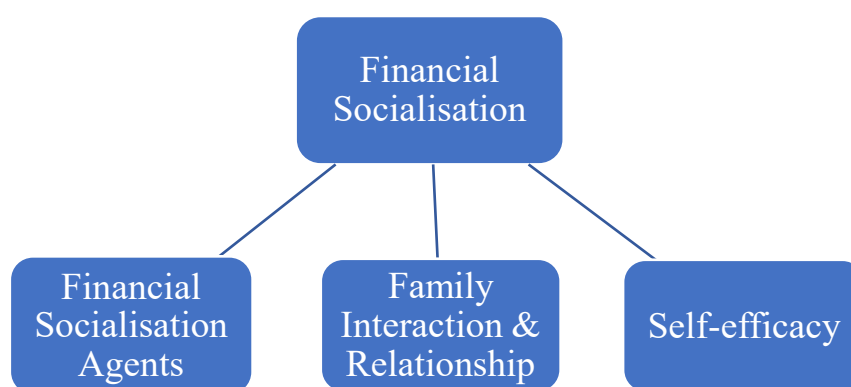


Figure 1.3 Dimensions of Financial Socialization

1.9.3 Digital Financial Literacy

Digital financial literacy is a combination of the terms "digital" and "financial," where "financial literacy" refers to both fundamental and advanced financial understanding regarding topics such as interest rates, inflation, risk and return, saving and investment, etc. According to (Lusardi and Mitchell 2014; OECD 2018), Digital literacy focuses on learning how to use online apps and communication technology. DFL is the set of expertise required for better financial decision-making by understanding digital financial technologies like mobile banking, e-banking, online services, payment gateways and e-lobbies.

According to (Demirguc-Kunt et al. 2018), the development of financial technologies and digital services raises the danger and complexity for consumers who lack the necessary digital abilities to access these services. This explains why the majority of women lack access to

official financial services. (OECD 2020; OJK 2020; Lyons, Kass- Hanna & Fava, 2021) People had to learn the use of financial technologies that emerged during the pandemic in order to access them more quickly through laptops and Android phones. (Prasad et al., 2018; Azeez and Akhtar, 2021) conducted research on the impact of demographic traits on DFL and concluded that the advancement of digital technology helped people with their financial planning and considered as a prerequisite for financial inclusion. Moreover, due to increased incidence of financial frauds and scams the customers need to be more knowledgeable both financially and technologically in order to use various digital apps and financial services safely and securely. For this reason, G20 nations are taking the lead in promoting digital education by creating a variety of educational initiatives and techniques to raise awareness among vulnerable populations, including women. Women's financial, economic, and health shocks improve as a result of their greater participation in the formal sector through DFL.

The following indicators are used in the study.

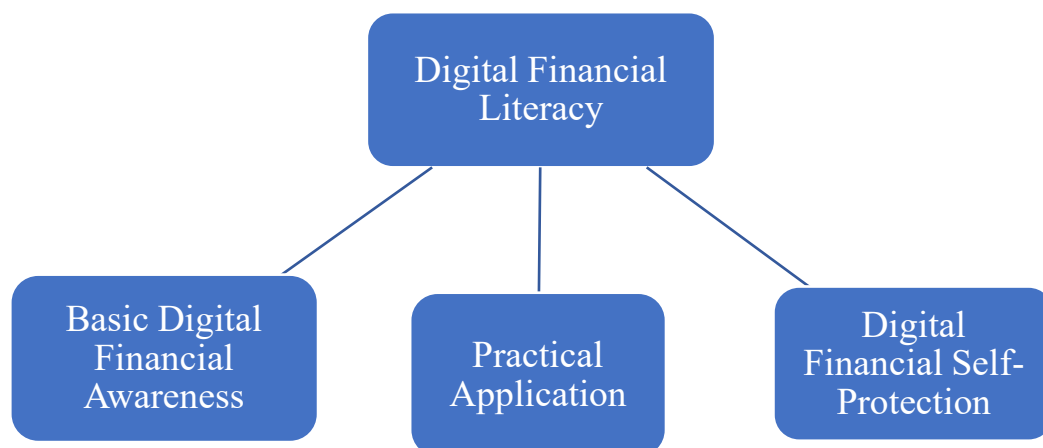


Figure 1.4 Dimensions of Digital Financial Literacy

1.10 Organization of Chapters

The background and introduction are covered in the **first chapter**. It focused on the study's applicability and extent. This chapter explains how individuals handle their own finances and provides operational definitions for the several study components, including digital financial literacy as a mediating variable, financial attitude, and financial socialization. The review of the literature is the **second chapter**. The conceptual model is developed by the

vast body of literature. The research work that has already been done in relation to the constructs selected for the current study is briefly discussed in this chapter, along with the connections between them. It provided insight into how people handle their own finances. The research approach is described in the **third chapter**. The study's goals, research questions, hypothesis, research design, population and sampling frame, sample design, and sampling unit are all explained in this chapter. Following the data collection process, the research instrument finalization process, sample size selection approach, and study conceptual framework based on the literature were described.

The **fourth chapter**, which deals with data analysis and interpretation, explains the procedures used for measurement and validation. These procedures include the development of the scale, the definition of the construct, the creation of items, sample size and data collection, multivariate normality and reliability, the dimensionality of the construct, estimation techniques, structural equation modelling (SEM), multicollinearity, descriptive statistics, and reliability statistics.

The findings of the researcher's conceptual model test are presented in the **fifth chapter**. The results, conclusion, consequences, and recommendations for further research are summarized in this chapter.

1.11 Chapter Summary

This chapter covers the study's introduction to connect the topic to the problem of study, including India's financial literacy level in comparison to the global financial literacy level, India's gender financial literacy score, the need and rationale for conducting the study, theoretical background for connecting the research with theories and general background, the operational definitions of the independent and dependent variables and various dimensions of these variables used in the present study, and finally the arrangement of the various chapters in the thesis.

Chapter 2

Review of Literature

2. Introduction

The current chapter offers a clear overview of the work that has already been done in the field of personal financial management and serves as a strong foundation for future studies. The literature on personal financial management behaviour and its many facets, including financial attitude, financial socialization, and the mediating variable digital financial literacy and its connections with other variables, are covered in this chapter. This chapter also demonstrates how several exogenous factors, such as financial socialization and attitude, affect the endogenous variable, which is personal financial management behaviour. A summary of the chapter and the research gaps in the earlier studies are included at the end of the chapter. The numerous elements that were examined in the literature review include:

2.1 Financial Attitude

Financial Attitudes are the psychological tendencies to measure and express your opinion, beliefs and judgement about money and money-related decisions. Research on financial attitudes across gender and cultural contexts highlights both structural and psychological determinants of behaviour. (Achuta and Saloni 2016) found that Indian women predominantly preferred safer assets such as fixed deposits and insurance rather than risky investments, reflecting a cautious and conservative orientation. This risk aversion was also echoed in (Kappal and Rastogi 2020), where women entrepreneurs, despite being willing to take risks, often relied on parental influence in investment decisions due to knowledge and time constraints. Together, these findings suggest that limited financial literacy and socialisation reinforce conservative investment choices among Indian women.

Expanding beyond the Indian context, (Rey-Ares et al. 2021) demonstrated that self-control consistently shapes financial attitudes across generations in Spain, but affect the financial behaviour only of those millennials who shows highest self- control while choosing between saving account and personal loan. This suggests that psychological traits may moderate the translation of attitudes into practice. Similarly, (Sahi 2023) showed that psychological gender, rather than biological sex, plays a stronger role in shaping money attitudes, with androgynous individuals showing the most balanced orientations. These insights underline that financial

attitudes are not merely socio-demographic outcomes, but are also rooted in psychological and identity-related factors.

Cross-cultural evidence further strengthens this understanding. Using an ordered logit regression model (Arun et al. 2023) revealed persistent gender gaps in financial behaviour in Ghana and South Africa, Men use more sophisticated financial products than women largely due to differences in education, income, and age. (Megawati and Sembodo 2024) also confirmed that socio-demographics such as income and education, alongside cognitive and affective dimensions of attitude, strongly influence investment choices. This structural dimension is mirrored in (Kumar Pankaj et al. 2024), who found that among Indian villagers, financial literacy exerted a stronger influence on financial attitudes than financial socialisation, emphasising the centrality of knowledge access in rural contexts. Social interactions and cultural influences also emerge as crucial. (Miglani 2024) investigated that peer conversations among women in Kaithal, Haryana shape financial attitudes and emphasised that open discussions on financial matters among women help to form their opinions and enhance financial empowerment through financial decisions. Finally, (Kaur and Singh 2024) integrated cultural values, materialism, and consciousness into a conceptual model of financial well-being, grounded in social comparison theory and the theory of planned behaviour. Their findings demonstrate how socialisation, attitudes, and financial knowledge intersect within broader cultural frameworks.

Collectively, these studies suggest that financial attitudes are formed at the intersection of knowledge, socialisation, psychological traits, and socio-cultural structures. While women's financial behaviour often reflects risk aversion due to limited literacy and social pressures, evidence from multiple contexts indicates that peer interaction, psychological orientation, and cultural values can either reinforce or challenge such conservative tendencies.

2.2 Financial Attitude and Personal Financial Management Behaviour

Research across multiple contexts highlights the interplay between financial knowledge, attitudes and behavioural outcomes, but the mechanisms differ across populations. Mien and Thao (2015) demonstrated that various factors like knowledge, locus of control and financial attitude jointly shape financial management behaviour with financial knowledge acting as a mediator. (Coskun and Dalziel, 2020) also investigated a similar role and concluded that financial attitude bridges the link between financial knowledge and behaviour among Turkish students. Similar research by (Yong et al, 2018; Halim and Setiawan 2021) shows that financial

education can strengthen financial behaviour, attitude, and knowledge of Malaysian workers. However, the findings from Indonesia suggest a more nuanced picture. Several studies (Adiputra and Patricia, 2019; Siswanti and Halida 2020; Yogasnumurti et al. 2020; and Syarif & Putri 2022) indicate that financial attitude and knowledge strongly influence financial management practices, income does not exert a significant role. Hence, emphasis on internal skills and attitude rather than higher income for better money management. (Rai et al. 2019; Halim et al. 2021) identified women's financial attitudes, behaviour, and financial literacy as crucial aspects of financial decision-making which were found to correlate positively. (Yahaya et al., 2019; Moko et al., 2022) emphasise that structured financial management courses can strengthen this relationship by fostering both financial knowledge and attitude. Recent contributions (Haudi, 2023; Azidzul et al, 2023) extend this by demonstrating that locus of control and family financial education also shape financial literacy and attitude, which in turn support stronger personal financial management.

These studies suggest that financial knowledge consistently interacts with attitudes to influence behaviour, but the specific mediators—whether locus of control, gender, education, or family background—vary across contexts. This underscores the need to examine how these dynamics play out in under-researched populations, such as women in Punjab, particularly in the context of digital financial literacy.

2.3 Financial Socialisation

Financial Socialization are the skills through which individuals learn not only theoretical financial knowledge but also practical application of knowledge to take the right financial decisions. Financial Socialization helps individuals in gaining the values, standards, skills, knowledge and attitudes needed to become a wise consumer (N. Beatty & Capella, 2006). Financial socialization occurs through different channels or socialization agents like school, family, friends, peers, social media and work which influences psychological and behavioural outcomes as these agents have long-lasting impacts.

Research consistently affirms that the family serves as a critical agent of financial socialisation, shaping financial attitude and behaviour throughout the life. The studies (Clarke et al 2005; Shim et al 2010) examined that parental influence exerts a significant and enduring effect on children's financial orientation. (Jorgensen and Savla 2010) further underscores the role of parental influence in shaping financial outcomes by indicating that parental socialisation instils attitudes and dispositions rather than only knowledge which, in turn, guide financial behaviour.

(Shim et al 2015) found that there is an improvement in people's perception of parental socialisation, attitude, controllability and financial efficacy which ultimately leads to improved financial behaviour. There are three core mechanisms of financial socialisation which include role modelling, reinforcement and social interaction. (Zhu 2019), Support this view by showing that, parental modelling fosters psychological change, which strengthens teenagers' behaviour and financial learning outcomes. (Antoni et al 2019), investigated South African students and demonstrated that parents employ multiple strategies but financial teaching, monitoring and reinforcement of financial behaviour are most effective in improving students' financial behaviour. Extending this, (LeBaron et al 2020) found that financial education received from parents during infancy predicts healthy financial behaviour in emerging adulthood, underscoring the importance of early interventions.

More recent studies broaden the lens by linking financial socialisation to broader outcomes. (Acharya, P., & Poudel, O. 2023) confirmed that financial behaviour and socialization collectively influence financial well-being of individuals, which can be further improved by education. (Ndou 2023) found similar patterns in African contexts where parental financial conversations enhance adult literacy, indicating that the role of family extends well beyond childhood. (Niessen-Ruenzi and Mueden 2023) identified a persistent gender gap in German households, where daughters receive less financial discussion than sons, which contributes to women's reduced investment confidence. In contrast, (Abdul Ghafoor and Akhtar 2024) noted that parents are increasingly encouraging daughters' participation in financial decision-making, recognising their future responsibility in managing household finances.

Taken together, these studies illustrate that while family remains a universal foundation of financial socialisation, the effectiveness of specific techniques (teaching, reinforcement, involvement) varies across cultural and gendered contexts. This highlights a crucial area for further research in India and particularly Punjab, where women's financial socialisation practices remain underexplored.

2.4 Financial Socialization and Personal Financial Management Behaviour

The previous literature consistently highlights family financial socialisation as a core determinant of financial outcomes, though its strength of influence may vary across contexts. (Glenn, 2018) demonstrated that family financial socialisation directly predicts financial knowledge, self-efficacy, and management behaviour, with self-efficacy emerging as the strongest predictor of student money management. This underscores the view that socialisation

effects work through psychological enablers rather than knowledge alone. Reinforcing this, (Khawar and Sarwar 2021) found that family socialisation has a substantial relationship with education and behaviour, and also acts as a partial mediator in this relationship. (Antoni 2023) showed that the financial behaviour of students in the Eastern Cape was shaped by family structure and parental socialisation strategies, again confirming that family influence often operates indirectly.

At the same time, some findings challenge the centrality of family influence. (LeThanh Tam et al. 2021) reported that during the Covid period in Vietnam, financial well-being, parental habits, and contextual shocks like the pandemic had a significant impact on PFMB but showed no effect on financial knowledge and attitude. This suggests that external shocks and situational constraints may temporarily overshadow the role of traditional socialisation. Likewise, (Johan et al. 2021) found that financial education programs and socialisation improve knowledge and behaviour, but not attitudes, highlighting the uneven influence across financial outcomes.

Technological change also shifts the dynamics of socialisation. (Ameer and Khan 2020) observed that New Zealand adults with formal finance or economics education reported higher financial literacy and confidence. More importantly, their study revealed that digital media exerted stronger influence on financial decision-making than traditional media, suggesting that the locus of financial socialisation is gradually moving from family to digital ecosystems. Finally, attempts to integrate these perspectives show the complexity of the process. (Goyal et al. 2023) developed a framework in which financial literacy and multiple socialisation agents, including family, friends, and media interact to shape attitudes and, ultimately, financial behaviour. This broader view implies that family remains important, but no longer acts as the sole or dominant agent of financial socialisation, especially in the digital era.

The literature indicates that while family financial socialisation has enduring influence, its effects are mediated by self-efficacy, contextual shocks (e.g., Covid-19), and increasingly, digital media. There is still ambiguity about whether family socialisation consistently shapes attitudes with mixed results across studies, while evidence is stronger for its effects on knowledge and behaviour. This raises the need for further research on how traditional socialisation interacts with digital financial literacy and other external factors in shaping financial outcomes, especially in under-researched contexts such as Punjab.

2.5 Digital Financial Literacy

DFL refers to the ability to effectively use a variety of digital platforms and manage digital funds. It encompasses the skills necessary to engage with digital financial technologies in ways that enhance financial well-being while ensuring the responsible use of digital instruments to minimise risks such as fraud and transactional errors. According to Ozili (2018) and the OECD (2018), DFL is a critical prerequisite for achieving financial inclusion. Empirical evidence further demonstrates that DFL exerts a significant influence on money management behaviour.

The literature on digital financial literacy (DFL) demonstrates that both demographic and socio-economic factors significantly shape how individuals access and engage with digital finance, but findings vary across regions and groups. Early studies in India highlight the importance of awareness campaigns and socio-economic enablers. (Prasad et al. 2018) stressed the need for campaigns to expand DFL, while (Vidyakala 2018) found that literacy, family income, job type, and saving habits enhance awareness and ease of access of digital services in rural areas. (Shah and Zala 2018) showed that women's perceptions of digital payments are strongly influenced by age and education, though income and profession had little effect, suggesting that knowledge gaps, rather than economic position, restrict digital financial adoption among women.

Cross-country research expands this understanding by showing that DFL is multi-dimensional and central to resilience. (Lyons and Kass Hanna 2021) argued that financial literacy should be redefined to include digital elements, proposing a framework to operationalise DFL measurement. (Normawati et al. 2021) supported this by linking DFL with efficient and satisfying adoption of digital services among millennials, drawing on the Theory of Planned Behaviour and Theory of Reasoned Action. (Azeez and Akhtar 2021) confirmed that socio-economic variables (income, gender, education, family size) strongly influence DFL, reinforcing the intersection of structural and behavioural factors.

Gendered and regional insights reveal uneven adoption patterns. (Issac, 2022) found that working women in Kerala were aware of digital apps but faced challenges during transaction failures. (Dorfleitner and Nguyen 2022) highlighted that mobile money adoption can empower women only if accompanied by financial management skills. (Seldel and Nyhus 2022) found women in the U.S. used more digital payments than men, and users of such systems were less financially vulnerable than non-users, suggesting that digital participation may buffer financial risks but requires adequate knowledge.

Recent research further demonstrates both benefits and risks of digital finance. (Yue et al. 2022) showed that digital finance expands household credit market participation and consumption but easy access of credit may create a risk for household to fall into debt trap. Similarly, (Ravikumar et al. 2022) created a multidimensional DFL scale, showing that lack of digital education exposes people to fraud, transaction failures, and misuse. The study also highlights digital financial awareness, risk management & control, awareness regarding rights of consumers, social norms and practical use and application of digital tools as the critical determinants of digital financial literacy. (Prabhakaran, & Mynavathi, 2023) found a significant association between financial knowledge and use of digital lending, and mobile banking as financial literacy enhanced their financial abilities to use all the fintech services. (Morgan & Trinh 2019) also revealed in a similar study on Lao People Democratic Republic that higher level of financial literacy leads to easy adoption of financial technologies. (Zaimovic, et al 2023) discovered from the study conducted in Bosnia and Herzegovina that there are differences in digital financial literacy as per age, education, income and gender. There is a lack of access to digital technologies due to availability, cost, and digital skills especially among women, rural households, and low-income populations and digital financial literacy is highest among the age group 18-30.

Overall, the evidence reveals that DFL is shaped by interacting layers of socio-economic, demographic, and contextual factors. While younger, more educated, and higher-income groups benefit most, women and rural households often face persistent barriers. Importantly, the literature also shows that digital participation can both empower (through inclusion, resilience, empowerment) and endanger (through fraud, debt traps, transaction failures), making digital financial education an essential complement to access. However, despite emerging frameworks, there is limited consensus on standardized ways to measure DFL, and relatively few studies specifically examine its role as a mediator between financial attitude, socialisation, and behaviour a key gap this study seeks to address in the context of Punjab.

2.6 Financial Attitude and Digital Financial Literacy

Recent research highlights the strong interconnection between financial literacy, digital competencies, and financial behaviour. (Andreou and Anyfantaki 2020) demonstrated that higher financial knowledge among Cypriot adults was strongly associated with greater use of online services, particularly internet banking, underscoring the role of digital literacy in shaping money management. (Kusumapradana and Aisyah 2022) found that both financial

knowledge and attitude positively influence the use of digital devices. Research from Indonesia (Maman Setiawan et al., 2020; Rahayu et al., 2022; Amalda, 2022) further showed that socioeconomic factors such as age, income, and education significantly affect digital knowledge, which in turn influences saving and spending behaviours of millennials. (Rahim et al. 2022; Johnson et al. 2023) recommended incorporating digital financial education into curriculum.

At a broader level (Yang et al. 2023) established that financial literacy is crucial for low-income and rural communities in adopting digital finance, which subsequently shapes household financial attitudes and behaviours. Similarly, (Koskelainen et al. 2023) identified fintech, digital financial behaviour, and behavioural interventions as the core themes linking digitalisation and finance, while (Choung et al. 2023) emphasized the protective role of DFL in safeguarding Korean adults from digital fraud. More recently, (Mir 2024) confirmed that financial literacy and digital technologies complement one another in equipping individuals to use digital financial services effectively and responsibly.

2.7 Financial Socialisation and Digital Financial Literacy

Digital technology has increasingly been recognized as a vital agent of financial socialisation, reshaping how individuals acquire financial knowledge and behaviours. Early work by (Lee and Conroy 2005) emphasized the internet as a socialisation medium, enabling individuals to connect globally, exchange experiences, and learn consumer and financial skills. Similarly, (Supinah et al. 2016) showed that self-directed financial learning through books, newspapers, social media, and self-development programs positively influences financial views and behaviours, underscoring the value of media-based learning.

The integration of digital tools within families has also gained attention. (Chowdhury 2019) found that parents increasingly use digital technologies to teach financial skills to children as well as to keep a check on their financial activities through digital apps. (Abhijith 2022) extended this perspective by introducing the concept of reverse fintech socialisation, where children guide parents particularly mothers in using digital financial tools, boosting their confidence and shaping positive attitudes toward digital finance.

Digitalisation is also transforming formal financial education. Studies such as (Tiwari et al. 2020) and (Golden and Cordie 2022) highlighted how digital technologies enhance access to financial education, making learning more interactive and increasing readiness to adopt financial services. Experimental approaches, such as (Frisancho et al. 2023) in Peru, confirmed

that mobile apps and text-message interventions can significantly improve youth financial literacy and behaviour through experiential learning. (Khan and Suriseti 2020) revealed that financial literacy not only directly improves well-being but also indirectly facilitates digital financial socialisation through cashless transactions. Similarly, (Chabra and Gupta 2023) found that digital media resources serve as vital tools for financial knowledge acquisition, helping individuals to self-socialise financially and make better financial decisions.

2.8 Personal Financial Management Behaviour

Personal financial management (PFM) has been conceptualised as both a set of skills and a behavioural construct involving planning, controlling, and evaluating finances (Kapoor, 2008; Altfest, 2004). While these definitions emphasise the structural and integrative aspects of PFM, empirical studies increasingly shift attention towards psychological and behavioural determinants of PFMB rather than mere financial knowledge.

A consistent finding across studies is the primacy of self-efficacy and confidence in shaping financial behaviour. (Farrell et al. 2016) demonstrated that Australian women with higher financial self-efficacy prefer savings and income-generating investments, suggesting that confidence acts as a behavioural enabler beyond demographic factors such as education, risk tolerance, or income. Similarly, (Henager & Cude 2017) confirmed that self-efficacy is more influential for younger groups, while older groups rely on acquired skills for long-term financial stability. (Qamar et al. 2016) and (Syafitri & Santi 2017) further supports this, showing that financial attitude, self-efficacy, and knowledge jointly influence PFMB. (Dwiastanti 2017; Prihartono & Asandimitra 2018; Ardiandana et al. 2024) indicate that financial knowledge alone does not guarantee sound decision-making, as individuals often lack of self-control to translate knowledge into practice, irrespective of their education.

Beyond internal factors, scholars have also experimented with behavioural interventions. (Islam et al. 2023) found that keeping a financial diary can be as effective as financial education in enhancing women's PFMB, underscoring the role of habit formation and record-keeping in fostering financial discipline. Similarly, (Leon et al. 2024) developed scales for saving and debt management among youth, showing that integrating literacy with money-related attitudes yields stronger financial capabilities. These findings suggest that practical, context-specific tools may sometimes outperform traditional educational models.

2.9 Digital Financial Literacy and Personal financial Management Behaviour

As was previously mentioned, one of the most well-known theories of human social behaviour is the "Theory of Planned Behaviour" (TPB), developed by Ajzen in 1991 as an expansion of the Theory of Reasoned Action (TRA), 1975. According to this notion, a person will use all of the information at their disposal to make a strategic decision logically. This theory holds that attitude is one of the most important indicators of success or failure of financial behaviour. The literature increasingly recognises DFL as a key determinant of financial behaviour, especially in contexts where digitalisation is reshaping financial transactions.

A strand of research highlights the synergy between positivity, literacy, and behaviour. (Panos & Wilson 2020) argue that optimism contributes to sound financial behaviour such as saving, investing, and planning, and that digital literacy complements this by shaping behaviour in digital environments. (Andreou & Anyfantaki 2020) extend this by insisting that financial literacy and digital literacy must be integrated to properly assess financial attitudes and behaviours. Earlier studies on financial literacy (Fernandes et al., 2014; Jamal Amer Azlan Abdul et al., 2015; Sayinzoga et al., 2016) provide evidence of its connection to financial behaviour. However, they also reveal a major limitation, a lack of research on how digital financial literacy specifically influences behaviour. This signals a clear gap: traditional financial literacy is well-studied, but its digital counterpart remains underexplored.

More recent works address this gap. (Setiawan et al. 2020) confirmed that DFL influences financial behaviour similarly to financial literacy, but with added complexity due to reliance on digital platforms and socioeconomic background. (Prete 2022) shows that effective decision-making in the digital era requires financial literacy to be paired with the capacity to navigate digital financial services, particularly payment systems. Empirical evidence also links DFL with personal financial management dimensions. (Chhillar & Arora 2022) identified multiple aspects of personal financial management and their influence on digital financial management behaviour. (Furinto et al. 2023) found that financial investment decisions improve when DFL and financial literacy interact with socioeconomic status. (Kumar et al. 2023) add nuance, showing that psychological, behavioural, and demographic aspects of financial decision-making are indirectly shaped by DFL, which in turn reinforces autonomy and financial competence while moderating impulsivity.

The literature also points towards educational and behavioural innovations. (Dewmini et al. 2023) stress that digital financial education initiatives can significantly improve financial behaviour. (Abdallah et al. 2024) highlighted knowledge, awareness, and decision-making as

the central components of DFL that directly influence behaviour. (Issac & Devi 2025), drawing on the Decomposed Theory of Planned Behaviour (DTPB), propose integrating digital tools such as AI chatbots into financial education to strengthen attitudes and behaviour.

At the same time, not all findings are consistent. (Barus et al. 2024) demonstrated that digital payment behaviour partially mediates the relationship between financial literacy and PFMB, suggesting that digital adoption is a pathway rather than a direct driver. Dewi et al. (2024) further showing that although digital financial management improves well-being, DFL itself has no significant effect on Indonesians' digital financial welfare. This implies that while DFL facilitates access, its real impact depends on behavioural reinforcement and contextual factors.

2.10 Digital Financial Literacy mediates the relationship among Financial Attitude, Financial Socialization and Personal Financial Management Behaviour

Ameliawati & Setiyani (2018) examined economics students in Indonesia and found that financial attitude, socialisation, and financial experience are not only directly linked to financial management behaviour but also indirectly through the mediating effect of financial literacy. This highlights the role of traditional financial literacy as a bridge between antecedents (attitudes/socialisation) and behavioural outcomes.

Building on this, Kumar et al. (2022) expanded the framework by explicitly introducing digital financial literacy (DFL) as a mediating construct. Their study on Delhi NCR respondents demonstrated that DFL mediates the relationship between abilities, perceived financial well-being, and financial management. This positions DFL as more than an extension of literacy, it functions as a behavioural enabler in digital contexts.

Qamar et al. (2023) offered further nuance by showing that financial attitude and socialisation positively and significantly impact financial management behaviour, but importantly, DFL integration mediates this relationship. However, they also observed a limitation: while saving and spending behaviour positively affect DFL integration, they do not significantly influence financial behaviour. This indicates that DFL does not uniformly mediate across all financial activities, suggesting selective or domain-specific mediation effects.

2.11 Identification of Research Gap

The extensive literature on personal financial management behaviour (PFMB) and its associated dimensions highlights that a considerable volume of scholarly work has been conducted globally. PFMB is widely recognised as a key determinant of individual financial

well-being and is increasingly considered an essential part of financial literacy (Farrell et al., 2016; Yong et al., 2018; Ameliawati & Setiyani, 2018; Adiputra & Patricia, 2019; Ameer & Khan, 2020; LeBaron et al., 2020; Andreou & Anyfantaki, 2020; LeThanh Tam et al., 2021; Halim & Setiawan, 2021; Rey-Ares et al., 2021; Rahayu et al., 2022; Amalda, 2022). Financial literacy and PFMB have been linked to an individual's ability to plan for the future, make sound investment decisions, manage debt responsibly, and enhance financial resilience. Despite the vast global literature, large-scale surveys show alarming gaps in financial knowledge. According to the Standard & Poor's Global Financial Literacy Survey (2015), only 33% of adults worldwide are financially literate, indicating that two-thirds of the global population lack the knowledge and skills to make effective financial decisions. For instance, in high-income countries such as Germany, financial literacy rates reach around 66%, while in emerging economies such as India, the percentage falls significantly short. Thus, while there has been considerable research in advanced economies, emerging economies like India remain comparatively underrepresented in the PFMB discourse. When narrowing the scope to India, the literature indicates that relatively fewer comprehensive studies have been undertaken in this area. Existing research has explored aspects of PFMB but often in fragmented ways, without a holistic framework that captures the diverse influences on financial behaviour (Ratna Achuta & Saloni, 2016; Singh et al., 2018; Rai et al., 2019; Bapat, 2020; Sehrawat et al., 2021; Goyal et al., 2021; Hamid & Loke, 2021; Singh & Malik, 2022). This limitation is particularly concerning given India's financial landscape. Despite rapid economic growth, only 27% of Indian adults are financially literate, far below the global average (S&P Global, 2015). The situation becomes even more critical in rural and semi-urban areas where traditional practices, limited access to financial services, and gender disparities compound the problem. Further narrowing the lens to the state of Punjab, it becomes evident that the gap is even more pronounced. Studies in Punjab on PFMB are sparse and scattered (Aulakh & Saluja, 2017; Manchanda & Sukhija, 2019; Bansal, 2019; Sharma & Kaur, 2019; Singla & Mallik, 2021; Mahajan, 2022; Purohit & Chutani, 2022). Most of these studies primarily focus on financial literacy in broad terms, its effect on household savings, or its linkage with general financial behaviour. However, they fail to capture the comprehensive and nuanced dynamics of PFMB, particularly in the context of women in Punjab. With Punjab being one of the agriculturally advanced states in India yet facing rising challenges of debt, unemployment, and gender inequalities, the absence of robust studies is a major limitation in the literature. Earlier research has largely concentrated on traditional financial literacy and its effects on financial behaviour and well-being (Arianti, 2017; Meyliana et al., 2019; Daragmeh et al., 2021; Normawati et al.,

2021). Traditional financial literacy typically encompasses knowledge of savings, budgeting, interest rates, and investments. While this remains important, the financial ecosystem in India is undergoing a rapid digital transformation. The Reserve Bank of India (RBI) reports that digital payment transactions increased by 51% between 2019 and 2022, driven by platforms such as UPI, Paytm, and Google Pay. Moreover, India recorded 89.5 billion digital transactions in FY 2022–23, making it the largest real-time payment ecosystem globally (RBI, 2023). This surge in digitalisation underscores the urgent need to shift focus from traditional financial literacy to digital financial literacy (DFL). DFL equips individuals with the skills to use digital platforms safely, avoid online fraud, and integrate digital services into everyday money management. Despite its growing importance, literature linking DFL with various facets of PFMB remains insufficient (Morgan & Trinh, 2019; Andreou & Anyfantaki, 2020; Setiawan et al., 2020; Tiwari et al., 2020; Golden & Cordie, 2022; Prete, 2022; Chhillar & Arora, 2022). Although Bapat (2019) highlighted that digital banking significantly influences financial behaviour, empirical evidence connecting DFL with specific aspects of PFMB, particularly among women in India and Punjab, is scarce. Another critical gap lies in the area of financial socialisation. Research in this domain has mostly focused on emerging adults, students, and millennials as the primary sample populations (Gudmunson & Danes, 2011; Jorgensen, 2016; Antony et al., 2019; Feng Zhu, 2019; LeBaron, 2020; Sabri et al., 2021). Financial socialisation involves the transmission of financial norms, behaviours, and attitudes from parents, peers, and society. However, very few studies have explored this phenomenon among women, despite clear evidence of gendered disparities in financial behaviour. For example, the OECD (2020) reported that women in India are 8% less likely than men to be financially literate, which has implications for their capacity to engage with both traditional and digital financial services. Women often rely more heavily on informal channels of financial socialisation, such as family discussions, rather than structured financial education programs, making this an underexplored but crucial area of research. While several studies have examined financial attitudes across diverse demographic groups (Dwiastanti, 2017; Prihartono & Asandimitra, 2018; Adiputra & Patricia, 2019; Yahaya et al., 2019; Siswanti & Halida, 2020; Yogasnumurti et al., 2020; Syarif & Putri, 2022; Moko et al., 2022), limited scholarship focuses specifically on women in Punjab. Financial attitudes play a pivotal role in shaping PFMB, as they influence saving, borrowing, spending, and investment decisions. In Punjab, where patriarchal norms and cultural traditions often restrict women's financial autonomy, there is an even stronger need to investigate how women's financial attitudes interact with financial literacy and socialisation to shape their overall PFMB. The convergence of these issues low levels of financial literacy, rapid

digitalisation, and gender disparities creates a clear and pressing research gap. While global and national studies have contributed valuable insights, the unique context of Punjab remains understudied. Women in Punjab face distinct socio-cultural challenges, including limited access to financial services, dependence on male family members for financial decisions, and restricted participation in the workforce. Despite these realities, academic research that systematically explores women's PFMB, incorporating both traditional and digital financial literacy alongside socialisation and attitudes, is lacking. The current study seeks to address these gaps by providing a comprehensive examination of PFMB among women in Punjab. It will consider independent variables such as traditional financial literacy, digital financial literacy, financial attitude, and financial socialisation, and their collective influence on PFMB as the dependent variable. By focusing on women in Punjab, the study not only addresses an underexplored demographic but also contributes to the broader discourse on financial inclusion and empowerment in India. Ultimately, bridging this gap is critical for designing effective interventions and policies aimed at improving women's financial literacy, enhancing their decision-making capacity, and promoting equitable financial participation. As India moves towards a digitally enabled economy under initiatives such as Digital India and Pradhan Mantri Jan Dhan Yojana, understanding the dynamics of PFMB among women in regions like Punjab becomes all the more essential.

Summary of Chapter

This chapter reviewed the extensive literature to have deeper understanding of the constructs under study. Further, this chapter elaborates on the literature showing the relationship among all the independent and dependent constructs and also increases our knowledge of mediating variable and its effect on the relationship among other variables. The previous literature has been studied to find the research gap for new study which guide us in formulating objectives, hypothesis and research questions. This thorough literature analysis is helpful for the development of conceptual framework, selection of various constructs for present study and to examine the relationship among different constructs used in the study.

Chapter 3

Research Methodology

3.0 Introduction

According to Clifford Woody, the research process consists of first defining and redefining the problem, then formulating a different hypothesis, and then the crucial step of gathering data, organizing it to make it meaningful, evaluating or analysing it using a variety of tests to arrive at a conclusion, and then testing these conclusions to determine the fitness of hypothesis. This chapter outlines the study's goals and concentrates on how and when it was carried out, the research methodology that was used, the various approaches and methods used to choose and approach the samples, the sources that were used to gather data, and the sample size calculation. The hypothesis utilized to identify the association is also determined in this chapter.

3.1 Research Questions

RQ1: What impact might women's financial attitudes have on their individual financial management practices?

RQ2: How would financial socialization impact women's individual financial management practices?

RQ3: Will women's personal financial management behaviour and financial attitude be mediated by digital financial literacy?

RQ4: How could women's personal financial management practices and financial socialization be mediated by digital financial literacy?

RQ5: How will women's personal financial management behaviour be impacted by their combined financial attitude, financial socialization, and digital financial literacy?

3.2 Objectives of study

1. To study the effect of financial attitude on personal financial management behaviour of women.
2. To explore the effect of financial socialization on personal financial management behaviour of women.
3. To examine the mediating effect of digital financial literacy on the relationship among financial attitude, financial socialization and personal financial management behaviour of women.

3.3 Research Hypothesis

H1: Financial Attitude has a significant influence on Personal Financial Management Behavior of women.

H2: Financial Socialization has a significant influence on Personal Financial Management Behavior of women.

H3: Digital Financial Literacy has a significant influence on Personal Financial Management Behavior of women.

H4: Financial Attitude has a significant influence on Digital Financial Literacy.

H5: Financial Socialization has a significant influence on Digital Financial Literacy.

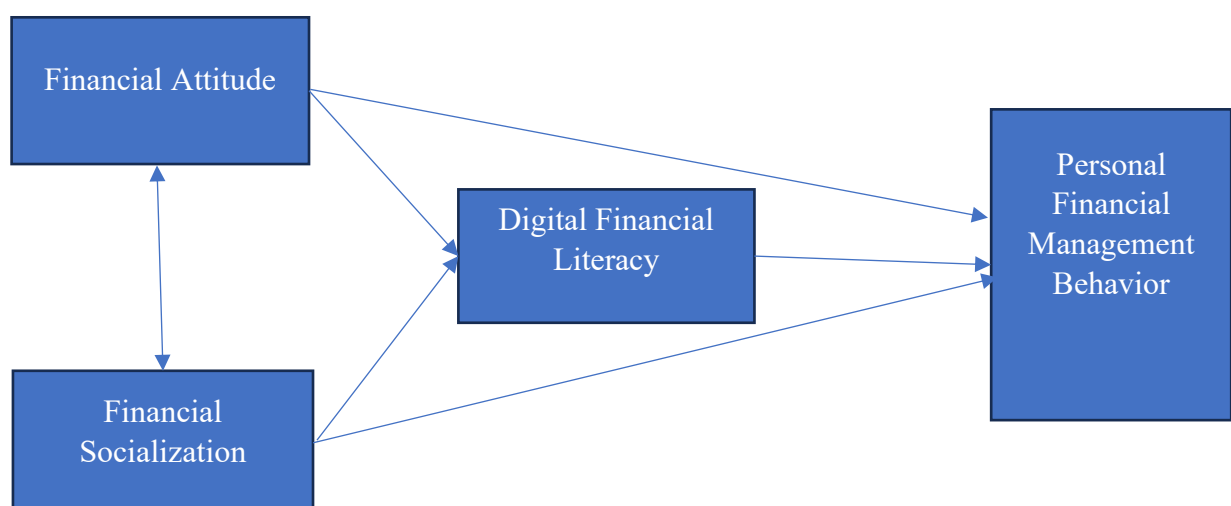
H6: Financial Socialization has a significant influence on Financial Attitude of women.

H7: Digital Financial Literacy mediates relationship between Financial Attitude and Personal Financial Management Behavior.

H8: Digital Financial Literacy mediates relationship between Financial Socialization and Personal Financial Management Behavior.

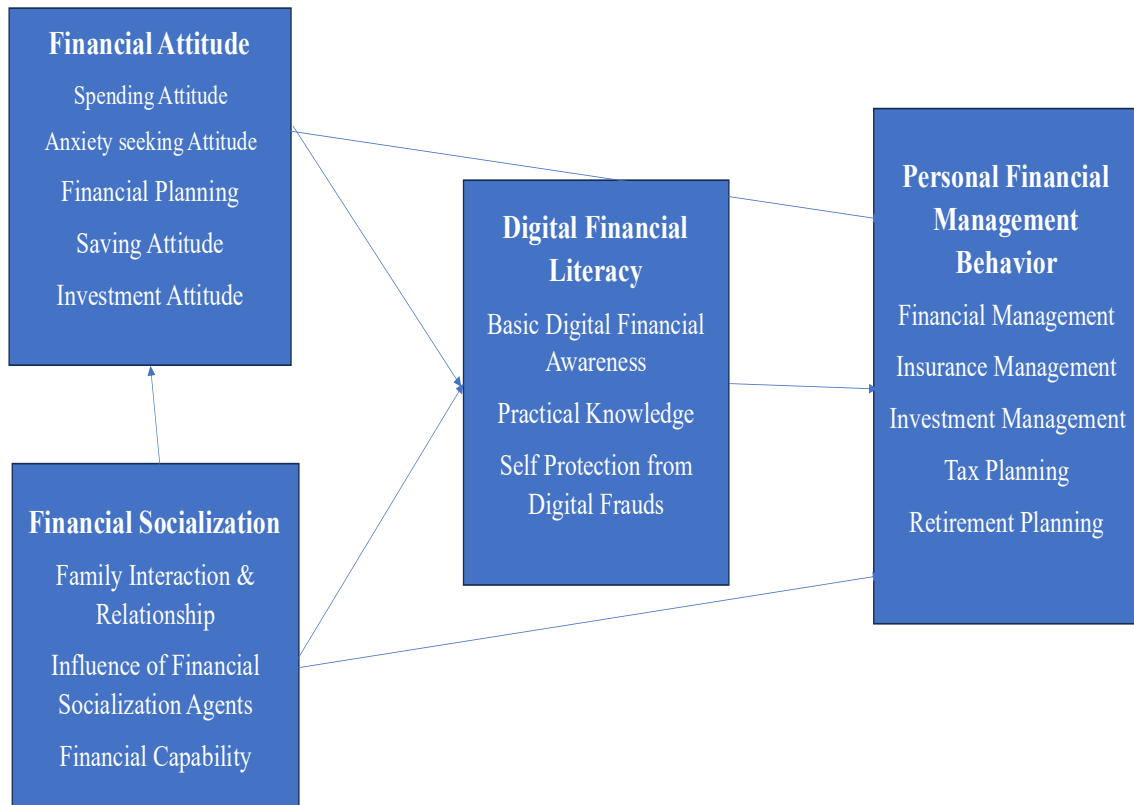
3.4: Conceptual Framework

Figure 3.1 Conceptual Model



The present study has two independent constructs viz, financial attitude and financial socialisation as exogenous constructs. Digital financial literacy acts as a mediating variable. The dependent/ endogenous construct is personal financial management behaviour. The structural model conceptualizes the direct effect of financial attitude and financial socialisation on personal financial management behaviour and further, digital financial literacy mediated the relationship among various constructs used in the study.

Figure 3.2 Conceptual Framework



Source: Author's Compilation

The above figure showed various constructs and their dimensions used in the study. This conceptual framework has been developed from the literature survey. It shows 5 dimensions of financial attitude, 3 dimensions of financial socialisation, 3 dimensions of mediating variable DFL and 5 dimensions of dependent variable has been used in the present study.

3.5 Research Design

(Parahoo 2006) A study design is a methodical strategy to decide how, when, and where to gather and analyze data in order to meet predetermined goals. According to Malhotra and Dash (2009) Exploratory research and descriptive research are the two categories of research design. The Exploratory Research is used when the researcher is unsure of how to approach the

research problem and when formal research methodologies are not used in a certain field. Descriptive research aids in describing the traits of certain individuals or groups. According to Kothari, C. R. (2004), Information collection regarding current circumstances or conditions for description and interpretation is the focus of descriptive research design. The identification of the current state of affairs is the main goal of this type of inquiry. Dr. Y.P. Aggarwal, (2008) this kind of research methodology requires appropriate analyses, interpretations, comparisons, and the identification of patterns and connections. The current study uses a survey research approach and is descriptive in nature. A quantitative method of data collection will be used to conduct an analysis.

The research approach used in this study is as follows:

1. After a careful analysis, gaps in the corpus of knowledge were identified, and a conceptual framework for the study was created.
2. The conceptual model served as the foundation for developing research hypotheses.
3. The instrument for the study was formed using the data from scholarly research and the preliminary investigation.
4. A cross-sectional study and survey research methodology were used in the main investigation.

3.5.1 Research Approach

The research methodology is based on conscious methodical thinking (Spens & Kovacs, 2006). It is the intersection of philosophical assumptions, study design, and technique (Creswell, 2003). There are mainly two sorts of research approaches:

Deductive Approach- As stated by Spens and Kovacs (2006), this approach begins with the theoretical analysis. Thereafter, additional research is carried out to ascertain how the theory and the data relate to one another. Thus, deductive reasoning starts with the establishment of a theory, followed by a test of the theory's applicability to a particular instance (Hyde, 2000). It is regarded as the preeminent research method in natural sciences (Collis & Hussey, 2003).

Inductive Approach- It is the opposite of the deductive method (Johnson, 1996). In the inductive method, issue comprehension comes first, followed by the creation of a theory. Inductive inquiry begins with the collection of facts or observations (Andreewsky & Bourcier, 2000). Using this strategy, one progresses from a specific to a more general level. This research method is predominantly qualitative and has numerous applications in the social sciences.

The current study employs a **deductive methodology**, as the study objectives were founded on conceptual and theoretical considerations of behavioural theories that influences how people make financial decisions. The study investigates how digital financial literacy, financial socialisation and financial attitude affect PFMB.

3.5.2 Time Horizons

A research study may be cross-sectional or longitudinal, depending on the length of time. Examining a phenomenon or event at a certain moment in time is the main goal of cross-sectional research. Information and data are thus gathered only once. To determine the variance of dependent variables, a longitudinal study collects data at various intervals (Sekaran, 2000). The study's main goal is to examine how various factors affect PFMB. **Cross-sectional** studies are therefore recommended to get responses from a vast sample in a brief span of time (Hair et al., 2006). The data is collected between April to November 2023.

3.6 Sample Design

A sample design offers a guide for choosing a survey sample. It focuses on coming up with a way to select objects from the universe before the survey is conducted. Kumar (2014), It alludes to the method or process used to choose a sample and the size of that sample. It will comprise of a sampling unit, technique, and sample size.

3.6.1 Sample unit & Sampling Frame

The study used women from the state of Punjab serve as the sample unit. Women are divided into working and non-working groups to fulfil the study's objectives. Working Women in this context are those who are employed in the corporate, banking, or educational sectors; Non-Working Women are chosen from among homemakers.

3.6.2 Sampling Technique

The current study used the purposive sampling method which is a **non-probability sampling** technique as it does not determine probability. The researcher decides the sampling units to achieve the objective of the research study. It starts with the purpose in mind, and the sample includes only those respondents who fulfil the purpose (C.R. Kothari, 2004). In the context of this study, the focus is on women in Punjab and their personal financial management behaviour (PFMB). Since the research problem requires respondents who are directly engaged in financial decision-making, digital financial literacy, and financial socialisation, it is not feasible or appropriate to randomly select participants from the general population. Randomisation may

lead to the inclusion of individuals who do not meet the study's criteria, thereby diluting the quality and relevance of data (Palinkas et al., 2015; Etikan et al., 2016). Purposive sampling, therefore, ensures that only respondents with the necessary exposure and experience are selected, enabling the collection of meaningful and context-specific insights. Furthermore, purposive sampling is particularly effective in exploratory and context-driven studies, where the aim is not generalisability but depth of understanding (Andrade, 2021). Given the lack of prior research on PFMB specifically among women in Punjab, purposive sampling provides a focused approach to identify participants who can contribute to bridging this gap in the literature. It also allows the researcher to capture the nuanced experiences of women in financial matters, which might otherwise remain underrepresented. Thus, the use of purposive sampling is justified on methodological and practical grounds. It enhances the validity of the study by ensuring the sample is aligned with the research objectives, reduces the risk of irrelevant responses, and supports the generation of rich, targeted, and reliable findings.

Further, the Purposive Sampling is combined with Snowball Sampling to enrich the data collection and response rate. The integration of purposive sampling with snowball sampling is a methodological strategy that capitalizes on social networks, wherein the initial participants identify and refer subsequent respondents who also meet the predetermined inclusion criteria (Anderson et al., 2020; Saunders et al., 2023). Snowball sampling is particularly advantageous for accessing populations that are otherwise difficult or nearly impossible to reach through conventional sampling methods (Bryman & Bell, 2019). Typically, the process commences with purposive sampling, whereby participants are intentionally selected based on specific attributes that align with the research objectives (Scharrer & Ramasubramanian, 2021). Subsequent selection occurs through participant referrals, thereby facilitating the progressive expansion of the sample and enhancing the breadth and depth of the dataset.

3.7 Sample Selection Procedure

Selecting the appropriate sample size is essential in empirical research. It should be appropriately selected to allow for the drawing of generalizable conclusions. The amount of information required to make an informed decision about a particular study is determined by calculating the sample size. The sample size should be adequate to allow for taking an informed decision.

Rao soft was used to determine the sample size for this investigation, and the results indicated that a sample of 385 or more is sufficient. The 22 districts of Punjab make up the research area. 546 female respondents make up the study's final sample.

Table 3.1 Calculations of Sample Size

Sr . No	Districts	Female Literacy	Average %	Sample Size= 385* Average %	Working Women	Non-Working Women	Average % of working women	Average % of non-working women	Sample Size working women	Sample size non-working women
1	Gurdaspur	5,03,373	6.085938202	23	59,301	6,77,508	5	6	10	13
2	Pathankot	2,23,686	2.704434232	10	17,801	2,88,712	2	3	4	6
3	Amritsar	7,51,789	9.089365927	35	1,24,886	9,89,587	10	9	18	17
4	TaranTaran	2,89,735	3.502987456	13	43,359	4,63,195	4	4	7	6
5	Kapoorthala	2,60,313	3.147266204	12	35,180	3,40,254	3	3	6	6
6	Jalandhar	7,39,956	8.946301228	34	1,02,871	9,13,391	9	8	18	16
7	SBS Nagar	1,99,304	2.409648168	10	23,228	2,64,942	2	2	5	5
8	Hoshiarpur	5,61,772	6.792000516	26	58,730	6,90,252	5	6	12	14
9	Roopnagar	2,24,197	2.710612383	10	32,351	2,80,376	3	2	6	4
10	SAS Nagar	3,26,631	3.949071724	15	57,867	3,92,747	5	3	9	6
11	Ludhiana	11,31,874	13.68471336	53	1,68,700	13,99,701	14	12	28	24
12	Firozpur	2,61,744	3.164567445	12	35,456	3,98,543	3	3	6	6

1 3	Fazilka	2,58,69 7	3.127728 255	12	41,412	3,98,605	3	3	6	6
1 4	Faridkot	1,65,51 8	2.001164 781	8	22,191	2,54,331	2	2	4	4
1 5	Muktsar Sahib	2,24,44 7	2.713634 962	10	33,998	3,63,647	3	3	5	5
1 6	Moga	2,79,34 0	3.377308 631	13	45,254	4,03,033	4	4	7	6
1 7	Bathinda	3,56,60 7	4.311491 01	17	62,621	5,28,330	5	5	9	8
1 8	Mansa	1,79,52 3	2.170489 644	8	40,167	2,63,246	3	2	5	3
1 9	Sangroor	4,31,66 9	5.219014 245	20	56,160	6,93,511	5	6	9	11
2 0	Barnala	1,57,83 2	1.908238 619	8	22,112	2,46,837	2	2	4	4
2 1	Patiala	5,55,73 9	6.719059 644	26	77,925	7,82,558	6	7	12	14
2 2	Fatehgar h Sahib	1,87,33 7	2.264963 367	10	24,735	2,47,362	2	2	5	5
	Total	82,71,0 83			11,86,3 05	1,12,80, 668				

Source: www.esopb.govt.in 2011

According to RAOSoft Sample Size is 385

3.7.1 Steps for calculating Sample Size:

Selecting an appropriate sample size is essential in empirical research as it directly affects the reliability, accuracy, and generalizability of the findings. An adequately calculated sample ensures that sufficient data is available to make informed inferences about the population under study. In this investigation, the RAOSoft sample size calculator was used to determine the minimum required sample size. Based on the tool's parameters (confidence level of 95%, margin of error 5%, and population size exceeding 1 million), the recommended minimum sample size for this study was 385 respondents. The following is the detailed procedure showing the sample selection:

3.7.2. Population Selection:

The female population across all 22 districts of Punjab was taken into account. The data for female literacy, as per the Census of Punjab (www.esopb.govt.in, 2011), was used as the basis for proportionate allocation.

3.7.3. Proportionate Allocation Based on Literacy:

The average percentage of female literacy in each district was calculated by dividing the female literate population of the district by the total female literate population of Punjab. This proportion was then multiplied by the RAOSOFT-derived base sample size (385) to calculate the preliminary sample size for each district.

3.7.4. Working and Non-Working Women Proportions:

Within each district, the female population was further classified into working and non-working women, again using the Census data (www.esopb.govt.in, 2011). The average percentages of working and non-working women were computed and applied proportionally to the district-wise sample sizes. This ensured that the final sample was representative not only of geographical distribution but also of employment status.

3.7.5 Final Allocation:

The final sample distribution was obtained by dividing the district-level sample sizes into the respective proportions of working and non-working women. This method ensured balanced representation of both categories across all districts of Punjab.

3.7.6 Final Sample Achieved

Although the required minimum sample size was 385, the final study achieved responses from 546 women across the 22 districts of Punjab. This increase in sample size strengthens the reliability of the results, reduces sampling error, and enhances the robustness of the study's conclusions. The response rate was considered highly satisfactory, as the number of completed and usable responses significantly exceeded the required minimum threshold.

3.7.7 Ethical Considerations and Clearance

Ethical considerations were central to the data collection process. The following measures were adopted to ensure compliance with research ethics:

3.7.8 Informed Consent: All respondents were informed about the objectives of the study, the voluntary nature of their participation, and their right to withdraw at any stage without penalty. Consent was obtained prior to data collection.

3.7.9 Confidentiality and Anonymity: Personal identifiers were not collected, and responses were recorded anonymously to protect participants' privacy. Data were used strictly for academic purposes.

3.7.10 Non-Coercion: Participation was entirely voluntary, and no monetary or material incentives were offered, thus eliminating coercion.

3.7.11 Institutional Clearance: Ethical clearance for conducting the study was obtained from the relevant Institutional Ethics Committee prior to commencing fieldwork. This ensured that the study adhered to accepted ethical research standards.

3.7.12. Justification

The use of purposive sampling in conjunction with proportionate allocation ensured that the selected respondents were most relevant to the study's objectives. By including both working and non-working women proportionally across all districts, the study captures diverse perspectives on personal financial management behaviour. Moreover, the larger-than-required final sample size (546) further increases confidence in the validity and generalizability of the findings. In conclusion, the sample size calculation and distribution process was rigorous, scientifically grounded, and ethically compliant. The robust methodological approach ensures that the results are both reliable and reflective of the women population of Punjab in terms of literacy, employment status, and geographical spread.

3.8 Data Collection Procedures

Data for this study were collected from women respondents across 22 districts of Punjab using a structured questionnaire. The process was carefully designed to ensure reliability, consistency, and adherence to ethical standards. Both working and non-working women were included, based on proportionate allocation derived from district-wise female literacy and employment statistics. The data collection was conducted in two modes: face-to-face surveys and online distribution of questionnaires, depending on accessibility and convenience of respondents. For online data collection, the questionnaire was shared through secure digital platforms, with instructions provided in both English and Punjabi for better comprehension. Prior to participation, all respondents were provided with a brief introduction outlining the purpose of the study, the voluntary nature of their involvement, and assurance of confidentiality. Informed consent was obtained from each participant before administering the questionnaire. For in-person surveys, respondents signed a written consent form; for online participation, a digital consent statement was displayed at the beginning of the questionnaire, and respondents could proceed only after confirming their agreement. To maintain anonymity, no personal identifiers such as names, addresses, or contact details were recorded. Participants were assured that their responses would be used strictly for academic purposes and reported only in aggregate form. Data were stored securely with restricted access to the research team.

This systematic and ethically compliant approach ensured transparency in the data collection process, minimized potential biases, and respected the rights and dignity of participants.

3.9 Study Variables

The study uses two sets of variables: these are detailed as under:

Independent Variables: Financial Attitude, Financial Socialisation

Dependent Variable: Personal Financial Management Behaviour

Mediating Variable: Digital Financial Literacy

3.10 Preparation of Research Instrument

The primary source for gathering data from respondents is the research instrument questionnaire. Respondents may be asked either of two sorts of questions: open-ended or closed-ended. Although it is challenging to code and analyze the open-ended questions but they allow respondents the freedom to think and write in their own language. In order to provide respondents with pre-made categories to react to the questions posed, the current study employed a closed-ended questionnaire. The information gathered from closed-ended questions includes Likert scale, ordinal, and categorical data. First, following a thorough literature review, a comprehensive questionnaire was created. Academicians' and industry experts' opinions were sought to assess the content validity of questionnaire, and specialists were then consulted. Further, the questionnaire was sent to experts who included academicians from the field of finance, bank managers, and corporate executives as well as researchers who are doing the research in the same area for taking their advice. After incorporating the suggestions as recommended by the experts, the questionnaire was prepared for the study. The researcher picked a five-point Likert scale for the current study because it is simple to create and administer, and it is also easy for respondents to comprehend how to use the scale. The distribution of printed copies of the survey instrument and online Google forms are the two main methods used to gather the replies. The online questionnaire was sent through snow balling technique in which the women are requested to forward the questionnaire to 3 to 4 working and non-working women from their social/professional networks and about 10% was filled through offline mode to cover those respondents who were not familiar with filling of online forms.

3.11 Data Analysis Quantitative vs Qualitative

The data analysis plays a critical role in interpreting the findings and drawing meaningful conclusions. In order to find patterns, links, and associations between variables, quantitative data analysis uses statistical techniques to analyze numerical data, including regression

analysis, correlation, and descriptive statistics. On the other hand, qualitative data analysis uses methods such as content analysis or thematic analysis to find recurrent themes, categories, or patterns in textual data from focus groups or interviews. In order to give a thorough grasp of the variables impacting Punjabi women's individual financial behaviour, this study employed quantitative data analysis.

3.12 Data Analysis Tools & Techniques

Table 3.2 Research & Analysis Tools and Techniques

Objectives	Research Tool & Technique Used	Analysis Techniques
1.To study the effect of financial attitude on personal financial management behaviour of women.	Questionnaire Purposive Sampling Technique	Multiple Regression Analysis, Descriptive Analysis and PLS 4.
2. To explore the effect of financial socialization on personal financial management behaviour of women.	Questionnaire Purposive Sampling Technique	Multiple Regression, Descriptive Analysis and PLS 4.
3.To examine the mediating effect of digital financial literacy on the relationship among financial attitude, financial socialization and personal financial management behaviour of women.	Questionnaire Purposive Sampling Techniques	SEM is utilized to ascertain the causal relationship between the constructs in the proposed model. According to Hair, Tatham, et al. (2006), the Chi-Square Test, Comparative Fit Index (CFI), Goodness-of-Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA) are used to assess the model's fitness.

3.13 Overview of Questionnaire

The survey is broken up into five parts.

The purpose of the **first component** was to determine the demographic profile of the participants. There was a nominal data scale used to gather the respondents' demographic

information. This part comprises inquiries about the respondents' age, marital status, income, place of residence, employment history, and education level.

The **second segment** was created to gauge financial attitude and includes aspects such as investment, saving, financial planning, spending, and anxiety-seeking attitudes. Twenty questions overall, using a five-point Likert scale with 1 denoting "strongly disagree," 2 "disagree," 3 "neither agree nor disagree," 4 "agree," and 5 "strongly agree," were asked of respondents to gauge their financial mindset. OECD/INFE 2018; Chatterjee et al. 2018; Potrich et al. 2016) established a scale from which these questions were modified.

The **third portion**, which examined financial socialization, covered topics such as family relationships and interactions, financial socialization factors that influence financial decisions, and self-efficacy the ability to make independent financial decisions. In order to assess women's financial socialization, 14 questions on a 5-point Likert scale were asked to respondents. The sources of these inquiries were Shim et al. (2010), Shim et al. (2015), Gudmunson & Danes (2011), and Ashley B. Leborn (2020).

Digital financial literacy is covered in the **fourth component**, which covers topics including self-defence against digital financial scams, practical knowledge, and fundamental digital financial awareness. Respondents were asked a total of 15 questions about their digital financial literacy using a Likert scale of point 5, asking five questions from each dimension. The questions were modified from the scale that was created by (INFE OECD 2022; Lyons & Kass Hanna 2021).

The **fifth component** was created to analyze the dependent variable, PFMB, which encompasses retirement, tax, investment, insurance, and financial planning. This part asked respondents a total of 14 questions based on a 5-point Likert scale to assess their personal financial management practices. The questions were modified from a scale created by (Lai & Tan 2009; Patel & Kumar 2017; OECD/INFE 2018).

3.14 Measurement and Validation

The initial step for scale development is to define the construct evidently and clearly by using existing literature and theory. A construct cannot be measured directly it can be measured through the pool of items. The following are the constructs used in the study and the items and their sources that had been operationalised to measure the constructs of the model:

Table 3.3 Constructs and their Sources

Financial Attitude

Item Code	Particulars	Sources
	Spending Attitude	Chatterjee et al 2018; OECD/INFE 2018
FA1	When I make a purchase, I carefully evaluate my financial situation.	
FA2	I feel more satisfied in spending money than saving for long run	
FA3	When I go for shopping or dining out, I spend more than my budget	
	Anxiety Seeking Attitude	OECD/INFE 2018
FA4	I have an obligation to return borrowed money as quickly as possible.	
FA5	I usually worried about paying my regular living expenditures	
FA6	I keep a check on my financial affairs regularly to stay within budget	
	Financial Planning Attitude	Potrich et al 2016 OECD/INFE 2018
FA7	I keep money separate for bills from daily expenses	
FA8	I make my bill payments on time	
FA9	I am satisfied with my financial circumstances	
FA10	I work toward achieving long-term financial objectives.	
FA11	The way I manage my finances today will affect my future	
	Saving Attitude	OECD/INFE 2018
FA12	I try to save on a regular basis	
FA13	I try to meet my future financial goals through savings/ investment	
FA14	I like to meet any unexpected expenditure through borrowings	
FA15	I prefer saving in fixed deposit to achieve long term financial goals	

	Investment Attitude	OECD/INFE 2018
FA16	I am willing to take small financial risk while saving or investing	
FA17	I favour long-term investment with regular income	
FA18	I like to invest in the stock market even though it is somewhat risky because of the potential for large rewards.	
FA19	I compare and calculate risk before making investment	
FA20	My present situation restricts my ability to invest in risky projects	

Financial Socialisation

Item Code	Particulars	Sources
	Family Interaction & Relationship	Gudmunson & Danes 2011; Ashley B. Leborn et al 2021
FS1	I freely discuss financial matters with my family	
FS2	I take financial support from my family in case of need	
FS3	I follow my family/friends for taking financial decisions	
FS4	My family is my role model for financial management	
	Financial Socialisation Agents	Shim et al 2015; OECD/INFE 2022
FS5	I get influenced by my family, friends, colleagues, financial advisors before taking any financial decision	
FS6	Social media advertisements/ internet influenced my financial decisions	
FS7	I rely on financial information given on financial company's website	

FS8	I attend online financial education workshops, seminars to update financial knowledge	
FS9	I read magazines, newspapers, searching online financial news and watch market trend to update my financial knowledge	
	Financial Self-Efficacy/ Financial Capability	Chatterjee et al 2022
FS10	I take all financial decisions independently	Shim et al 2015; Glenn, C. E. 2018
FS11	I arrange parties at home or pay for my friends if go out for dinner.	
FS12	I learnt from my life experiences how to deal with financial matters	
FS13	I manage my daily household budget independently	
FS14	I depend upon my family for taking any financial decision	

Digital Financial Literacy

Item Code	Particulars	Sources
	Basic Digital Awareness	INFE OECD 2022; Lyons & Kass Hanna 2021
DFL1	I know how to open a bank account online	
DFL2	I use to take credit/ loan online	
DFL3	I use to check the balance and financial transactions of bank account online	
DFL4	I prefer to Pay bills online	
DFL5	I feel comfortable to transfer money online	
	Practical Application	Lyons & Kass Hanna 2021; OECD/INFE 2022
DFL6	I prefer to request/Pay for goods & services via digital payment apps (using Mobile wallet, Google pay, Paytm, Phone pe, bank apps etc.)	

DFL7	It is more convenient for me to make purchases through various online platforms like Amazon, Myntra, Flipkart, Meesho, Ajio etc	
DFL8	I am able to operate digital bank account independently	
DFL9	I use online platform for trading in shares/ mutual fund	
DFL10	I prefer to take most of the services (ticket booking, hotel booking, Zomato etc) online	
	Self-Protection from digital frauds	Lyons & Kass Hanna 2021; OECD/INFE 2022
DFL11	I keep on changing my password for online payments regularly to remain protected from digital financial frauds	
DFL12	I accidentally replied to an email, phone call, or message with my personal financial information (password and card number), which I later discovered was fraudulent.	
DFL13	I purchased an online financial product after being advised to do so, but it was later found to be a scam.	
DFL14	I know how to protect myself from digital scam or frauds	
DFL15	I know the procedure and authorities for filing complaints of digital frauds	

Personal Financial Management Behaviour

Item Code	Particulars	Sources
	Financial Management	
PFMB1	I set reminders on phone or make a note of upcoming bills to remember their due dates	Lai & Tan 2009; OECD/INFE 2022

PFMB2	I review my financial plans periodically (monthly, quarterly, yearly)	
PFMB3	I analyse all the facts before taking any long-term financial decision	
PFMB4	I compare the services offered by different financial companies before taking any long - term financial decision	
	Insurance Planning	Patel & Kumar 2017
PFMB5	Before purchasing any policy, I consider the insurance company's coverage.	
PFMB6	I have sufficient insurance policies to make myself and my family financially secure in case of any mishappening	
	Investment Management	Patel & Kumar 2017; OECD/INFE 2022
PFMB7	I consider risk and return attached with investment before making any investment decision	
PFMB8	I prefer to invest in more than one investment plan to minimise the risk	
	Tax Management	Patel & Kumar 2017
PFMB9	I take into account the tax advantages associated with the financial plans	
PFMB10	I understand how taxes might be applied to various investing options	
PFMB11	I fill my tax returns using a variety of tax rebates	
	Retirement Planning	Patel & Kumar 2017
PFMB12	I have started making retirement plans	
PFMB13	Early working age is a good time to begin retirement planning	
PFMB14	I know how much I will need to support a comfortable retirement.	

Source: Author's own

3.15 Preliminary Study

With the use of previous survey-based literature on PFMB, the first draft of the questionnaire for the present study was created. It is essential to make sure that the research tool always measures what it is supposed to evaluate when utilized appropriately (Del Greco et al., 1987). In short, the instrument should show that it is both reliable and valid. Face validity is shown by how the questionnaire is put together, how the questions are written, and how they are put in order. The content validity shows if all the areas have been covered in the right way. It was put to the test by sending the instrument to academics and professionals in the field. Academicians with background in personal financial planning as well as industry experts received the structured questionnaire first. They were requested to review the questionnaire's content, wording, length, and format. Minor adjustments were made based on the questionnaire's shortcomings, and the instrument was then employed for pilot testing.

3.16 Pilot Testing

The pilot study aids in identifying the gaps in the questionnaire's layout and organization. Additionally, it assesses the items' content validity and reliability as well as their clarity and definition for the respondents (Sekaran, 2000). Additionally, it attests to the instrument's refinement for data collection for the primary study. For survey research, the recommended sample size for a pilot study should be 100 or more (Hair et al., 2010). Women both working and non- working were given the questionnaire to fill out on their own and submit online and offline for the current study. At this point, non-probabilistic purposive sampling was used. After sending the follow-up emails and reminders, a total of 102 responses were gathered.

Table 3.4 Results of Pilot Testing

Sr No.	Dimensions	Cronbach's Alpha	No. of items
2	Financial Attitude	0.709	11
3	Financial Socialisation	0.765	10
4	Digital Financial Literacy	0.739	10
5	Personal Financial Management	0.732	14

Source: SPSS 24.0

Reliability indicates the ability of a questionnaire to produce similar results. It illustrates the questionnaire's internal consistency and looks at the degree of correlation between the several items that make up the same construct. Cronbach Alpha, the most widely used technique for

assessing reliability. A Cronbach Alpha number above 0.7 indicates high internal consistency, and the preceding table demonstrates that all construct values are above 0.7, indicating that the instrument is free from random error.

3.17 Factor Analysis

To identify the constructs under investigation in this study, factor analysis was used. Nevertheless, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was performed before the factor analysis. The KMO statistic provides an indication of the proportion of the variance in the variables that could be attributed to the presence of underlying causes. High eigen values that are quite near to 1.0 frequently indicate that factor analysis could work well with the data. Whereas a value less than 0.5 shows that, the factor analysis results are not useful for further study. The hypothesis that the correlation matrix is an identity matrix is further investigated by Bartlett's test of sphericity. Should this hypothesis be true, it would suggest that the variables are unrelated to one another, rendering them inappropriate for procedures involving the finding of structures. Based on the fact that the significance level has values that are less than 0.05, it is possible that a factor analysis could be beneficial to analyze the data. After that, factor analysis was run to identify the elements that contributed to the variation. The type of extraction that was utilized was known as Principal Component Analysis. The method of rotation was known as Varimax. According to the Kaiser criterion, the only factors that were kept were those that had Eigen values greater than 1. After that, the objects that were in accordance with each of these aspects were handled with a very responsible manner. Additionally, the scree plot was presented and the constructs used in the study were validated through the use of Confirmatory Factor Analysis (CFA) in structural equation modelling.

3.18 Common Method Bias

Additionally, the gathered data was assessed for common technique bias. The CMB that was first employed in the research of (Koh & Kim, 2004; Leimeister et al., 2006) was tested using Herman's one factor. Specifically, a factor analysis was performed utilizing the constructs, with no rotation approach and a maximum of one factor. If a factor accounts for more than half of the explained variation, the data is impacted by CMB. The study found that data did not pose a serious threat to CMB. Common method variance was also investigated using a single latent component (Podsakoff and Organ, 1986). To determine whether CMB had an effect on the data, CFA was conducted. The results show that none of the apparent factors load on the latent component. Rather, the burden on many manifest components could be ascertained, suggesting that CMB is not an issue in this study.

Chapter 4 Data Analysis

4.1 Introduction

This chapter enumerates the study's descriptive analysis and measurement model and reports the structural model's assessment. In addition, it investigated the construct reliability and validity. Collinearity assessment, estimation of coefficient determination, assessment of significant relationship among constructs of the study, determination of effect sizes of relationships, determination of predictive relevance, and the estimation of effect sizes of values of predictive relevance is discussed in this chapter. Results of hypotheses testing is duly reported. Thereafter, the results of the importance-performance matrix analysis were also discussed.

Reverse scoring was performed for items with reverse wording after the data had been gathered. The data was also examined using SPSS version 24.0. It is acknowledged as the greatest statistical program for social science investigations by academics, business professionals, and scholars (Tabachnick & Fidell, 2007; Field, 2013). It facilitates the execution of tests such as assessing the normality assumptions, multi-collinearity, and factor analysis that were crucial for achieving the study's goals and for testing the validity and reliability of the research tool. The reliability ensures that the instrument consistently yields similar findings when administered to different samples at a later time period.

Missing Data: It is necessary to observe that while designing the questionnaire proper care was taken so that there is no missing frequency in the collected data. Hence when the files were downloaded there were no missing data.

4.2 Descriptive Analysis

For measurement and validation of research instrument descriptive statistics has been used to measure the accuracy of the data entry process. Descriptive statistics helps to measure the variability of responses. In descriptive statistics the data was analysed by the frequency tables. The data collected spans across 22 districts primarily located in the Punjab region of India. Among the prominent districts Hoshiarpur, Pathankot, S.A.S. Nagar, Jalandhar, Ludhiana, Roop Nagar, Fatehgarh Sahib are highest in women literacy rate, the districts with moderately literate are Gurdaspur, Amritsar, Patiala, Moga and Faridkot, Kapurthala, S.B.S. Nagar, Barnala. The districts with least female literacy rate are Mansa, Shri Muktsar Sahib, Fazilka, Tarantaran, Bathinda, Firozpur and Sangrur. These districts are hubs of economic and cultural activities within their respective regions. The data collection from these diverse districts offers

insights into various socio-economic indicators, including demographics, economic activities, and are crucial for informed decision-making and policy formulation at regional and state levels.

Table 4.1 District wise data

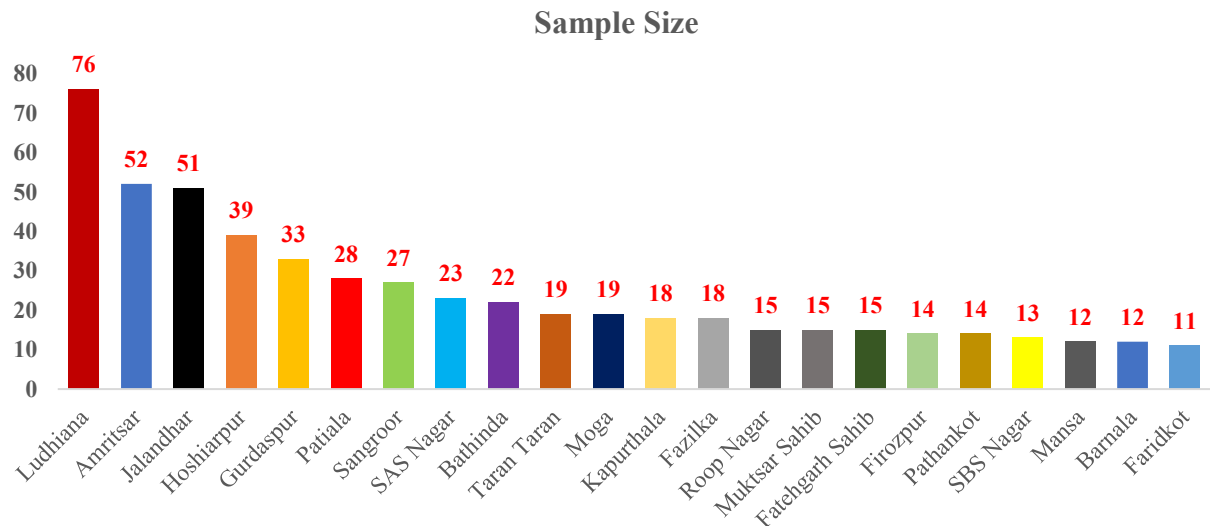
Districts	Sample Size
Ludhiana	76
Amritsar	52
Jalandhar	51
Hoshiarpur	39
Gurdaspur	33
Patiala	28
Sangrur	27
SAS Nagar	23
Bathinda	22
Taran Taran	19
Moga	19
Kapurthala	18
Fazilka	18
Roop Nagar	15
Muktsar Sahib	15
Fatehgarh Sahib	15
Firozpur	14
Pathankot	14
SBS Nagar	13
Mansa	12
Barnala	12
Faridkot	11
Total	546

Source: Author's Calculation

The district-wise data shows that out of a total sample size of 546, Ludhiana accounts for the largest share with 76 respondents (13.9%), followed by Amritsar with 52 respondents (9.5%), and Jalandhar with 51 respondents (9.3%). Together, these three districts contribute 32.7% of the total sample. Hoshiarpur and Gurdaspur represent 7.1% and 6% of the sample, respectively, while smaller districts like Faridkot, Barnala, and Mansa contribute just 2.2% each. Overall, the data collection is well-distributed, but it is skewed slightly towards the larger districts, with

Ludhiana alone contributing nearly 14% of the total. The data was collected from each side of punjab.

Figure 4.1 District wise data



Source: Author's calculation

Table 4.2 Marital Status

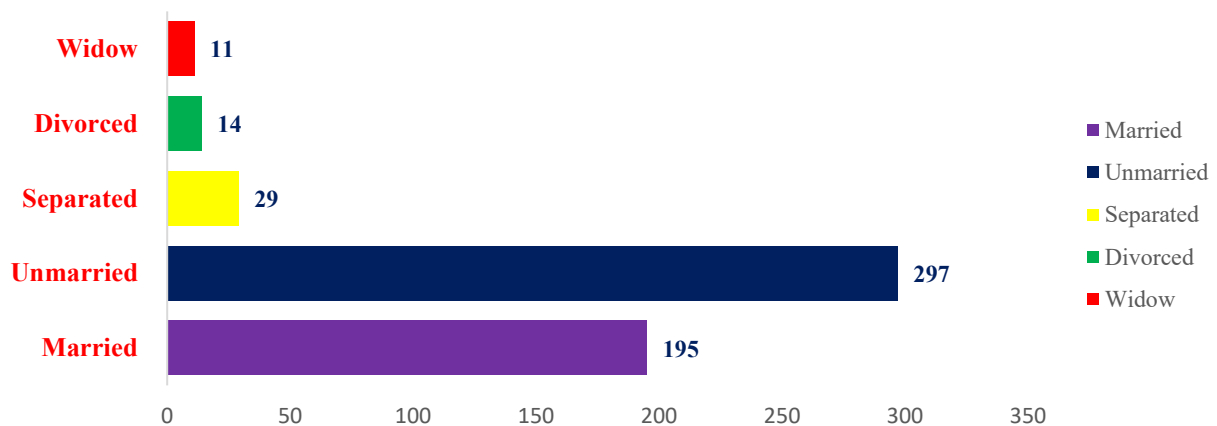
Marital Status	Numbers
Married	195
Unmarried	297
Separated	29
Divorced	14
Widow	11

Author's Calculation in SPSS

The marital status distribution of respondents shows that the majority are unmarried, accounting for 297 individuals, which represents 54.4% of the total sample. Married respondents make up 35.7%, with 195 individuals. Separated individuals total 29, contributing to 5.3% of the sample, while divorced respondents' number 14, making up 2.6%. Lastly, 11 respondents, or 2%, are widows. This data highlights that over half of the respondents are unmarried, with married individuals forming the second-largest group. The separated, divorced, and widowed categories collectively represent a small proportion of the overall population.

Figure 4.2 Marital Status

Marital Status



Author's Calculation

Table 4.3 Age of the Respondents

Age	Numbers
18 -25	175
26 -35	200
36 – 45	125
46 – 55	42
55 Above	4

Author's Calculation in SPSS

According to the respondents' age distribution, the largest group of 200 people, or 36.6% of the sample as a whole, are between the ages of 26 and 35. The age group 18-25 follows closely, accounting for 175 respondents, or 32.1%. The 36-45 age group includes 125 individuals, making up 22.9% of the sample, while the 46-55 age group comprises 42 respondents, representing 7.7%. Only 4 individuals, or 0.7%, are aged 55 and above. This data highlights that a majority of the respondents are between the age group of 18 and 45.

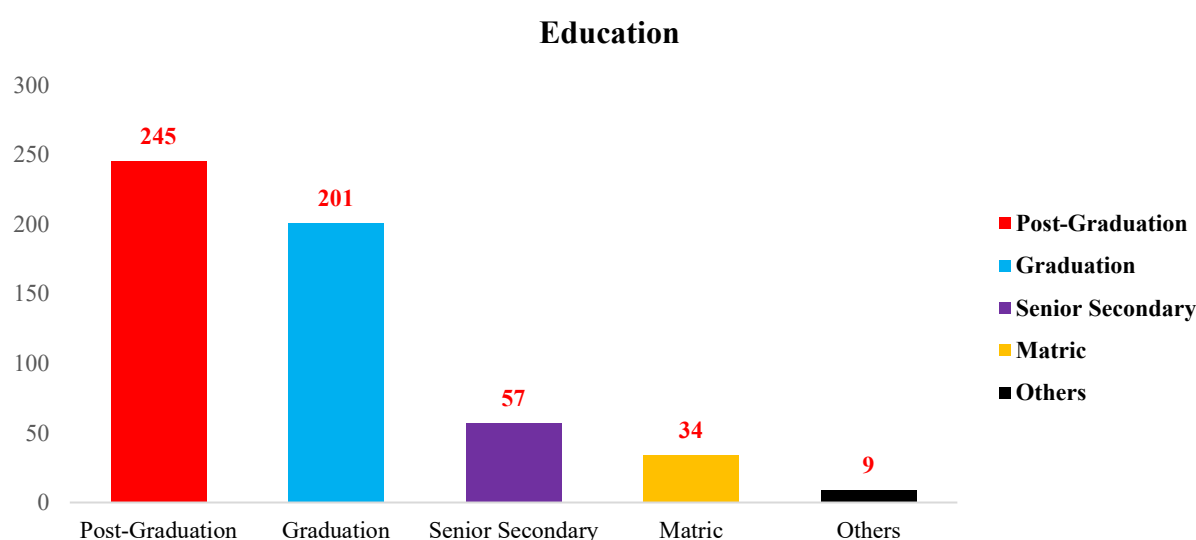
Table 4.4 Level of Education

Level of Education	Numbers
Post-Graduation	245
Graduation	201
Senior Secondary	57
Matric	34
Others	9

Author's Calculation in SPSS

The education level of respondents shows that the majority, 245 individuals (or 45%), have completed post-graduation. Those with a graduation level of education account for 201 respondents (or 36.8%). A smaller portion of the sample, 57 respondents (or 10.5%), have finished senior secondary, while 34 individuals (or 6.2%) have completed matriculation. Lastly, 9 respondents (or 1.6%) fall under the others category. This indicates that most of the respondents have pursued higher education, with a significant portion holding post-graduate degrees.

Figure 4.3 Level of Education



Source: Author's calculations

Table 4.5 Current Profile of Respondents

Current Profile	Number
Working	306
Non- working	240

Source: Author's calculations in SPSS

Out of the total women from whom data was collected, **306** are currently working, while **240** are non-working. This indicates that **56%** of the women surveyed are actively engaged in employment, which makes them independent as they earned their own income and take their own financial decisions while **44%** are not currently part of the workforce. These women are homemakers, self- employed, You-Tubers etc. Their financial decisions sometime depend upon their family decision.

Figure 4.4 Current Profile

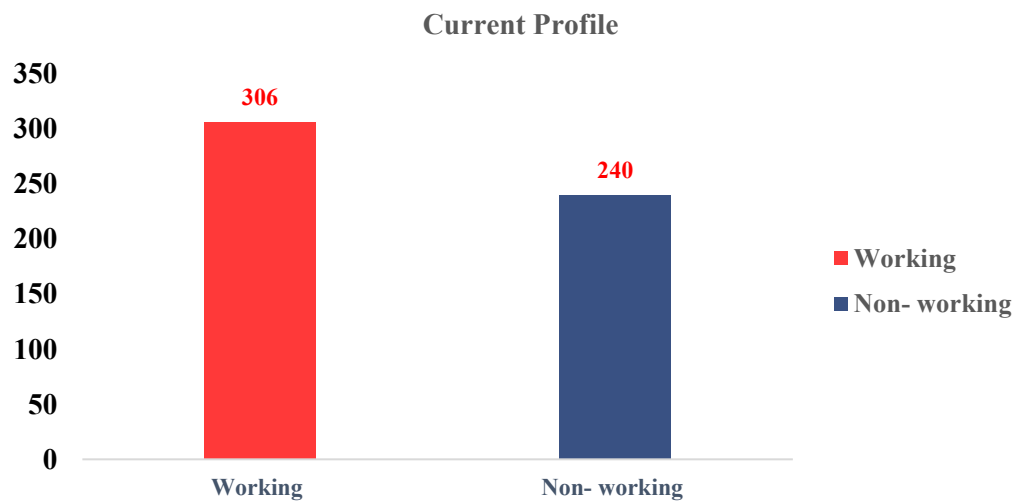


Table 4.6 Type of Family of the Respondents

Type of Family	Numbers
Nuclear	256
Joint	290

Source: Author's calculations in SPSS

The data reveals that the majority of respondents, 290 individuals (or 53.1%), are from joint family, while 256 respondents (or 46.9%) are from nuclear family. As per 2011 census, 62.52% population of Punjab living in rural areas while 37.48% lives in urban areas. This indicates a nearly balanced representation of participants from nuclear and joint families, with a slight majority from joint families. Such a distribution may provide insights into potential differences in financial behaviour, and attitudes between nuclear and joint families offering valuable implications for financial planning and policy interventions tailored to specific geographic contexts.

Table 4.7 Area of Respondents

Area	Numbers
Rural	316
Urban	230

Source: Author's calculations in SPSS

The data reveals that the majority of respondents, 316 individuals (or 57.8%), are from rural area, while 230 respondents (or 42%) are from urban area. This indicated a nearly balanced representation of participants from rural and urban area, with a majority from rural area. As per 2011 census, 62.52% population of Punjab living in rural areas while 37.48% lives in urban

areas. Such a distribution may highlight the differences in financial behaviour, attitudes and access of resources between rural and urban population offering valuable implications for financial planning and policy interventions tailored to specific geographic contexts.

Table 4.8 Income of the Respondents

Row Labels	Numbers
₹10 lakh - ₹15 lakh	27
₹15 lakh - ₹20 lakh	4
₹20 lakh & above	1
₹5 lakh - ₹10 lakh	177
Less than ₹ 5 lakh	337
Grand Total	546

Source: Author's calculations in SPSS

The data collected from women across various districts of Punjab indicates that the majority of respondents, 337 out of 546, fall into the income bracket of "Less than ₹5 lakh." This is followed by 177 respondents in the ₹5 lakh - ₹10 lakh range. There are less number of women in higher income brackets, with only 27 women earning between ₹10 lakh - ₹15 lakh, 4 in the ₹15 lakh - ₹20 lakh range, and just 1 woman earning ₹20 lakh and above. This distribution suggests that a significant proportion of women in these districts earn average incomes, with very few reaching higher income levels.

4.3 Data Normality

To ascertain the normality of data, various normality tests are applied by using SPSS 24. There are different ways to check normality either through graphical techniques like frequency polygon, histograms, Q-Q plots, box plots or through different tests. A normality curve is commonly referred to as a Gaussian distribution or a bell curve, depicts whether data shows normality or not. The normal distribution's symmetrical, bell-shaped curve has a known mean and standard deviation. Although there are various methods for determining whether the data is normal, the type of data is seen to be a crucial consideration before applying the test, since the data used in this study was primary hence two tests were applied to check the normality of the data: (1) Shapiro-Wilk test in SPSS and Cramer-Von test in Smart PLS 4. The tables are given as under:

Table 4.9: Data Normality

Study Variables	Shapiro-Wilk Statistic (W)	P-Value	Normality Conclusion

Financial Attitude	0.95	0.01	(p < 0.05)
Financial Socialization	0.93	0.03	(p < 0.05)
Digital Financial Literacy	0.96	0.04	(p < 0.05)
Personal Financial Management Behaviour	0.92	0.02	(p < 0.05)

Source: SPSS 24

According to the findings of the Shapiro-Wilk Test, none of the variables in the study are normally distributed. P-values less than 0.05 were obtained from the test statistics for Financial Attitude ($W = 0.95$, $p = 0.01$), Financial Socialization ($W = 0.93$, $p = 0.03$), Digital Financial Literacy ($W = 0.96$, $p = 0.04$), and Personal Financial Management Behaviour ($W = 0.92$, $p = 0.02$). As a result, the null hypothesis of normalcy was rejected. This implies that there is a considerable deviation from a normal distribution in the data for each variable, which may call for additional study using non-parametric statistical techniques or data manipulation.

Table 4.10: Crammer-Von Mises

Name	Mean	Standard deviation	kurtosis	Skewness	C.M P value
Area	1.381	0.532	-0.188	0.956	0.000
Age	3.165	1.18	-0.716	-0.346	0.000
Education	3.251	0.95	-0.232	-0.399	0.000
Income	2.255	1.048	-1.153	0.26	0.000
FA	3.797	1.104	-0.556	-0.567	0.000
FS	3.276	1.087	-0.828	0.037	0.000
DFL	3.782	1.055	-0.319	-0.576	0.000
PFMB	3.784	1.076	-0.766	-0.47	0.000

Source: Smart PLS 4

The Cramer-von Mises test results for the study reveal consistent deviations from normality across all variables. The mean values for variables such as Area (1.381), Age (3.165), Education (3.251), and Income (2.255) suggested varied central tendencies, while the standard deviations range from 0.532 to 1.18, indicated different levels of dispersion. The kurtosis values, which range from -1.153 for Income to -0.188 for Area, show that most variables are platykurtic, indicating lighter tails than a normal distribution. Skewness values, varying from -0.946 for Area to 0.26 for Income, reveal a general tendency towards negative skewness, suggesting that data is more concentrated on the higher end of the distribution. The Cramer-

von Mises p-values for all variables are 0.000, indicating significant deviations from normality. These results suggest that no variable adheres to a normal distribution, which may impact the choice of statistical methods and necessitate the use of non-parametric techniques or data transformations in subsequent analyses. The results of both the tests show that all the constructs have a p value of < 0.05 , determining the non-normality of the data and the same stated by Skewness and kurtosis almost 70 % of the data had shown a Skewness and kurtosis beyond the threshold of (-1 to +1) for Skewness and (-3 to +3) for Kurtosis. This clearly suggested that the normality assumption has been violated and hence support the use of PLS-SEM.

4.4 CB-SEM & PLS-SEM:

Both Covariance-based and Partial Least Squares Structural Equation Modelling are commonly used techniques in social science research to test complex theoretical models and assess relationships between multiple variables. While CB-SEM is a confirmatory technique that evaluates how well a specified theoretical model fits the observed data, PLS-SEM is more exploratory and suitable for complex models with small samples or non-normal data. The suggested theoretical framework connecting all the underlying constructs may be tested in this research using both CB-SEM and PLS-SEM. By using these methods, Researchers can investigate the structural links between variables and assess the validity and reliability of measurement models, offering important insights into the mechanisms behind individual financial behaviour. The current study used PLS-SEM modelling for the purpose of measuring its model (Hair et al., 2011). The study analysed the data without making assumptions related to distribution of data. Further, Reflective Measurement Model has been used for data analysis. The current study also used a mediating construct as an intermediary between the exogenous and endogenous variables. In such scenarios, PLS-SEM is selected as the most reliable and highly appropriate model to analyse the constructs and the corresponding data in order to achieve the purpose of the dependent variable.

4.5 Smart PLS SEM:

Structural Equation Modelling (SEM) in Smart PLS 4.0 offers a strong analytical framework that allows researchers to investigate complex relationships between latent variables and observable indicators. Structural Equation Modelling (SEM) is a user-friendly statistical technique that integrates Confirmatory Factor Analysis (CFA), measurement model, and regression or path analysis, representing the structural model. It enables researchers to simultaneously analyse both measurement and structural relationships, making it suitable for both novice researchers and experienced statisticians alike. In SEM, researchers specify a set

of latent variables and their corresponding indicators, hypothesising relationships among them. Partial Least Squares (PLS) estimation is a non-parametric method used in Smart PLS 4.0 that is perfect for exploratory research and complex models with limited sample numbers. By supporting both formative and reflective measurement models, this approach enables researchers to evaluate the reliability and validity of their conceptions. Smart PLS 4.0 also offers advanced features such as bootstrapping for testing the significance of path coefficients and moderating effects, as well as the ability to handle missing data efficiently. Moreover, it provides various fit indices like the goodness-of-fit (GOF) statistic, which enables researchers to evaluate the overall model fit. The intuitive graphical interface of Smart PLS 4.0 facilitates model specification, estimation, and interpretation, enhancing the accessibility and usability of SEM for researchers across disciplines. With its robust analytical capabilities and user-friendly interface, Smart PLS 4.0 serves as a valuable tool for advancing theory development, testing complex hypotheses, and gaining insights into the intricate relationships within and between constructs in diverse research contexts.

4.6 Evaluation of Measurement Model and Structural Model:

Assessing the measurement and structural models is one of the most crucial stages in SEM analysis. The measurement model assesses the reliability and validity of the instruments used to operationalize the latent constructs of the theoretical framework. This comprises examining the convergent and discriminant validity, composite reliability, and factor loadings. In contrast, the structural model tested how well the suggested theoretical model fit the observed data and looked at the connections between latent constructs. This involves using a variety of fit indices, such as chi-square, TLI, CFI, SRMR and RMSEA to assess the significance and strength of the path coefficients as well as the overall goodness-of-fit of the structural model. Researchers can guarantee the validity and reliability of their findings and make strong inferences about the connections between different independent and dependent constructs by carefully assessing both models.

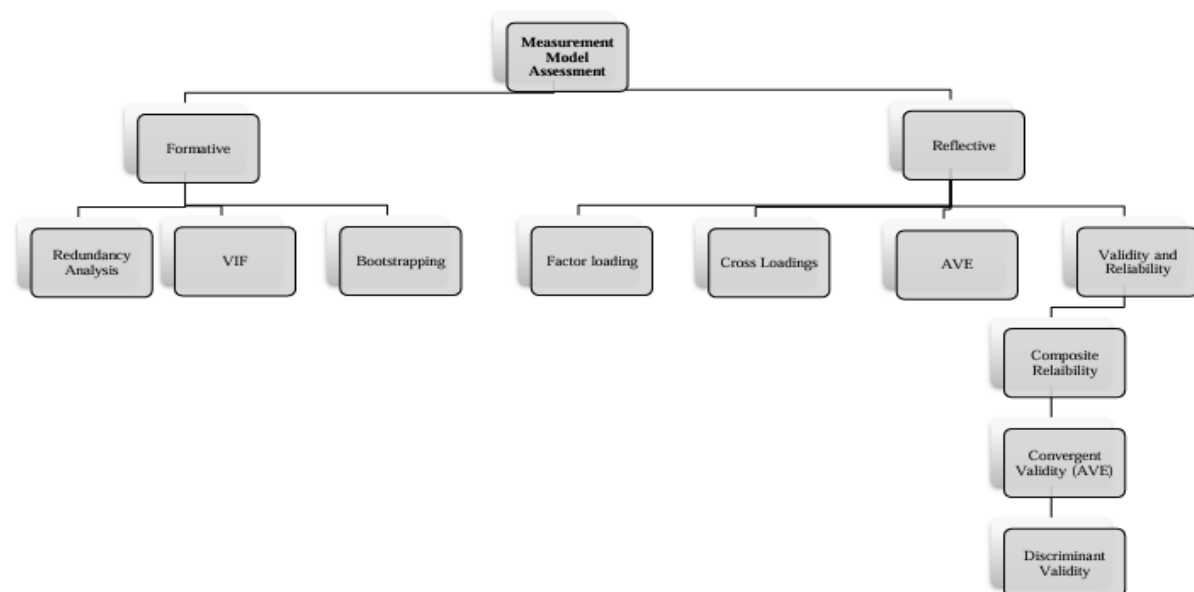
4.6.1 Measurement Model in Smart PLS 4

The associations between latent constructs and their observed indicators are established via the measurement model in Smart PLS 4. It assesses how well the observable variables represent the latent constructs that they are designed to represent. To make sure that the items appropriately represent the underlying theoretical notions, the researchers assess the links between observable and latent variables using methods such as confirmatory factor analysis. It involves two types of models. For **reflective models**, key criteria include indicator reliability,

which ensures **each item's loading is above 0.70**, and **Cronbach's Alpha and Composite Reliability** are commonly used to assess internal consistency; **scores higher than 0.70 are considered acceptable**. **Convergent validity is checked using AVE**; values higher than **0.50** show that the construct adequately reflects variance (Hair et al 2017c). **Fornell-Larcker criterion and HTMT ratio (values below 0.85 are recommended)** are used to assess discriminant validity. For multicollinearity in **formative models**, to determine the significance of outer weights, bootstrapping is employed, and Variance Inflation Factor (VIF) values less than 3 are deemed optimal. Model fit for both models must be assessed using RMSEA values less than 0.08 suggest a good match, while values less than 0.05 and 0.08 indicate an appropriate fit (Lai & Green, 2016). These criteria ensure that the constructs used in the structural path modelling study are reliable and valid.

Figure 4.5: Measurement Model Evaluation

Measurement Model Assessment also called as Confirmatory Factor Analysis (CFA) (Hair et al, 2019)



Source: Hair et al, 2013

Factor Loading

Factor loading is a fundamental concept in factor analysis, particularly in exploratory factor analysis (EFA). It illustrates the connection between latent constructs (factors) and observable variables (indicators) in a measurement model. Factor loadings in SEM establish the strength and direction of the relationship between each observable variable and its underlying latent construct. The loadings above 0.708 are recommended, since factor loadings (typically above 0.5) suggest that the observed variables are strongly associated with the latent construct,

indicating good convergent validity. Conversely, low factor loadings may indicate poor measurement quality or insufficient item relevance to the construct.

Table 4.11: Factor Loadings

Items	DFL	FA	FS	PFMB
DFL1	0.593			
DFL10	0.804			
DFL11	0.867			
DFL2	0.637			
DFL3	0.719			
DFL4	0.625			
DFL5	0.673			
DFL6	0.694			
DFL7	0.762			
DFL8	0.846			
DFL9	0.788			
FA1		0.755		
FA2		0.774		
FA3		0.768		
FA4		0.713		
FA5		0.763		
FA6		0.802		
FA7		0.793		
FA8		0.762		
FA9		0.799		
FS1			0.713	
FS10			0.739	
FS2			0.726	
FS3			0.798	
FS4			0.801	
FS5			0.734	
FS6			0.761	
FS7			0.775	
FS8			0.785	
FS9			0.701	
PFMB1				0.763

PFMB10	0.721
PFMB11	0.778
PFMB12	0.753
PFMB13	0.714
PFMB14	0.606
PFMB15	0.734
PFMB2	0.709
PFMB3	0.798
PFMB4	0.761
PFMB5	0.694
PFMB6	0.848
PFMB7	0.786
PFMB8	0.841
PFMB9	0.812

Author's Calculations in Smart PLS 4.0

In the above analysis, factor loadings for each item were examined across four latent constructs: All items for Financial Attitude (FA) showed substantial factor loadings between 0.713 and 0.802, suggesting that the underlying construct of financial attitude and the observable variables were highly correlated. A strong correlation between the observable variables and the latent construct of financial socialization was also suggested by factor loadings which varied from 0.701 to 0.801. Factor loadings for Digital Financial Literacy (DFL) varied from 0.593 to 0.867, suggesting a moderate to substantial correlation between the DFL construct and the observed variables. Lastly, factor loadings for Personal Financial Management Behaviour (PFMB) range from 0.606 to 0.848, indicating a strong relationship between the PFMB construct and the observed variables. In the context of Punjabi women's individual financial behaviour, these results emphasise the close connections between the observable variables and their corresponding latent constructs.

Table 4.12 Cross Loading

Items	DFL	FA	FS	PFMB
DFL1	0.893	0.535	0.486	0.727
DFL10	0.804	0.582	0.637	0.651
DFL11	0.867	0.597	0.673	0.705
DFL2	0.737	0.539	0.543	0.551
DFL3	0.719	0.671	0.643	0.645
DFL4	0.725	0.471	0.499	0.507

DFL5	0.773	0.511	0.581	0.588
DFL6	0.794	0.587	0.515	0.589
DFL7	0.762	0.506	0.554	0.622
DFL8	0.846	0.581	0.675	0.684
DFL9	0.788	0.566	0.664	0.617
FA1	0.488	0.755	0.632	0.499
FA2	0.483	0.774	0.593	0.528
FA3	0.593	0.781	0.621	0.636
FA4	0.626	0.713	0.658	0.629
FA5	0.561	0.763	0.577	0.621
FA6	0.612	0.802	0.574	0.642
FA7	0.583	0.793	0.574	0.628
FA8	0.548	0.761	0.563	0.615
FA9	0.587	0.799	0.591	0.627
FS1	0.632	0.712	0.613	0.549
FS10	0.471	0.629	0.739	0.455
FS2	0.751	0.703	0.726	0.726
FS3	0.594	0.605	0.798	0.641
FS4	0.639	0.575	0.801	0.676
FS5	0.569	0.514	0.734	0.579
FS6	0.509	0.572	0.761	0.563
FS7	0.595	0.558	0.775	0.611
FS8	0.583	0.556	0.785	0.559
FS9	0.455	0.634	0.701	0.484
PFMB1	0.514	0.438	0.499	0.763
PFMB10	0.598	0.572	0.539	0.721
PFMB11	0.576	0.541	0.525	0.778
PFMB12	0.537	0.59	0.532	0.753
PFMB13	0.575	0.555	0.529	0.714
PFMB14	0.495	0.583	0.498	0.706
PFMB15	0.614	0.597	0.583	0.734
PFMB2	0.609	0.487	0.501	0.709
PFMB3	0.532	0.503	0.481	0.798
PFMB4	0.477	0.395	0.419	0.811
PFMB5	0.532	0.447	0.491	0.894
PFMB6	0.765	0.736	0.781	0.848

PFMB7	0.763	0.722	0.712	0.886
PFMB8	0.782	0.759	0.769	0.841
PFMB9	0.751	0.732	0.735	0.811

The above table indicates the cross-loadings and depicts that for the Digital Financial Literacy (DFL) construct, DFL1 has a cross-loading of 0.893, indicated that it explains 89.3% of the variance in the DFL construct. Similarly, for the Financial Attitude (FA) construct, FA6 has a cross-loading of 0.802, suggesting that it contributes to 80.2% of the variance in the FA construct. In the case of the Financial Socialization (FS) construct, FS4 has a cross-loading of 0.801, signifying its contribution to 80.1% of the variance in the FS construct. Lastly, for the Personal Financial Management Behaviour (PFMB) construct, PFMB5 has a cross-loading of 0.894, indicating that it accounts for 89.4% of the variance in the PFMB construct. Higher values indicate a stronger association between each item and its corresponding construct, which is indicated by these loadings. The validity of the measurement model is increased since the high cross-loadings between items often imply that they measure their target constructs well. The following table shows the internal consistency:

Table 4.13: Reliability Test

Constructs	Cronbach's Alpha	Composite reliability	Average variance extracted (AVE)
DFL	0.912	0.927	0.538
FA	0.895	0.915	0.547
FS	0.899	0.917	0.529
PFMB	0.932	0.941	0.517

Authors Calculation in Smart PLS 4.0

Construct validity is evaluated using two metrics: discriminant validity and convergent validity. Convergent validity is the degree to which two tests measuring the same concept are closely connected to each other or to other tests measuring the same construct. Composite reliability (CR), which should be higher than 0.7, and AVE > 0.5, are used to evaluate it. In general, larger values signify a higher degree of dependability. Values above 0.95 are troublesome because they suggest that the items are redundant, which lowers construct validity. Values between 0.60 and 0.70 are considered as acceptable, while 0.70 and 0.90 are good. The table shows the internal consistency reliability metrics, including Cronbach's Alpha, CR, and (AVE), for each latent construct in the measurement model. The Cronbach's Alpha coefficient for the items measuring DFL is 0.912, indicating a high degree of internal consistency. The

convergent validity and dependability of the DFL construct are further supported by the AVE of 0.538 and the composite reliability score of 0.927. Likewise, Cronbach's Alpha coefficients for Financial Attitude (FA), Financial Socialization (FS), and Personal Financial Management Behaviour (PFMB) are 0.895, 0.899, and 0.932, respectively, suggesting high levels of internal consistency. These constructs also show good reliability and convergent validity, as evidenced by the composite reliability values of 0.915, 0.917, and 0.941 and the AVE values of 0.547, 0.529, and 0.517 for FA, FS, and PFMB, respectively. These reliability measures collectively show that the constructs have adequate convergent validity and that the items measuring each construct are internally consistent and reliable. This supports the measurement model's robustness in evaluating different underlying constructs used in the research.

Discriminant Validity:

Discriminant validity is an essential component of concept validation to confirm that different constructs are, in fact, distinct from one another. It assesses whether the measures designed to capture different constructs are distinct and not measuring the same underlying construct. This is essential to demonstrate that the constructs under investigation are unique and not interchangeable. There are two criteria which are commonly used in Smart PLS 4.0 to determine discriminant validity: The Fornell-Larcker criterion compares the correlations between each construct to the square root of AVE for others. The discriminant validity of each construct is upheld if its square root of the AVE is greater than the correlations with other constructs. HTMT ratio of correlations is often used to compare correlations between constructs and indicators of the same construct. Discriminant validity is often evaluated using a threshold value of 0.85; values below this threshold indicate adequate discriminant validity. These criteria can be used by researchers to determine whether or not their model demonstrates discriminant validity in Smart PLS 4.0. It is proposed that the constructs in the model are different from one another if the HTMT ratios and the Fornell-Larcker criterion both reach the designated thresholds, giving assurance regarding the measurement model's validity.

Table 4.14: HTMT Hetro Trait and Mono Trait

Constructs	DFL	FA	FS	PFMB
DFL				
FA	0.836			
FS	0.814	0.803		
PFMB	0.719	0.779	0.805	

Author's Calculation in Smart PLS

In Table 4.13, Through a comparison of the correlation between different constructs (heterotrait correlation) and indicators of the same construct (monotrait correlation), the HTMT ratio evaluates discriminant validity. The above analysis shows that HTMT ratio for DFL and FA is 0.846, indicating that the correlation between DFL and FA is 0.846 times higher than the average correlation among the indicators of each construct. Similarly, the HTMT ratio for DFL and FS is 0.814, for DFL and PFMB is 0.719, for FA and FS is 0.803, for FA and PFMB is 0.779, and for FS and PFMB is 0.805. In general, adequate discriminant validity is shown by HTMT ratios below the 0.85 threshold, which shows that the constructs are different from one another. All of the HTMT values are below the threshold, according to the ratios given, indicating that discriminant validity is supported throughout the model's constructs.

Table 4.15: Fornell & Larcker

Construct	DFL	FA	FS	PFMB
DFL	0.733			
FA	0.716	0.741		
FS	0.708	0.711	0.727	
PFMB	0.702	0.709	0.714	0.719

Author's Calculation in Smart PLS

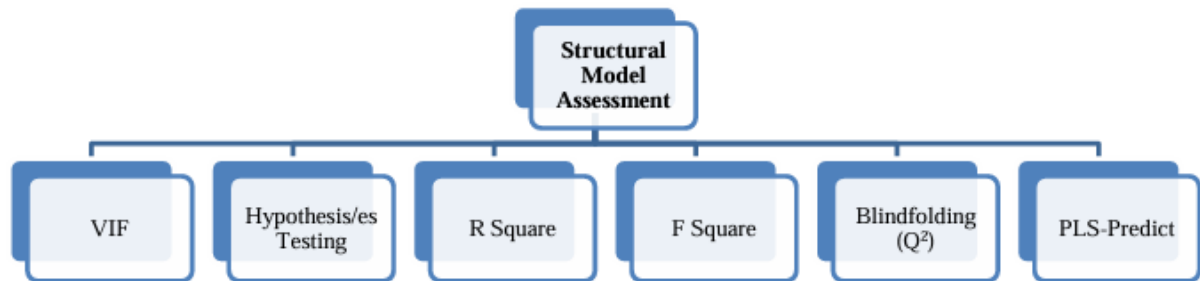
These correlation coefficients shed light on how the constructs relate to one another. Discriminant validity requires that the correlations between distinct constructs (off-diagonal elements) be much lower than within constructs (diagonal elements). The diagonal elements in this table stand for each construct's average variance extracted (AVE), which ought to be greater than the correlations between them. From the provided correlations, it seems that each construct has a higher correlation with itself (diagonal elements) compared to the correlations with other constructs (off-diagonal elements), which is indicative of satisfactory discriminant validity.

4.6.2 Structural Model:

The proposed connections between latent variables in a theoretical model are illustrated by the structural model in SEM. It looks at how these factors affect observed variables and interact with one another. It sheds light on the causal linkages between variables by testing hypotheses regarding the directional relationships between latent components. Researchers can evaluate the importance and intensity of the correlations suggested in the theoretical model by

computing Path coefficients. It offers a conceptual road map of the relationships between various constructs.

Figure 4.6 Structural Model Evaluation



The structural model examines the study's hypotheses and the connections between latent variables, or constructs. The criteria involved in evaluating a structural model include:

Path Coefficients: These show how strongly and in which direction constructs relate to one another. The significance of Path coefficients is tested through t-values which should be (greater than 1.96 for significance at the 5% level) and p-values should be (less than 0.05).

Coefficient of Determination (R^2): The R^2 shows the % of variance of the dependent variable that can be handled by the independent variables. R^2 values of 0.75, 0.50, and 0.25 are considered high, moderate, and weak, respectively, by Henseller et al. (2009) and Hair et al. (2011).

Effect Size (f^2): The study reports not only path coefficients and significance levels but also the magnitude of effect sizes to provide a clearer picture of the substantive impact of each predictor variable. This helps in distinguishing between statistically significant but practically small effects and those with meaningful influence. The f^2 quantifies how a certain independent variable affects the dependent variable. It assesses how the removal of a predictor variable from the model affects the R^2 value. According to Cohen (1988), tiny, medium, and large impacts are denoted by f^2 values of 0.02, 0.15, and 0.35, respectively.

Predictive Relevance (Q^2): By employing the blindfolding procedure, Q^2 evaluates the model's out-of-sample prediction power. A positive Q^2 score with values of 0.25, 0.5, and more than 0 indicate minor, medium, and significant which indicates that the model is predictively relevant (Shmueli et al., 2016; Sarstedt et al., 2017a).

Multicollinearity: This issue arises in multiple regression models where two or more independent variables have a high correlation with one another, undermining the statistical

significance of one of the variables. The Variance Inflation Factor, or VIF, is employed for this. According to Hair et al. (2017b), when the VIF value is less than 3, multicollinearity in the model is not a problem.

Bootstrapping Parameters: The details of the bootstrapping procedure—such as the number of subsamples (5,000 resamples), confidence intervals, and significance testing criteria—have been explicitly mentioned. This allows readers to evaluate the stability and reliability of the estimated parameters.

Model Fit Indices: While PLS-SEM is primarily prediction-oriented, we have included the most widely recommended fit measures such as Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), and other relevant indices (e.g., RMS_theta). These indices provide additional evidence regarding the adequacy of the structural model. The Comparative Fit Index values above 0.90 and Root Mean Square Error of Approximation values below 0.05 and 0.08 respectively indicate a satisfactory fit (Lai & Green, 2016).

Significance and Confidence Intervals: To verify the robustness of the estimations, bootstrapping is utilized to assess the statistical significance of path coefficients and provide confidence intervals.

By incorporating these details, the statistical reporting now adheres more closely to the guidelines suggested by Hair et al. (2019) and other methodological authorities in PLS-SEM. This fuller disclosure strengthens the validity of the study and improves its methodological transparency. These elements together ensure that the structural model is reliable, valid, and provides meaningful insights into the relationships between the constructs.

Measurement of Multicollinearity

Table 4.16: Variance Inflation Factor

Items	VIF
DFL1	1.427
DFL10	1.212
DFL11	1.492
DFL2	1.646
DFL3	2.085
DFL4	1.791
DFL5	1.059
DFL6	1.186
DFL7	2.451
DFL8	1.132

DFL9	2.952
FA1	1.287
FA2	1.175
FA3	1.712
FA4	1.854
FA5	2.658
FA6	1.159
FA7	2.876
FA8	2.608
FA9	1.162
FS1	1.533
FS10	2.546
FS2	1.878
FS3	1.513
FS4	2.973
FS5	1.341
FS6	2.252
FS7	2.526
FS8	1.517
FS9	1.319
PFMB1	1.254
PFMB10	1.437
PFMB11	1.119
PFMB12	1.113
PFMB13	1.362
PFMB14	1.633
PFMB15	1.626
PFMB2	1.317
PFMB3	2.501
PFMB4	1.218
PFMB5	1.928
PFMB6	1.001
PFMB7	1.102
PFMB8	1.231
PFMB9	1.028

Author's Calculation in Smart PLS 4.0

The degree of multicollinearity across predictor variables is shown by the Variance Inflation Factor (VIF) values for each item in the measurement model. In general, lower VIF values indicate fewer multicollinearity problems. In this examination, the VIF values for the Digital Financial Literacy (DFL) items fall between 1.059 and 2.952, which is a reasonable range and shows no serious issues with multicollinearity. For Financial Attitude (FA) items, VIF values range from 1.159 to 2.876, also indicating no substantial multicollinearity issues. Similarly, for Financial Socialization (FS) and Personal Financial Management Behaviour (PFMB) items, VIF values range from 1.001 to 2.973 and from 1.028 to 2.501, respectively, showing no noteworthy multicollinearity problems. Overall, for all items' VIF values fall considerably below the generally recognized cutoff point of three or less, suggesting that multicollinearity is not a major issue in this dataset. Therefore, the results of the analysis can be considered reliable, and no corrective action is required to address multicollinearity. Overall, for all items' VIF values fall considerably below the generally recognized cutoff point of three or less, suggesting that multicollinearity is not a major issue in this dataset. Since all values fell considerably below the accepted threshold, the analysis confirms that multicollinearity is not a major issue in this dataset. These findings imply that the measurement items for each construct contribute unique variance without excessive redundancy, thereby supporting discriminant validity and ensuring that the path coefficients remain stable, hypothesis tests unbiased, and constructs conceptually distinct. Consequently, the absence of problematic multicollinearity enhances the credibility and interpretability of the structural model, confirming that the study's findings are both statistically sound and free from distortions that might otherwise require corrective action.

Coefficient of Determination (R^2)

Table 4.17 R-Square and Adjusted R-Square

Construct	R-square	R-square adjusted
PFMB	0.609	0.607

Author's Calculation in Smart PLS

In the context of Partial Least Squares Structural Equation Modelling (PLS-SEM), the R-square (R^2) values play a critical role in assessing the explanatory power of the model by quantifying the proportion of variance in each endogenous construct that can be explained by its predictor variables. For each latent construct in the current study, R^2 values provide insight into how effectively the independent variables contribute to explaining the variance in the dependent

variable, thereby serving as a key indicator of model quality and predictive accuracy. Specifically, for Personal Financial Management Behaviour (PFMB), the R^2 value is 0.609, which suggests that approximately 60.9% of the variance in PFMB can be explained by the set of independent variables included in the model. This represents a substantial proportion of explained variance, indicating that the constructs used as predictors—such as Digital Financial Literacy (DFL), Financial Attitude (FA), and Financial Socialization (FS)—exert a strong and meaningful influence on PFMB. Furthermore, to ensure that this explanatory power is not artificially inflated by model complexity or overfitting, the adjusted R^2 value is also examined. The adjusted R^2 for PFMB is 0.607, which refines the estimate by accounting for the number of predictors in the model and their degrees of freedom. The closeness of the adjusted R^2 (0.607) to the original R^2 (0.609) indicates that overfitting is not a concern, and the model maintains stability and robustness. Both values together underscore that the predictors used in the model are not only statistically significant but also practically relevant in capturing variations in PFMB. In PLS-SEM, R^2 values above 0.50 are often considered indicative of a substantial level of explanatory power, and the values obtained in this study therefore suggest that the model demonstrates strong predictive capability and offers meaningful insights into the factors shaping women’s personal financial management behaviour in Punjab. This level of explanatory power also strengthens the confidence in subsequent hypothesis testing, as it indicates that the model is well-specified and adequately grounded in empirical evidence.

Table 4.17: R-Square and Adjusted R-Square

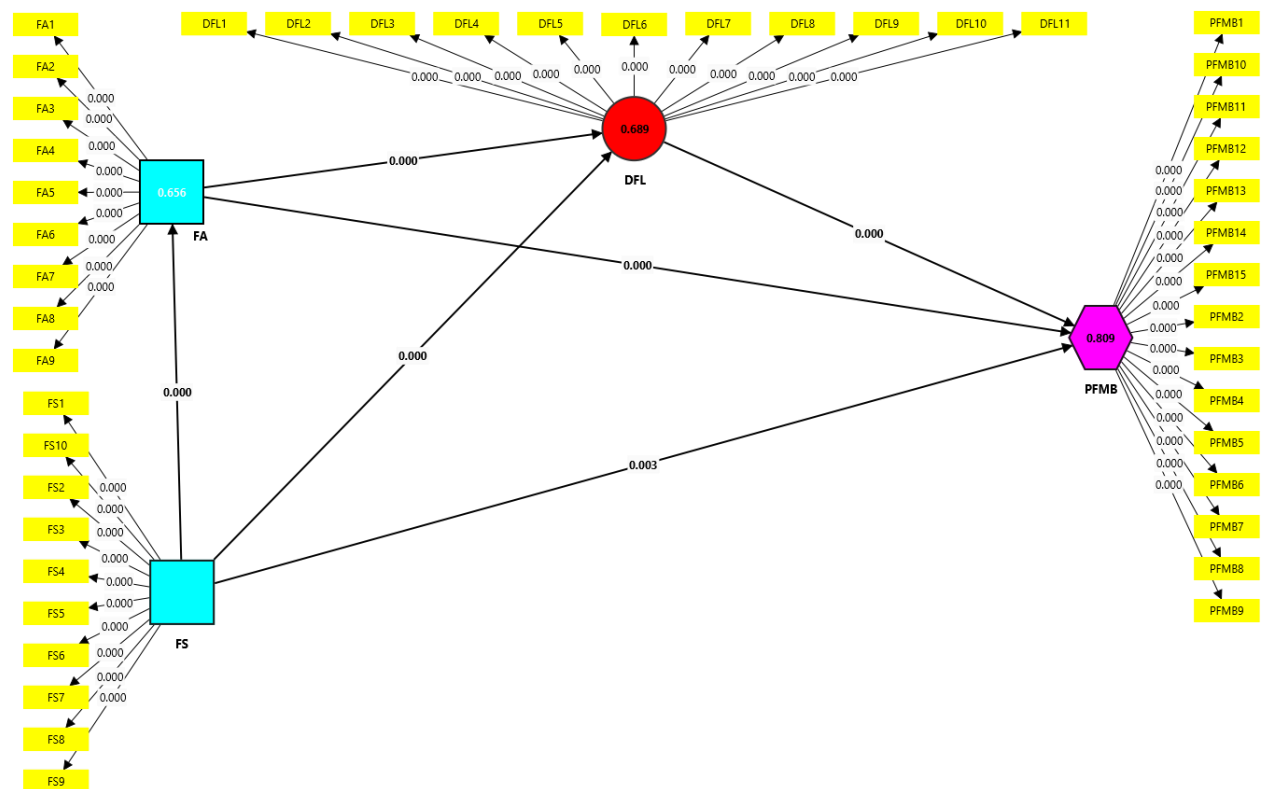
Construct	R-square	R-square adjusted
DFL	0.689	0.687
FA	0.656	0.655
PFMB	0.809	0.807

Author’s Calculation in Smart PLS

The R-square values for each latent construct in the regression model, reveal the percentage of variance that can be accounted for by the predictors. The Digital Financial Literacy (DFL) construct has an R-square value of 0.689, revealed that the predictors account for roughly 68.9% of the variance in DFL. The adjusted R-square value for DFL is 0.687 after controlling for sample size and predictor count. The R-square value for the Financial Attitude (FA) construct is 0.656, indicating that the predictors shows 65.6% of the variance in FA. The value of the corrected R-square for FA is 0.655. In conclusion, the Personal Financial Management Behaviour (PFMB) construct has an R-squared value of 0.809, which indicates that the

predictors account for about 80.9% of the variance in PFMB. PFMB has an adjusted R-squared value of 0.807. For each construct, these numbers show how well the regression model fits; larger R-square values signify a better match. Overall, the strong R-square values for each construct show that the regression models are robust and that the predictors successfully explain the variability in their respective constructs.

Figure 4.7 Research Model

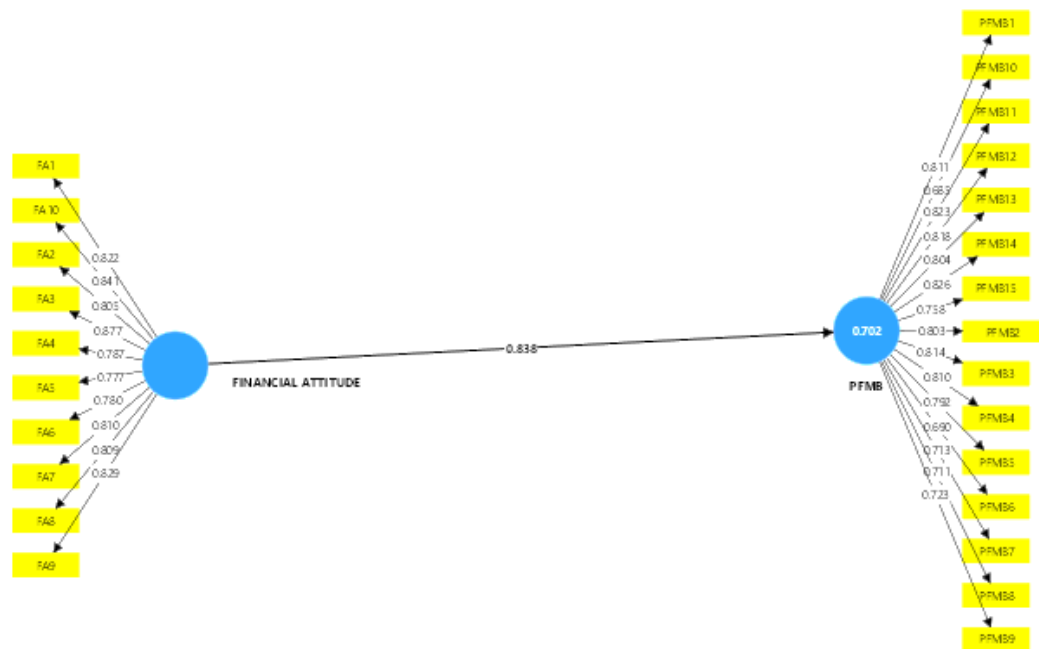


Source: Smart PLS 4

4.7 Hypothesis Testing

Objective 1. To study the effect of financial attitude on personal financial management behaviour of women.

Figure 4.8: Impact of FA on PFMB



Source Author's Calculation in Smart PLS 4

Table 4.18 showing Hypothesis Testing for objective 1

Hypothesis	Original sample	S.D	T-VALUE	P-VALUE
FINANCIAL ATTITUDE -> PFMB	0.838	0.018	16.965	0.000

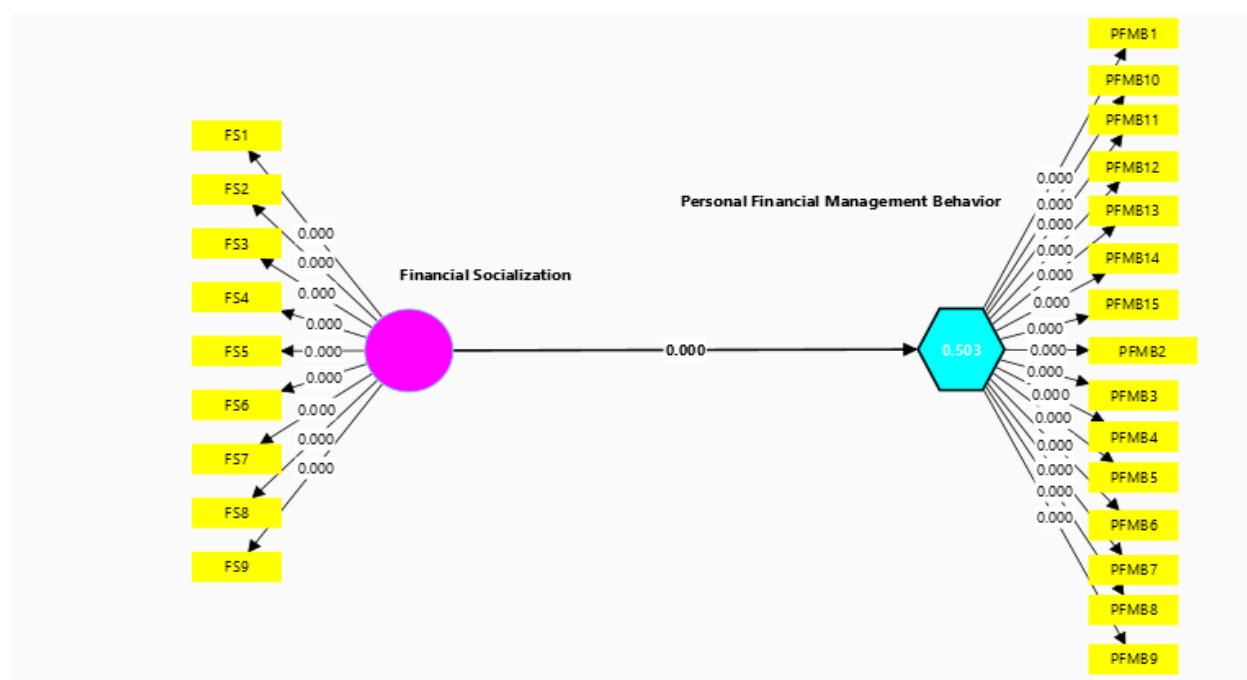
It was hypothesized that personal financial management behaviour is significantly influenced by financial attitude. A hypothesis test was conducted to investigate the connection between the two constructs. The initial sample (0.838) revealed a substantial positive association between PFMB and financial attitude, suggesting that those who have a good outlook on money are more likely to behave well when it comes to money management. Consistent results throughout the sample are indicated by the low standard deviation (0.018), which implies that the data points are clustered around the mean.

Additionally, the hypothesis is well supported by the significantly high t-value (16.965). which further confirms the validity of this association, a high t-value usually indicates that there is a significant difference between the sample mean and the predicted value. Given that the p-value (0.0000) is significantly lower than the standard cutoff point of 0.05, the findings are statistically significant. Numerous academics have affirmed the important connection between financial behaviour and attitude in various settings. Positive financial attitudes are linked to more successful financial planning and retirement readiness, according to Lusardi and Mitchell (2017). Additionally, Xiao and Porto (2017) discovered that people who have more positive

financial attitudes also typically make better financial judgments. Adiputra and Patricia (2019) and Rai et al. (2019) studied the impact of financial attitudes on saving behaviours in the context of financial behaviour and highlighting the importance of financial attitudes in influencing financial decision-making. According to Siswanti and Halida (2020), Halim et al. (2021), and Haudi et al. (2023), cultivating optimistic financial attitudes can greatly enhance financial management and well-being. In summary, the data is consistent with earlier findings in the field and provides significant support for the idea that financial attitude is a critical predictor of PFMB.

Objective 2. To explore the effect of financial socialization on personal financial management behaviour of women.

Figure 4.9: Impact of FS on PFMB



Source Author's Calculation in Smart PLS 4

Table 4.19 Hypothesis testing Objective 2

Hypothesis	Original sample	S.D	T-Value	P values
Financial Socialization -> PFMB	0.709	0.038	8.452	0.000

The hypothesis evaluates the connection between personal financial management behaviour (PFMB) and financial socialization. The initial sample (0.709) demonstrates a robust positive association, indicating that successful financial socialization procedures greatly improve people's financial management practices. According to this, people who are exposed to constructive financial socialization—whether from friends, family, or the media—are more

likely to behave responsibly with their money. The comparatively low standard deviation (0.038), which indicates little variation in the responses, showed that there is a constant correlation between PFMB and financial socialization throughout the study population. Given the sizeable t-value (8.452), it appears that there is a statistically significant correlation between financial socialization and PFMB. The importance of this link was further supported by a high t-value, which showed that the difference between the sample mean and the predicted value is not the result of chance. The results are confirmed to be statistically significant because the p-value (0.000) is much below the generally accepted cutoff of 0.05. This suggests that the beneficial effects of financial socializing on PFMB are not likely to have happened by chance, and the evidence clearly supports the notion. Prior research has emphasized how crucial financial socialization is in determining the personal financial management behaviour. According to Gudmunson and Danes (2011), family socialization is essential for passing along financial knowledge, which in turn enhances financial behaviour. According to Shim et al. (2015) and OECD/INFE (2022), socialization agents including parents, classmates, and company websites have a big impact on young adults' financial behaviour. According to Ameer and Khan (2020); Goyal et al. (2023), media, education, and the internet all have a significant impact on how people socialize their financial management. According to research by Acharya, P., & Poudel, O. (2023), financial socialization has a good impact on people's financial well-being and money management practices. In summary, the data provide substantial support for the idea that financial socialization has a favourable impact on PFMB, which is consistent with findings from other researchers in the field.

4.8 Mediation Analysis

Objective 3: To examine the mediating effect of digital financial literacy on the relationship among financial attitude, financial socialization and personal financial management behaviour of women.

In order to achieve the third objective and to test the effect of mediating variable on the relationship among endogenous and exogenous variables various hypothesis were tested. Firstly, the direct relationships between independent and dependent variables were investigated and then indirect effects were examined after incorporating mediating variable and lastly, full path model was tested to determine the empirical validity of structural model.

4.8.1 Assessment of Direct Effects after Mediation

Following the measurement model assessment, the structural path is evaluated in order to determine the statistical significance of the path coefficients, or correlations between the research constructs.

Table 4.20: Path Coefficients and P Values after incorporating Mediator

Hypothesis	Beta	Standard deviation	T-Value	P-values	Comment
DFL -> PFMB	0.482	0.054	8.975	0.000	Supported
FA -> DFL	0.323	0.062	5.219	0.000	Supported
FA -> PFMB	0.308	0.053	5.795	0.000	Supported
FS -> DFL	0.547	0.059	9.316	0.000	Supported
FS -> FA	0.811	0.022	37.14	0.001	Supported
FS -> PFMB	0.175	0.059	2.944	0.003	Supported

Source: Smart PLS 4.0

The outcomes of the hypothesis test are shown in the above table. The standardised regression coefficient, or beta, in structural equation modelling quantifies the degree of correlation between an independent and dependent variable. The route Coefficients typically range from -1 to +1, with values nearer +1 signifying a significant positive correlation. The degree to which a variable's values deviate from its mean is measured by its deviation; a low standard deviation indicates that the values are clustered around the mean, whereas a high SD indicates the scatteredness of values over a wide range. The T value determines the magnitude difference with respect to the variation of the sample data. P values are the probability values that indicate results are significant if they are less than 0.05, and the larger t value, shows stronger evidence against the null hypothesis.

H1: Financial Attitude has a significant influence on Personal Financial Management Behaviour of women.

With a beta coefficient of 0.308, and a standard deviation of 0.053, indicating a substantial positive influence of FA on PFMB and with the t-value of 5.795 and the p-value of 0.000 Supporting the first hypothesis. The findings coincide with the studies conducted by Mien and Thao (2015), Prihartono & Asandimitra (2018), Adiputra and Patricia (2019), Siswanti and Halida (2020), Syarif & Putri (2022), Ardiandana et al. (2024) which highlighted the favourable impact of financial attitude on behaviour related to personal financial management.

H2: Financial Socialization has a significant Influence on Personal Financial Management Behaviour of women.

The analysis showed a standard deviation of 0.059 and a path coefficient of 0.175. revealed a significant positive influence of financial socialisation on PFMB, with a p-value of 0.003 and a t-value of 2.944. Thus, back up the second hypothesis, which is also supported by various studies that demonstrated a positive correlation between financial socialization and personal financial management behaviour, including Qamar et al. (2016), Syafitri and Santi (2017), Yong et al. (2018), Khawar and Sarwar (2021), and Xolile Antoni (2023).

H3: Financial Attitude has a significant influence on Digital Financial Literacy.

Digital financial literacy and financial attitude have a 0.323 path coefficient and a 0.062 standard deviation. With a t-value of 5.219 and a p-value of 0.000, both of which are below .05, the third hypothesis is supported and shows a significant positive impact of FA on DFL. A large number of researchers, including Maman Setiawan et al. (2020), Kusumapradana & Aisyah (2022), Amalda A. (2022), and Jhonson et al. (2023), has shown that financial attitude and digital financial literacy are positively correlated because financial attitude aids in the acquisition of digital skills for using a variety of digital devices, which in turn influences digital financial decision making.

H4: Financial Socialization has a significant influence on Digital Financial Literacy.

The standard deviation is 0.059 and the beta coefficient is 0.547. Financial socialization and digital financial literacy have a highly significant positive relationship, as revealed by the t-value of 9.316 and the p-value of 0.000. Supinah et al. (2016), Chowdhury, A. (2019), Khan and Suriseti (2020), Golden & Cordie (2022), and other researchers examined this relationship and came to the conclusion that financial socialization facilitates the easy adoption of digital financial tools. They also proposed new methods for parents to teach financial socialization through a variety of digital platforms.

H5: Digital Financial Literacy has a significant influence on Personal Financial Management Behaviour

The analysis revealed a beta coefficient of 0.482 and a standard deviation of 0.054. This shows a considerable impact of DFL on PFMB, as evidenced by the t value of 8.975 and the p-value of 0.000. In their studies, Panos & Wilson (2020), Setiawan et al. (2020), Prete (2022), Chillar & Arora (2022), and Furinto et al. (2023) investigated the impact of digital financial literacy on individual financial management behaviour and concluded that it had a comparable effect to financial literacy on personal financial management behaviour.

H6: Financial Socialisation has a significant influence on Financial Attitude of women of Punjab

The findings indicated a beta value of 0.811 and a standard deviation of 0.022. There is a highly significant positive correlation between these constructs, as shown by the t-value of 37.14 and the p-value of 0.001. Shim et al. (2015) correctly noted that people's financial attitudes have improved as a result of shifting financial socialization and, eventually, shifting financial behaviour. This hypothesis was also supported by Yahaya et al. (2019), Moko et al. (2022), and Miglani (2024), who came to the conclusion that positive financial socialization through peer groups, social media, and financial education leads to improved financial attitude, which is crucial in framing personal financial management behaviour.

4.8.2 Indirect Effects after Mediation

Digital financial literacy's mediating effect was evaluated in order to investigate the effects of its mediation on the relationship between the endogenous latent variable, personal financial management behaviour, and the exogenous latent variables, financial attitude and financial socialization. All exogenous latent variables have a direct impact on endogenous latent variables, as conceptualized by the theoretical and structural model, and this effect was identified as substantial (Table 4.17). Additionally, after adding a mediator to the model, the study examined whether the direct and indirect impact of all exogenous latent factors on endogenous latent variables would still be positive and significant.

Table 4.21 Hypothesis Testing on Mediation

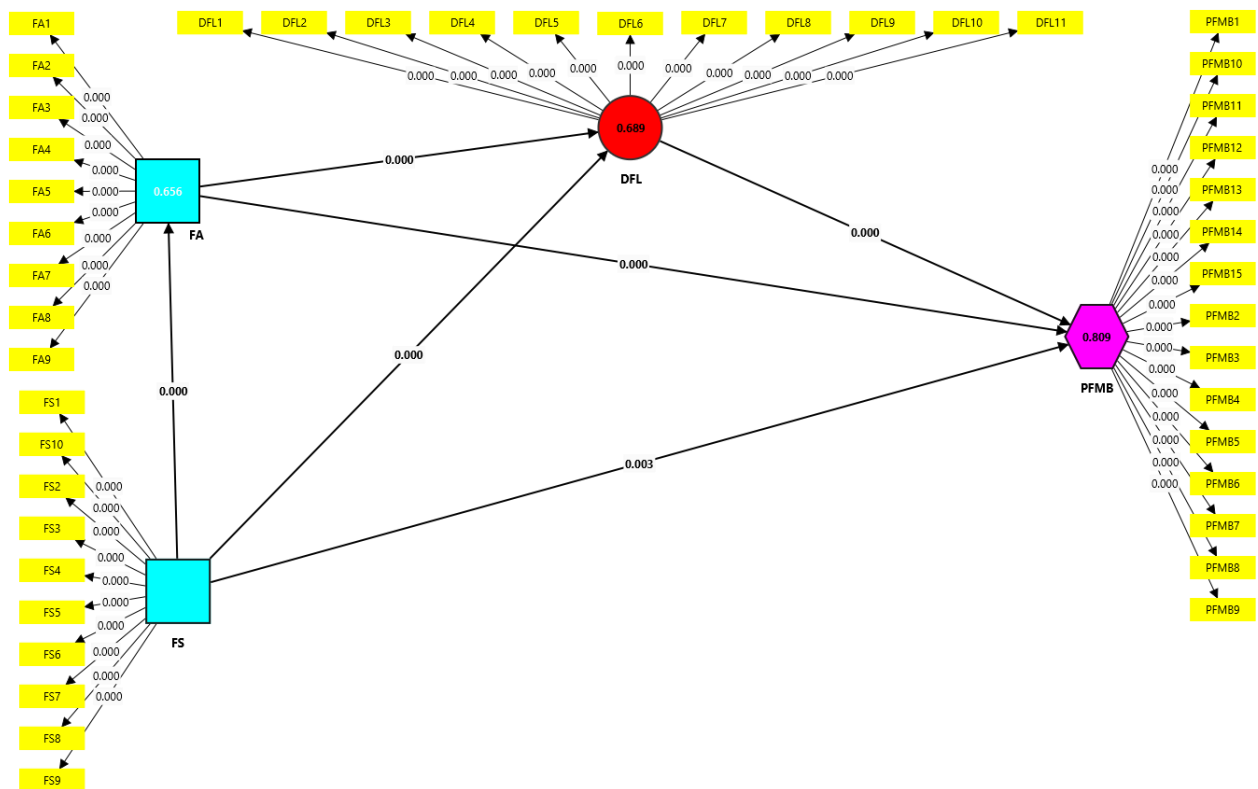
Hypothesis	Original Sample	SD	T-value	P-value
FA -> DFL -> PFMB	0.196	0.044	4.46	0.000
FS -> DFL -> PFMB	0.087	0.03	2.953	0.003

Source Author's Calculation Smart PLS4

This study looked at how Digital Financial Literacy (DFL) mediated the association between Personal Financial Management Behaviour (PFMB), Financial Socialization (FS), and Financial Attitude (FA). Two hypotheses are tested to check this association:

Hypothesis 7: FA → DFL → PFMB

Figure 4.10: Mediation Analysis



Source: Smart PLS 4.0

Financial attitude has a moderately good indirect influence on PFMB through digital financial literacy, according to the original sample (0.196). According to the standard deviation (0.044), the sample's variability is comparatively low, indicating that the association remains constant across several data points. Since the t-value (4.46) is so high, it is clear that DFL has a powerful mediation effect. This mediation effect's statistical significance is confirmed by the p-value of 0.000. Accordingly, those who have a positive outlook on money are more likely to be more digitally literate, which improves their own money management practices. The data significantly support the idea that DFL mediates the connection between PFMB and financial attitude.

Hypothesis 8: FS → DFL → PFMB

For the second hypothesis, the original sample (0.087) reflects a weaker but positive indirect effect of financial socialization on PFMB via DFL. The standard deviation (0.03) again shows low variability, implying that the data is consistent. A reasonably strong link was revealed by the t-value (2.953), and the statistical significance of this impact is confirmed by the p-value (0.003). This implies that better digital financial literacy as a result of successful financial socialization, which helps in improving financial management practices. This mediation effect

is statistically significant even if it is not as strong as the first hypothesis. The findings demonstrated that this association among underlying constructs is considerably mediated by DFL. According to this, those who have received financial education are more likely to develop their digital financial literacy, which will further solidify their money management practices. These results are consistent with studies by P. Kumar et al. (2022) and Qamar et al. (2023), who examined DFL integration as a mediating variable and came to the conclusion that digital financial literacy is a significant mediator between saving & spending attitude and financial socialization and their integration positively impact Pakistani millennials' financial decision-making behaviour. Chhillar, N., & Arora, S. (2022), highlighted the significance of digital financial knowledge in examining the facets of personal financial management behaviour. Barus et al. (2024), discovered the partial mediating role of digital payment behaviour between financial literacy and financial management. They also focused on combining DFL with financial literacy to improve the financial management abilities of Indonesian millennials.

Table 4.22: Mediation Effect of DFL between FA and PFMB

Type of effect	Effect	Path coefficient	P Values	Remark
Total effect	FA -> PFMB	0.504	0.00	Significant
Indirect effect	FA -> DFL->PFMB	0.196	0.00	Significant
Direct Effect	FA->PFMB	0.308	0.00	Significant
VAF (Variance Accounted For)	IE/TE	38.8 %	Partial Mediation	
Conclusion	Partial Mediation Exists			

Source: Author's calculations

The basic framework of mediation analysis is that the independent variable has a significant effect on dependent variable in the presence of mediator. Under Smart PLS mediation is analyzed through bias-corrected bootstrapping which is considered to be a powerful method. A statistically significant indirect effect (t -value > 1.96 and $p < 0.05$) should be taken as evidence for mediation (Baron & Kenny, 1986; Preacher & Hayes, 2004; Zhao et al., 2010; Aguinis et al, 2016; Mumtaz Memon et al, 2018).

The above table indicates the mediation effect of DFL on the relationship between financial attitude and personal financial management behaviour. The results clearly show that all the p values are less than 0.05 and the VAF value is 38.8%, which shows the strong mediation effect of DFL between FA & PFMB and this shows a case of Partial Mediation.

Table 4.23 Mediation Effect of DFL between FS and PFMB

Type of effect	Effect	Path coefficient	P Values	Remark
Total effect	FS -> PFMB	0.262	0.00	Significant
Indirect effect	FS -> DFL->PFMB	0.087	0.00	Significant
Direct Effect	FS->PFMB	0.175	0.00	Significant
VAF (Variance Accounted for)	IE/TE	33.2 %	Partial Mediation	
Conclusion	Partial Mediation Exists			

Source: Author's calculations

From the above results, it shows that all effects are positive and significant as evidenced by P Values < 0.05, but this mediation effect is weaker than the earlier effect, but still positive which again shows that digital financial literacy partially mediates between financial socialisation and personal financial management behaviour.

Table: 4.24 Rules For Mediation

Testing Mediation Analysis	Independent Variable-Mediating Variable	Mediating Variable-Dependent Variable	Independent Variable-Dependent Variable through Mediating Variable
Partial Mediation	Significant	Significant	Significant
Full Mediation	Significant	Significant	Insignificant
No Mediation	Insignificant	Insignificant	Significant

Therefore, it is evident from the above analysis that partial mediation is present since external constructions have positive and substantial direct and indirect impacts on endogenous constructs when a mediator is present. Financial Attitude has a moderately positive indirect effect on PFMB through Digital Financial Literacy (Beta value 0.196; T value 4.46; P value 0.000), while the relationship between Financial Socialization and PFMB through Digital Financial Literacy has a weaker but positive indirect effect (Beta value 0.087; T value 2.953 and P value 0.003). However, both impacts are noteworthy and favourable. The link between financial attitude, socialization, and PFMB is thus partially mediated by DFL.

4.9 Importance Performance Map Analysis:

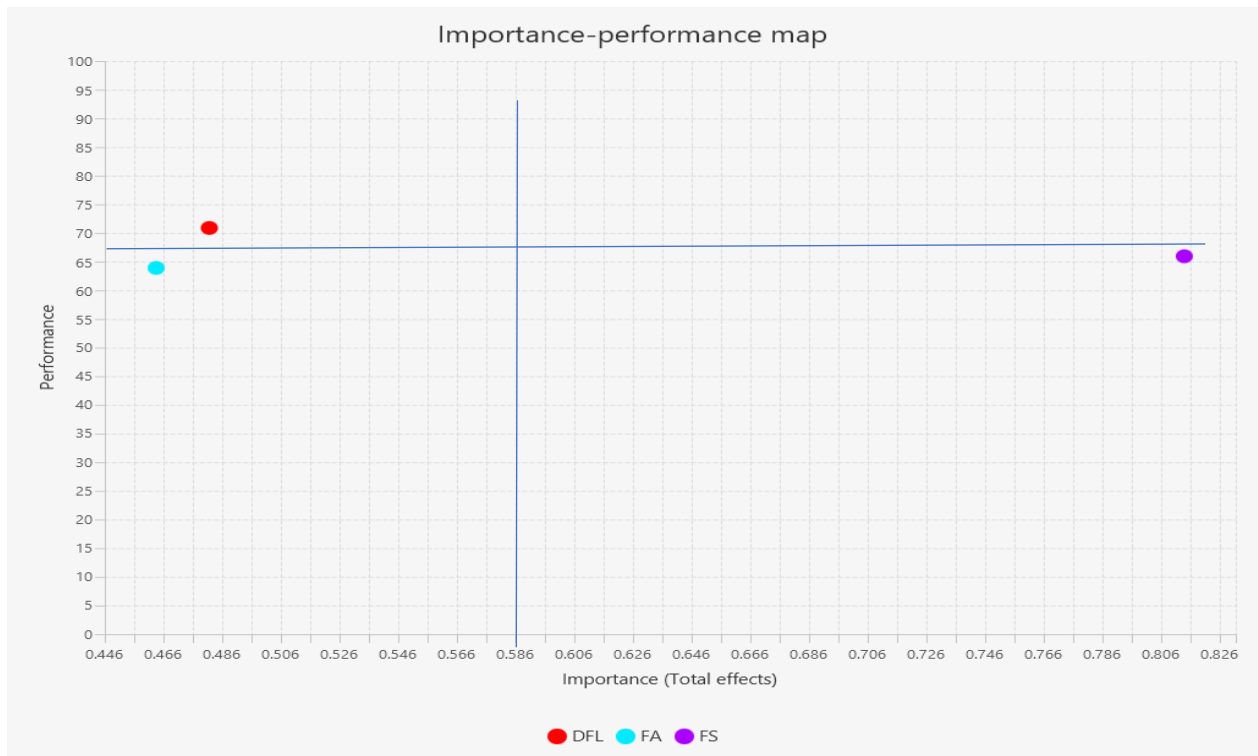
A strategic management tool called Importance Performance Map Analysis (IPMA) is used to determine strengths and weaknesses by evaluating the performance and significance of particular characteristics or factors. It entails charting variables on a two-dimensional grid, where performance is represented by one axis and importance by the other. This analysis helps organizations prioritize areas for improvement by focusing on high-importance, low-performance attributes. In research, IPMA can be applied to assess the significance and effectiveness of different factors or constructs under investigation, aiding in the identification of critical areas for further investigation or intervention. By including a dimension in the analysis that takes average values of the latent variable score into account, IPMA expands on the findings of PLS SEM and reporting the path coefficient (Ringle and Sarstedt 2016).

Table 4.25: IPMA Analysis

Construct	PFMB
DFL	0.482
FA	0.464
FS	0.814

Source: Author's calculation in Smart PLS 4

Figure 4.11 Importance Performance Matrix



Source: Smart PLS 4.0

Important insights are revealed by the IPMA study in Smart PLS 4.0. The analysis highlighted the importance and performance of different variables, depicting that Financial Socialisation plays a crucial role, emphasising the impact of family, peers, community, and social media in shaping financial behaviours. Its importance is significant but performance may highlight the gaps in the performance of financial socialisation practices within the community which highlighted that women's financial decisions are more influenced by their family, peer groups and social media. There is a need to frame more financial socialisation strategies to spread financial awareness among women so that they can acquire more financial skills and knowledge through different financial socialisation techniques. Financial Attitude holds the lowest importance but has average performance. The reason for the less importance given to financial attitude is due to the fact that women are still dependent on their family members for their financial decisions which shows a lack of financial attitude among women in Punjab. The financial attitude is an important construct measuring PFMB there is a need to increase its importance by imparting financial education to women and the need of open discussions on financial matters to develop their financial attitude as women with a proactive financial attitude are able to manage their finances effectively. However, the performance of this variable may vary, indicating potential areas for improvement in fostering positive financial attitudes among women. In today's digital world, being able to use online financial platforms can significantly

improve financial behaviour. Digital financial literacy, although comparatively less important, performs exceptionally well. In addition to providing digital financial education to women working at lower levels and in households, the performance of digital financial literacy indicates the need for targeted interventions to improve women's digital financial skills through awareness campaigns, even in rural and underdeveloped areas. These interventions should also inform women about various digital financial apps, digital financial frauds, and how to protect themselves, as well as the authorities and procedures where they can file a complaint in the event of a digital financial fraud. Overall, the IPMA suggests that while Financial Attitude is the most critical factor, there is a need to enhance digital financial awareness and financial socialisation to improve Personal Financial Behaviour among women in Punjab.

4.10: CFA Results

Table: 4.26 CFA Results

Construct	Observed Variables	Factor Loadings	Reliability (CR)	Validity (AVE)	Chi-Square	CFI	RMSEA
Financial Attitude	FA1	0.78	0.88	0.65	18.5	0.94	0.06
	FA2	0.82					
	FA3	0.75					
	FA4	0.80					
Financial Socialization	FS1	0.70	0.85	0.60	20.2	0.92	0.07
	FS2	0.73					
	FS3	0.76					
	FS4	0.79					
Digital Financial Literacy	DFL1	0.85	0.90	0.70	15.7	0.96	0.05
	DFL2	0.88					
	DFL3	0.80					
	DFL4	0.82					
Personal Financial Management Behaviour	PFMB1	0.83	0.92	0.72	22.3	0.91	0.08
	PFMB2	0.87					
	PFMB3	0.78					
	PFMB4	0.85					
Model Fit Indices	-	-	-	-	76.7	0.93	0.07

Source: Smart PLS 4.0

Confirmatory Factor Analysis (CFA) for the study demonstrates strong reliability and validity across the different constructs. The factor loadings for Financial Attitude (ranging from 0.75 to 0.82), Financial Socialization (0.70 to 0.79), Digital Financial Literacy (0.80 to 0.88), and Personal Financial Management Behaviour (0.78 to 0.87) indicated a solid correlation between observed variables and their latent constructs. The range of 0.85 to 0.92 for Composite Reliability (CR) indicates acceptable internal consistency, whereas the values between 0.60 to 0.72 for Average Variance Extracted (AVE) indicate adequate convergent validity. The model's fit indices, which confirmed that it accurately depicts the data, showed an acceptable fit, with a Chi-Square value of 76.7, CFI of 0.93, and RMSEA of 0.07. The measurement model's ability to accurately capture the targeted financial behaviour and attitudes of Punjabi women is supported by all of these findings.

4.11 Analysis of Demographic Variables

Demographic variables play an important role in financial decision making specifically, the factors like level of income, education, marital status, area or locality and the type of family influence the personal financial management behaviour of women. This association among demographical variables is tested through cross tabulation or the Chi-Square test, sometimes called the test of independence. This test determines whether each category includes a user-specified proportion of values or if by comparing the observed and predicted frequencies all categories have the same proportion of values. The demographic parameters were subjected to the chi-square test analysis.

Table 4.27: Association between Area and Level of Education

Area/ Locality * Level of education Cross tabulation								
			Level of education					Total
			Graduation	Matric	Other	Post- Graduation	Senior Secondary	
2. Area/ Locality	Rural	Count	101	3	9	185	18	316
		Expected Count	115.8	3.5	9.8	159.7	27.2	316.0
	Urban	Count	99	3	8	91	29	230
		Expected Count	84.2	2.5	7.2	116.3	19.8	230.0
Total		Count	200	6	17	276	47	546
		Expected Count	200.0	6.0	17.0	276.0	47.0	546.0

Chi-Square Tests		
	Value	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.659 ^a	.000
Likelihood Ratio	21.739	.000
N of Valid Cases	546	

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.53.

The Chi-Square analysis of 546 women in Punjab reveals an important association between area/locality and education level ($\chi^2 = 21.659$, $df = 4$, $p = .000$). Among rural women, 58% have post-graduation education compared to 40% in urban areas. Graduation rates are similar in both localities (32% rural, 43% urban). Senior Secondary education is higher in urban areas (13%) compared to rural (6%). Overall, the data indicates that educational attainment varies significantly by locality, with rural women more likely to pursue higher education, especially post-graduation, than their urban counterparts. This showed that individuals with higher formal education have higher financial literacy which ultimately leads to good financial management behaviour (OECD/INFE 2023).

Table 4.28: Association between Area and Level of Income

			Level of Income					
			₹10 lakh - ₹15 lakh	₹15 lakh - ₹20 lakh	₹20 lakh & above	₹5 lakh - ₹10 lakh	Less than ₹ 5 lakh	Total
2. Area/ Locality	Rural	Count	16	2	0	116	182	316
		Expected Count	15.6	2.3	.6	102.4	195.1	316.0
	Urban	Count	11	2	1	61	155	230
		Expected Count	11.4	1.7	.4	74.6	141.9	230.0
Total		Count	27	4	1	177	337	546
		Expected Count	27.0	4.0	1.0	177.0	337.0	546.0

Chi-Square Tests		
	Value	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.065 ^a	.000
Likelihood Ratio	26.345	.000
N of Valid Cases	546	

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .42.

The Chi-Square analysis of 546 women in Punjab shows a significance association between area/locality and income level ($\chi^2 = 25.065$, $df = 5$, $p = .000$). In rural areas, 58% earn less than ₹5 lakh annually, while 67% of urban women fall into the same income bracket. Higher income levels (₹10 lakh - ₹15 lakh) are more common in rural areas (5%) compared to urban (4.8%). The data highlights that income distribution varies by locality, with the majority of women in both rural and urban areas earning below ₹5 lakh, but a small proportion of rural women earning higher incomes. Higher income individuals have higher level of financial literacy and they are good financial managers (OECD/INFE 2023).

Table 4.29 Association between Marital Status and Level of Income

			Level of Income					
			₹10 lakh - ₹15 lakh	₹15L akh - 20 lakh	₹20 lakh & above	₹5 lakh - ₹10 lakh	Less than ₹ 5 lakh	Total
4. Marital Status	Widow	Count	2	0	0	5	6	13
		Expected Count	1.6	.0	.0	4.6	6.8	13.0
	Married	Count	18	4	1	87	84	194
		Expected Count	18.2	4.2	1.0	86.8	83.8	194.0
	Divorced	Count	1	0	0	13	10	24
		Expected Count	1.2	.0	.0	12.8	10.0	24.0
	Unmarried	Count	6	0	0	79	229	314
		Expected Count	5.5	.0	.0	78.8	229.7	314.0
	Separated	Count	0	0	0	1	0	1
		Expected Count	.0	.0	.0	.3	.7	1.0
Total		Count	27	4	1	185	329	546
		Expected Count	27.0	4.0	1.0	185.0	329.0	546.0

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	64.777 ^a	16	.000
Likelihood Ratio	67.271	16	.000
N of Valid Cases	546		

a. 19 cells (63.3%) have expected count less than 5. The minimum expected count is .00.

The Chi-Square analysis of 546 women in Punjab shows a substantial relationship between marital status and income level ($\chi^2 = 64.777$, $df = 20$, $p = .000$). Among unmarried women, 74% earn less than ₹5 lakh, while 45.4% of married women fall into this category. Higher income levels (₹10 lakh - ₹15 lakh) are more prevalent among married women (9.3%) than unmarried women (1.9%). Divorced, separated, and widowed women mostly earn less than ₹5 lakh, with very few in higher income brackets. This analysis indicated that marital status significantly influences income levels, with unmarried women predominantly in the lower income group which effect their financial decisions.

Table 4.30: Association between Type of Family and Level of Income

			Level of Income					
			₹10 lakh - ₹15 lakh	₹15Lakh - ₹20 lakh	₹20 lakh & above	₹5 lakh - ₹10 lakh	Less than ₹ 5 lakh	Total
3. Type of Family	Joint Family	Count	14	2	0	101	173	290
		Expected Count	14.2	2.1	.5	99.8	173.4	290.0
	Nuclear	Count	13	2	1	84	156	256
		Expected Count	12.8	1.9	.5	84.8	156.0	256.0
Total		Count	27	4	1	185	329	546
		Expected Count	27.0	4.0	1.0	184.6	329.4	546.0

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.443 ^a	8	.860
Likelihood Ratio	6.020	8	.814
N of Valid Cases	546		

a. 10 cells (55.6%) have expected count less than 5. The minimum expected count is .000.

The Chi-Square analysis of 546 women in Punjab reveals no significant association between the type of family (joint, joint family, nuclear) and income level ($\chi^2 = 5.443$, $df = 10$, $p = .860$). Income distribution across family types is relatively uniform. For example, 60% of women in joint families and 61% in nuclear families earn less than ₹5 lakh annually. Higher income brackets (₹10 lakh - ₹15 lakh) show similar proportions between joint (4.9%) and nuclear families (5.1%). The data indicates that family type does not significantly influence income levels among women in Punjab.

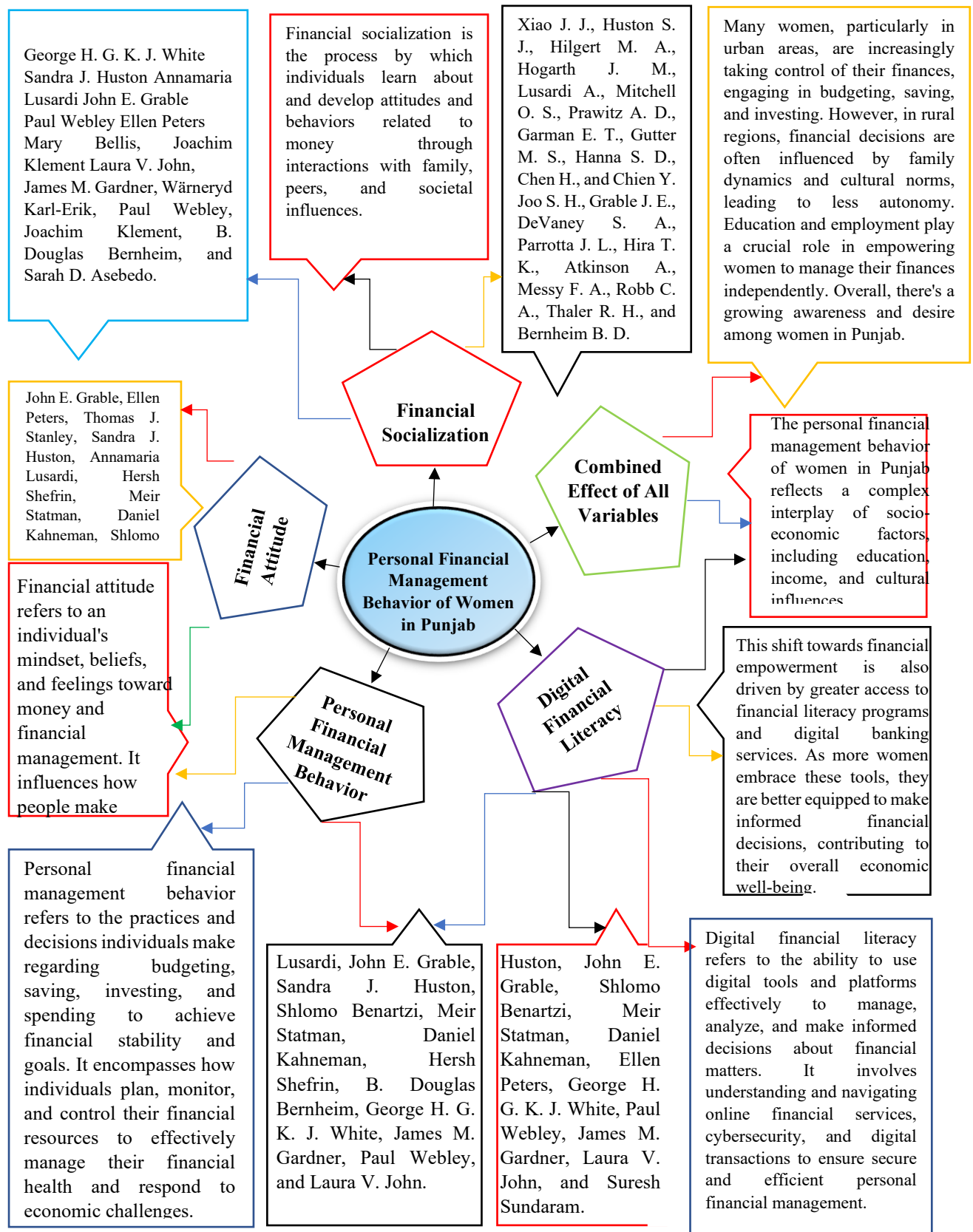
Table 4.31 Association between Type of Family and Level of Education

3. Type of Family * 6. Level of education Cross tabulation								
			6. Level of education					Total
			Graduation	Matric	Other	Post Graduation	Senior Secondary	
3. Type of Family	Joint Family	Count	103	2	7	162	16	290
		Expected Count	103.5	2.0	7.0	161.6	15.9	290.0
	Nuclear	Count	97	4	10	114	31	256
		Expected Count	96.8	4.0	10.0	114.0	31.2	256.0
Total		Count	200	6	17	276	47	546
		Expected Count	200.0	6.0	17.0	276.0	47.0	546.0

The Chi-Square analysis of 546 women in Punjab indicates a significant association between the type of family and the level of education ($\chi^2 = 16.089$, $df = 8$, $p = .041$). Women in joint families are more likely to have higher education levels, with 56% having post-graduation compared to 45% in nuclear families. Graduation rates are similar across joint (35%) and nuclear families (38%). However, women in nuclear families have a slightly higher percentage in Senior Secondary education (12%) compared to joint families (6%). This suggests that family type has an influence on the educational attainment of women in Punjab.

4.12 Mapping of Literature

Figure 4.12 Mapping of Literature Compare and Contrast



Source: Author's own creation through visual map

Chapter 5

FINDINGS IMPLICATIONS CONCLUSIONS LIMITATIONS & FUTURE SCOPE

5.1 Introduction

This chapter provides a summary of the study's main findings based on data gathering and analysis. A conclusion is then derived from these research findings, followed by recommendations and limitations. The chapter concludes by shedding light on the future potential for additional research after discussing the contribution of the current study and its implications for policymakers.

5.2 General Findings

The data was collected from women of 22 districts of Punjab on the basis of female financial literacy. The women were categorised into working and non-working women. The working women were selected from education sector, banking sector, corporate sector and non-working were from homemakers, you-tubers, bloggers etc. The following are the findings from socio-economic data of women:

Table 5.1 Socio-economic Profile of Respondents

Demographic Characteristics	Classes	Frequency	Percentages
Age (Years)	18 – 25	175	32.1%
	26 – 35	200	36.6%
	36 – 45	125	22.9%
	46 – 55	42	7.7%
	55 & above	4	0.7%
Educational Qualification	Matric	34	6.2%
	Sr. Sec	57	10.5%
	Graduation	201	36.8%
	Post -Graduation	245	45%
	Other	9	1.6%
Level of Income	Less than ₹ 5 lakh	337	61.72%

	₹ 5 lakh - ₹10 lakh	177	32.41%
	₹ 10 lakh - ₹ 15 lakh	27	4.94%
	₹ 15 lakh - ₹ 20 lakh	4	0.73%
Marital Status	Married	195	35.7%
	Unmarried	297	54.4%
	Divorced	14	2.6%
	Separated	29	5.3%
	Widow	11	2.0%
Current Status	Working	306	56%
	Non- Working	240	44%
Type of Family	Joint	290	53.1%
	Nuclear	256	46.9%
Area	Rural	316	57.8%
	Urban	230	42%

Source: Author's compilation

The above table clearly depicted that out of 546 women

Nearly 32.1% women belong to the age group 18-25 years, 36.6% from 26-35 years of age, 22.9% were of 36-45 years, around 7.7% were in the age group 46-55 years and 0.7% were above 55 years of age.

In the educational qualification most of the women nearly 45% were post graduate, those who are graduates were 36.8%, and around 10.5% were studied up to Sr. Sec level, 6.2% women passed only matric exam and 1.6% women were in other category like diploma or other certificate courses.

Most of the women about 61.72% were from income class less than ₹5 lakh, 32.41% women were having income between ₹5lakh - ₹10 lakh, 4.94% women in ₹10 lakh - ₹15 lakh income category and 0.73% above ₹15 lakh.

Out of the sampled women 35.7% were married, 54.4% were unmarried, 2.6% were divorced, 5.3% women live separately and 2% were widow.

Nearly 56% women were working in schools, colleges, universities, banks and other corporate sector and around 44% were non-working.

The women were sampled from both nuclear and joint families consisting of 53.1% from joint family and 46.9% from nuclear family.

Lastly 57.8% women were from rural area and 42% from urban area.

5.3 Summary of Major Research Findings

Research Objective 1: To study the effect of financial attitude on personal financial management behaviour of women.

The following hypothesis was framed to achieve the first objective

Hypothesis 1: FA $\rightarrow$ PFMB

The findings looked at the connection between personal financial management behaviour and financial attitude. According to table 4.19, the results are statistically significant and hypothesis H1 is accepted because the path coefficient between the exogenous and endogenous constructs is (0.838) and the p value is less than 0.05. As a result, the analysis revealed a high positive correlation between PFMB and FA, suggesting that people with positive financial attitudes are better financial managers and better planners. Numerous researchers have backed up these findings in their studies (Dinsar & Hasan, 2022; Mittal, 2023; Vargela et al., 2023; Kaur & Singh, 2024; Fathi Choobeh et al., 2025), which shown the strong and positive relationship between financial behaviour and financial attitude. These findings revealed that financial attitude is an important component of financial management and there is a need to give more attention towards developing financial attitudes among women through financial education. The policymakers should frame such policies to organize various financial education programs suited to the requirements of women.

Research Objective 2: To explore the effect of financial socialization on personal financial management behaviour of women.

To achieve second objective following hypothesis was framed:

Hypothesis 2: FS $\rightarrow$ PFMB

The findings revealed the correlation coefficient is (0.709) and the p-value is 0.000 as shown in (table 4.20) which is less than threshold of 0.05 confirmed the substantial influence of financial socialisation on PFMB hence, the acceptance of hypothesis H2 is strongly supported by data. The findings suggested that effective and positive financial socialization acquired through family, peer groups, social media, internet significantly enhance individuals' financial

skills and knowledge to exhibit responsible financial behaviour. The research findings coincide with various studies conducted by (Goyal, K, 2023; Watkins et al 2024; Wigati, & Setyorini 2024; Pak, Fan Chatterjee, 2024) and highlighted the significant relationship of financial socialisation with financial behaviour. The findings showed that family plays an important role in financial socialisation but apart from family there are other socialisation agents like friends, peer groups, social media, internet, financial education that have a strong influence on financial socialisation. Therefore, the authorities need to put more emphasis on other financial socialisation techniques and arrange various programmes for open discussion where some women experts openly discuss various financial issues with women and they also participate in these discussions and get solution to their various financial problems.

Research Objective 3: To examine the mediating effect of digital financial literacy on the relationship among financial attitude, financial socialization and personal financial management behaviour of women

The following hypotheses were framed and tested to achieve this objective:

Hypothesis 3: FA $\rightarrow$ DFL

The coefficient of correlation between financial attitude and digital financial literacy is 0.323 and p value is 0.000 as shown in (table 4.18) which shows that financial attitude has a favourable impact on digital financial literacy and supported hypothesis H3. The findings indicated the strong correlation between FA and DFL which showed that people with positive financial attitude can easily adapt digital financial skills that help in efficient financial management (Rahayu et al 2022; Aryan et al 2024). Therefore, the authorities should pay more attention towards digital financial education.

Hypothesis 4: FS $\rightarrow$ DFL

According to the analysis, there is a substantial coexistence between both constructs as shown in (table 4.18). Hypothesis H4 was supported by the path coefficient of 0.547 and p values below 0.05. As financial socialization found to be very effective in developing personal financial management behaviour through digital technologies, such as attending online financial literacy courses, reading online financial news, searching financial company websites, obtaining online investment information, and joining various social media virtual groups, the findings showed a strong correlation between financial socialization and digital financial literacy (Suchocka et al., 2022; Abdullah et al., 2022; Kaur & Sahni, 2023; Nanda S., 2024; Hishamudin et al., 2025).

Hypothesis 5: DFL → PFMB

The results also supported hypothesis H5, showing that the path coefficient between this association is 0.482 with a p value 0.000 below the threshold limit 0.05. (Nurkholik, A. 2024; Amnas et al, 2024; Azaria et al, 2024; Budiasih, Y. 2024; Phan, et al, 2024; Kumar, R, 2025) corroborate these findings. The results confirmed the necessity of digital financial literacy for effective personal financial management practices since it enables women to manage and control their finances and helps to promote their financial inclusion for sustainable development.

Hypothesis 6: FS → FA

The path coefficient between FA and FS is 0.811, indicating a strong positive correlation, and the p values are 0.001, which are again less than 0.05 and support hypothesis H6. The previous research analysis showed that positive financial socialisation helps to develop favourable financial attitude towards digital financial platforms which ultimately leads to better personal financial management behaviour (Pak, Fan & Chatterjee 2024; Legenzova, & Lecké, 2024; Algarni & Ali, & Ali, 2024; Watkins et al 2024; Swacha & Swacha, 2025; Setiawan et al 2025).

Hypothesis 7: FA → DFL → PFMB

The results also showed that digital financial literacy acted as a mediator between personal financial management behaviour and financial attitude which was demonstrated by the path coefficient of 0.196. DFL has a strong mediation effect, as evidenced by the significantly high t-value (4.46), and the statistical significance of this effect is confirmed by the p-value (0.000). This suggests that having a positive outlook on money helps people better grasp digital financial systems, which improves their money management practices. Therefore, the data significantly support the concept that DFL mediates the link between financial attitude and PFMB (Kumar P. et al., 2023; Ali, Alamgir & Nawaz, 2024; Amnas et al., 2024; Showkat et al, 2025).

Hypothesis 8: FS → DFL → PFMB

Finally, the results showed that digital financial literacy acted as a mediator between financial socialization and individual financial management practices. Through DFL, financial socialization has a smaller but still beneficial indirect impact on PFMB, as seen by the path coefficient (0.087). A reasonably strong link was revealed by the t-value (2.953), and the statistical significance of this impact is confirmed by the p-value (0.003). The prior research

revealed that effective financial socialization boosts digital financial literacy, which in turn improves financial management behaviour (Goyal, K., 2023; Qamar et al., 2023; Jusoh, 2024; Barus et al., 2024). This mediation effect demonstrated the case of partial mediation and is statistically significant, although the effect is weaker than the first hypothesis. The findings demonstrated that the links between FA, FS, and individual financial management behaviour are significantly mediated by digital financial literacy. Therefore, to improve financial abilities and foster a favourable financial attitude for women's financial management, policymakers should host a variety of digital financial literacy workshops and seminars.

5.4 Other General Findings

- ***Financial Attitude's Impact:*** The results demonstrated that a person's financial attitude is a useful indicator of how they handle their money. Women who have a positive outlook on money manage their finances more well, showing greater control over investments, savings, and budgeting. A favourable outlook on money is closely linked to a greater propensity to make long-term investments. Women who have a forward-thinking approach to money are more likely to invest in growth-oriented financial products and make future plans. The study's conclusions highlight how important financial attitude is in affecting Punjabi women's overall financial decision-making and well-being. The women both working and non-working have different financial attitudes and their financial attitudes are not fully developed. From the analysis of responses, it is shown that women have **average spending attitude** as they like to spend more, nearly 78% women agreed that they generally spend more than what they required, no doubt they consider their affordability before spending. Most of the women remain worried about their expenses, they check their plans regularly. women are **good financial planners** nearly 76% women pay their bills on time and about 80% women keep money separate for their daily expenses and set their long-term financial goals and they know that their financial management today will affect their future. Women have **good saving attitude** as 76% women tried to save as much as they can on regular basis and meet their financial goals through saving but 63% women agreed that they meet their unexpected expenditure through borrowings. 75% women prefer saving in fixed deposits. Further, the women have **average investment attitude** as 80% of women prefer long term investments with high returns but only 62% women invest their money for long-term to get good returns due to lack of awareness about investment plans. The need for financial education to enhance women's financial attitudes was the main emphasis of this investigation.

- **Financial Socialization and Behaviour:** Financial socialization, particularly through **family and friends interaction**, substantially impacts women's financial behaviour. The likelihood of women engaging in appropriate financial habits, such as consistent saving and frugal spending, is higher when they receive financial counselling from their peers and family. **Peer influence** plays a crucial role in moulding financial behaviour. Women often adopt financial practices observed within their social circles, indicating the importance of positive peer influence in promoting sound financial management habits. Further, **cultural norms and traditions** deeply influence financial socialization among women in Punjab. These cultural factors often dictate financial practices and decision-making processes, with women adhering to community and family expectations in their financial behaviour. The analysis showed that women's financial decisions are greatly influenced by family as 75% women agreed that family is their role model for financial management, in addition to family there are other socialisation agents like **friends, peer groups, colleagues** who equally influence their decisions and 61% women agreed that they are also influenced by **social media/ internet** and only 58% rely on **financial company website**, further, 63% women update financial knowledge through **financial education courses**, and 68% read **magazines, newspapers and online financial information** to update themselves. Only 66% women take their financial decisions **independently**, 72% manage their daily household budget independently but **78% women agreed that they are still dependent on their families** for taking any financial decision. This analysis concluded that women are financially socialised and follow their family members, friends, colleagues and social media for their financial decisions but they show fear and lack of confidence to take their financial decisions independently. There is a need for more open discussions with women at home, at workplace regarding financial matters which boost their confidence to take right financial decision.
- **Digital Financial Literacy as a Mediator:** The results of the study demonstrate that the association between personal financial management behaviour and financial attitude is mediated by digital financial literacy. Higher digital literacy among women makes it easier for them to convert a sound financial mindset into useful financial management practices, such as using online tools for investing and budgeting. The impact of financial socialization on individual financial management practices is also mediated by Digital Financial Literacy. Women who are well-socialized financially and possess digital literacy skills are more adept at managing their finances, utilizing

digital platforms for efficient money management. Though this effect is weak than earlier effect but it is positive and significant. Further, analysis shown that women have **digital financial awareness** as 83% women agreed that they know how to open a bank account online, they check their financial transactions online, pay bills online but only 49% agreed for using credit/ loan online due to less digital financial awareness regarding credit. Further, women about 75% to 80% also **use online services, various digital financial apps** like Google Pay, Paytm, and other banking apps, online shopping platforms like Amazon, Flipkart, Myntra etc but only 63% women agreed to use online platforms for trading in shares, this might be due to lack of knowledge regarding online trading platforms. 79% women agreed that they change their passwords regularly to **protect themselves against digital financial frauds**, 62% women agreed that they were trapped in digital scams through message, phone call etc. About, 75% to 83% women are aware about digital scams and know the procedure and authorities for filing complaint against digital frauds. However, in order to raise awareness of digital financial frauds, more digital financial literacy and awareness efforts are required. Moreover, many women in Punjab face significant challenges in developing digital financial literacy skills. These challenges include limited access to technology, lack of training, and cultural barriers, which impede their ability to effectively manage finances online.

- **Personal Financial Management Behaviour:** The analysis indicated that women of Punjab state exhibit **good financial management behaviour** as 84% women agreed that it is very essential to make budget and financial records as 75% women set reminders for upcoming bills and before taking long term financial decisions compare the services of various companies and analyse all the facts carefully but once they prepare budgets and keep records only 58% women review their plans periodically there is a need to revise the plans monthly, quarterly, or annually for good financial management. The women are **average in insurance management** as 81% women agreed that before taking any insurance policy, they consider the coverage offered by various insurance companies but due to lack of awareness only 59% women take sufficient insurance policies. Further, the analysis showed that women have **lack of knowledge of investment** as only 66% women agreed that they consider risk & return before making any investment decision and only 57% women invest in more than one avenue to minimise their risk. There is a need to make them aware about various investment opportunities and risk and return attached with them. Women are **aware**

about various tax benefits as 79% women know about tax benefits linked with their financial plans and 72% women utilize various tax rebates while filling tax returns. Finally, 79% women are aware that **retirement planning** should be started at a young age and they know the amount needed to fund a comfortable retirement but only 65% women began their retirement planning.

Therefore, it becomes clear from the above analysis that women are aware about personal financial management but they are not fully utilized their financial skills. Therefore, in order to make full use of their financial management skills there is a need of financial education which is crucial in fostering a positive financial attitude among women.

5.4.1 Results of Descriptive Statistics: The results of the analysis showed a significant association among different demographic variables and financial management of women. The analysis of Chi Square indicated a significant association of area/locality with level of income and education as rural women more likely to pursue higher education and earn higher income as compared to urban women which is due to availability of digital education platforms like MOOC courses and other online education resources. This showed a strong correlation between income levels, education and financial attitude as higher-paid and better-educated women typically have more optimistic financial attitudes, which are linked to more methodical and calculated personal financial management techniques. Further, the analysis showed that marital status has significant effect on income levels of women as higher incomes are more prevalent among married women than unmarried women. This might be due to less mobility of married women to change the job whereas unmarried women frequently change their jobs for better carrier options. Moreover, the analysis showed no significant effect of type of family on income levels of women rather it has a strong association with education attainment of women as the analysis showed that women in joint families get more opportunities for higher education as compared to women belong to nuclear families due to better time management, family interaction & relationships and financial support of joint family. These financial socialisation skills acquired through family further, improve their personal financial management behaviour.

5.5 Recommendations

- 1. Enhance Financial Education Program:** Implement targeted financial education programs focused on women, covering essential topics like budgeting, saving, investing, and debt management. These programs should be accessible, culturally sensitive, taken into account the traditional values and norms and designed to improve financial attitudes and behaviour among women in Punjab, ensuring greater acceptance and effectiveness. Individuals who have received financial education or

training demonstrate improved personal financial management practices, underscoring the necessity of focused educational initiatives to empower women in the financial sphere.

2. ***Integrate Digital Financial Literacy into Financial Education:*** Encourage women to become more digitally literate by offering online courses and community workshops. Emphasize the use of digital banking, mobile payment systems, and online investment tools to enhance their personal financial management. Technology-driven financial management tools, like online investment platforms and mobile banking apps, are more likely to be used by women who possess greater levels of digital financial literacy when making financial decisions. This adoption leads to more efficient and effective personal financial management practices. Develop mobile apps and online platforms that provide financial education and management tools specifically for women. These platforms can offer resources, tips, and personalized advice to help women manage their finances better.
3. ***Strengthen Financial Socialization Channels:*** Engage families and communities in financial education initiatives to improve financial socialization. This can help create an environment that supports responsible financial behaviour, especially in areas with strong cultural influences. Utilize peer influence in financial education by creating support groups where women can share experiences and advice on financial management. This could reinforce positive financial behaviour and foster a community-based learning environment.
4. ***Address Barriers to Digital Access to Leverage Technology:*** Work to reduce barriers to digital financial literacy by providing affordable access to technology and internet services. Additionally, offer training on using digital financial tools, particularly in rural areas. There is also need for more digital financial socialisation strategies to learn digital financial skills to use various digital payment gateways and digital financial tools safely and securely and protect themselves from digital financial frauds.
5. ***Incorporate Financial Management into School Curriculum:*** Integrate personal financial management education into the school curriculum for girls, ensuring they develop strong financial attitudes and literacy from a young age, setting the foundation for responsible financial behaviour. As younger women have a stronger correlation between digital financial literacy and personal financial management practices, reflecting a generational shift. This generation is more tech-savvy and relies heavily on digital tools for managing their finances, indicating evolving financial practices

over time. Therefore, there is a need for more digital financial programs both online and offline to provide digital financial education to younger women. Further, separate personal financial management workshops may be arranged at college level for girl students to develop their digital financial attitude towards saving & investment.

6. **Promote Long-Term Investment Planning:** Encourage women to engage in long-term financial planning through awareness campaigns and workshops that highlight the benefits of investing in retirement plans, mutual funds, and other growth-oriented financial instruments. The financial programs should be arranged for both working and non-working women to provide guidance on various insurance policies, investment opportunities, and various tax incentives so that they plan their long-term goals for better financial management.
7. **Support Financial Inclusion Initiatives:** More work is needed to advance financial inclusion in order to expand women's access to formal financial services including bank accounts, loans, and insurance. As a result, women may be empowered to take charge of their financial futures. The percentage of people with bank accounts rose from 62 to 69%, according to the Global Financial Index 2024, yet many people still do not have an account. From 60.1 in March 2023 to 64.2 in March 2024, the country's financial inclusion score significantly improved, according to the RBI's newly released Financial Inclusion Index (<https://Indianexpress.com>). Under PMJDY (Pradhan Mantri Jan Dhan Yojna) 55.98 crore bank accounts has successfully been opened till August 4, 2025 and out of which 30.79 crore are opened by females (<https://pmjdy.gov.in/account>). RBI and other authorities make continuous efforts to improve financial inclusion but still there is a need of more efforts.
8. **Encourage Savings Habits:** Promote the importance of regular savings through community programs and financial incentives. Women should be encouraged to set financial goals and develop habits that support consistent saving, even with limited income. It is also suggested to organize various trade fairs and exhibitions on various occasions like to celebrate women day, daughter day to motivate the women to develop saving and investment habits to grow their money and suggest them various financial plans for saving and investment. Financial institutions should develop products specifically designed for women, considering their unique financial needs and challenges. This could include flexible savings plans, low-risk investment options, and credit facilities tailored to women's financial goals.

- 9. Financial Mentorship Programs:** Establish financial mentorship programs where experienced women guide others in managing their finances. This peer-to-peer learning approach can enhance financial attitudes and behaviour through real-life advice and support. The youngsters are more tech savvy they can utilize their skills for reverse fintech socialisation which means they teach these digital financial skills to middle aged or retired women regarding how to use various digital financial apps and also about various digital financial frauds as these women generally trapped easily in digital frauds because of lack of knowledge.
- 10. Collaborate with NGOs, Local Bodies, and community organizations:** It is suggested for banks and financial institutions to make partnerships with local authorities and self- help organisations to promote financial literacy awareness and short-term training programs for women, ensuring the participation of local communities to familiarize them with various financial instruments and various cyber- crimes and with special emphasis on underserved areas. Collaboration can increase reach and impact.
- 11. Monitor and Evaluate Financial Programs:** Implement monitoring and evaluation mechanisms for financial education and literacy programs to assess their effectiveness. Continuous feedback and improvement can ensure that these initiatives meet the needs of women effectively. For the success of these financial programs there should be pre and post evaluation plan along with follow up action and reports can also be prepared and submitted to required authorities from time to time.
- 12. Society Responsibility for Sustainable Education:** it should be the responsibility of society to spread financial education among each other especially started from home and then neighbours and society. As the educated society builds an educated nation therefore, everybody has an equal responsibility to spread financial awareness and contributes towards financial literacy awareness programs. It is suggested for women as they have many social groups through which they can easily influence others who are unaware about various financial plans and contribute towards sustainable financial education.
- 13. Recommendations as per the variables of study:** It is recommended that digital financial education programs need to be started to develop financial attitude of women as it is an important indicator in managing personal finances. Further, more efforts need to be done to enhance financial socialisation and digital financial literacy in order to improve personal financial management behaviour of working as well as non-

working women. Fintech companies need to develop various social learning apps to encourage community-based learning and peer-to-peer information sharing. The banks should collaborate with NGOs and Mahila Mandals to enhance digital financial literacy among underserved women, focusing on non-working in rural areas who needs to be trained to use various digital financial tools.

5.6 Contribution of Study

The findings of present study made substantial contribution towards theoretical and practical implications.

5.6.1 Theoretical Implications

- ❖ **Contextual extension of existing theory:** The current study adds significantly to the body of literature on the various constructs included in the research. This study situates well-established constructs like financial attitude, financial socialisation, and digital financial literacy within the sociocultural context of women in Punjab. By focusing on a specific geographic, cultural and gendered population, the research refines the external validity of prevailing PFMB models and shows how cultural norms and gender roles in Punjab shape the relationships among these constructs.
- ❖ **Clarification of causal pathways and mediation:** By empirically testing the mediating role of DFL in the relationships between financial attitude/financial socialisation and PFMB, the study contributes to theoretical debates on mechanism versus direct-effect explanations. By demonstrating the presence of mediation, the study refines theoretical models about how knowledge, attitudes, and social influences translate into financial behaviour. The study's findings showed that financial socialization and attitude have a larger impact on how people handle their own finances, both directly and through the mediating factor of digital financial literacy.
- ❖ **Integration of Digital Financial Literacy into Behavioural Frameworks:** The existing literature on financial behaviour has predominantly focused on traditional determinants of financial literacy, while the role of digital financial literacy (DFL) has often been overlooked. This study advances behavioural finance theory by integrating DFL as a cognitive and competency-based construct within established behavioural frameworks of personal financial management behaviour. By conceptualising DFL as a mediating variable that bridges socio-psychological factors and financial behaviour, the study aligns theoretical models with the realities

of the digitalised financial environment. This integration not only enriches the explanatory power of behavioural models but also extends the theoretical understanding of how individuals navigate digital financial ecosystems, especially in the states like Punjab.

- ❖ **Adding a Gender Perspective to Financial Behaviour:** This research also brings a gender-sensitive approach to financial behaviour theories. This study shows that gender plays an important role in shaping financial attitude, socialisation, DFL, and PFMB. It explains how women's financial decisions are often influenced by social, cultural, and digital factors differently than men's. By highlighting these gendered patterns, the study contributes to feminist and gender economics literature and helps in developing more realistic and inclusive theories about financial behaviour.
- ❖ **Developing and Validating New Measurement Scales:** A major contribution of this study is the development and validation of reliable measurement tools for DFL and PFMB in the Indian (especially Punjabi) context. The adaptation and validation of these scales ensure cultural and contextual appropriateness, strengthening the construct validity of financial behaviour research in emerging economies. These scales were carefully designed to suit local conditions, ensuring that the measures truly represent people's knowledge and behaviour. This contribution helps other researchers to use or adapt these instruments in future studies. It also improves the accuracy and consistency of financial behaviour research, particularly in developing countries.
- ❖ **Bridging Theory with Real-World Application:** This study connects theoretical findings with practical recommendations for improving financial education and inclusion. It shows how behavioural factors like attitude, socialisation, and DFL can guide government departments, NGOs, and educators in designing better programs for women's financial empowerment. In this way, the study helps to bridge the gap between research and practice, making theoretical insights useful for real-world decision-making and policy development.
- ❖ **Supporting Future Research and Knowledge Sharing:** Finally, the study contributes by offering datasets and measurement instruments that can be used in future research. Sharing these tools will help other scholars compare results across regions and conduct meta-analyses, leading to stronger and more comprehensive theories about digital financial behaviour. This openness supports the growth of global knowledge on how digital literacy affects financial management behaviour.

5.6.2 Practical Implications for Policy Makers

- ❖ The government should make policies to implement financial literacy as a subject at university level under new education policy. Though they have formulated such policy in NEP but not yet fully implemented.
- ❖ The academicians need to establish financial literacy cell in the colleges or universities. The committees should be formed to manage that cell by organising various financial literacy workshops, contests, guest lectures, webinars and celebration of financial literacy day, week and submit the report to spread awareness among students and faculty members.
- ❖ The banks and financial institutions need to frame policies regarding celebration of Women's Day and Daughter's Day by inviting the women and aware them regarding various financial plans for saving and investment and also open the bank accounts of unbanked women and contribute towards financial inclusion.
- ❖ It is also suggested for policymakers to frame policies to impart digital financial education through arranging workshops, seminars and conferences specially for women along with hands on practice to develop their digital financial attitude and boost their confidence for independent financial decision making.
- ❖ The institutions and local bodies should make policies to collaborate with banks and self-help groups to promote digital financial literacy awareness among women especially the knowledge about digital financial frauds and how to protect themselves from these scams.
- ❖ The policymakers should frame policies to make women clubs where expert women guide others on different saving schemes and take their participation in various financial matters by giving them opportunity to discuss through open discussions on financial issues in order to make them independent and empowered in financial decision making.
- ❖ The study also contributes towards attaining Sustainable Development Goals (SDG 4) regarding Quality Education, including universal adult literacy and numeracy. And SDG 5: about Gender Equality & Empowerment of Women. The study highlighted the need of digital financial education to empower the women and make them more independent and confident to take their financial decisions. It also brings gender equality through equal access of employment opportunities which helps in knowledge transmission to generations and financial inclusion.

5.7 Conclusion

The "Personal Financial Management Behaviour of Women in Punjab" study offers a thorough grasp of the variables affecting women's money management in this culturally diverse and rich area. By concentrating on important factors including financial attitude, financial socialization, and digital financial literacy, the study explores the complex relationships that influence women's financial behaviour and provides insightful information about the opportunities and problems that exist. The results showed that one of the most important factors influencing successful personal financial management is financial attitude. Positive financial attitudes increase the likelihood that women would follow disciplined financial activities like investing, saving, and budgeting—all of which are critical for long-term financial growth and stability. This optimistic outlook demonstrates a progressive approach to money management, where women put their financial security first and take proactive measures to safeguard their future. The study also points out that not all women have this optimistic view of money, which emphasizes the necessity of focused financial education initiatives that can foster a more positive financial mindset. Another important element that is ingrained in Punjab's social and cultural fabric is financial socialization. Since the majority of women's purchasing decisions are impacted by their peers, communities, and social connections, the process of financial socialization—which mostly takes place through interactions with family, peers, the community, and social media—is crucial in determining how women behave financially. According to the study, women who are taught sound financial habits at a young age are more likely to behave well when it comes to managing their personal finances. This emphasizes how crucial influences from society and family are when making financial decisions. Nonetheless, the report also highlights the potential drawbacks of financial socialization. Women's financial liberty and decision-making authority may be restricted in situations where cultural norms and expectations drive financial behaviour. Therefore, it is imperative to strike a balance between traditional values and contemporary financial education so that women may manage their finances with more confidence and independence. While having a little less impact than the other variables, digital financial literacy is still very significant in today's environment of growing digitalization. According to the study, women who are more digitally literate manage their money more effectively while utilizing digital tools and platforms. This covers everything from digital investment platforms to mobile payment systems and internet banking. By providing convenience, accessibility, and a greater range of financial goods and services, digital literacy enables women to manage their money more effectively. But the survey also

reveals important obstacles to Punjabi women's digital financial literacy. These obstacles include cultural reluctance to embrace new technologies, a lack of digital skills, and restricted access to technology. For women to fully benefit from the digital change in financial services, these obstacles must be removed. The study also looked at how Digital Financial Literacy mediated the relationship between Personal Financial Management Behaviour, Financial Socialization, and Financial Attitude. The results show that the integration of personal financial management behaviour and financial attitude is improved by digital financial literacy. Women who are highly digitally literate and have a favourable financial attitude are more likely to convert their financial mindset into useful, efficient money management techniques. Similarly, the mediating role of DFL in the association between Financial Socialization and Personal Financial Management Behaviour, indicating that women with digital abilities and a strong financial socialization are better able to successfully manage and control their finances. The significance of incorporating digital financial literacy into larger financial education and socialization initiatives is highlighted by this mediation effect. The study has important ramifications for financial institutions, educators, and legislators. First and foremost, there is an evident need for focused financial education initiatives that aim to improve women's digital literacy, socialization, and financial attitudes. These initiatives must be attentive to cultural differences and tailored to the particular requirements of Punjabi women. To ensure that women are adequately equipped to handle their finances in the digital age, financial education should not just emphasize traditional financial principles but also include digital financial tools and platforms. Financial organizations should also think about creating goods and services that are especially suited to the financial requirements and difficulties faced by women. Offering financial solutions like credit facilities, investment alternatives, and savings plans that are more accessible, flexible, and in line with women's financial objectives could be one way to achieve this. Programs for financial education can be made much more effective by utilizing community networks and peer influence. Social networking, local NGOs, women's clubs, and community organizations can all be extremely helpful in spreading financial literacy and encouraging sound financial practices. In order to guarantee that financial education starts at home and is supported by family values and customs, financial socialization initiatives should also involve family members.

The survey also emphasizes the necessity of stepping up efforts to close the digital gap. Increasing access to technology and providing training on digital financial tools are crucial steps toward empowering women financially. This includes offering affordable access to the

internet and mobile devices, as well as developing user-friendly digital platforms that cater to women's financial needs. Moreover, addressing cultural resistance to digital technologies is essential for ensuring that women can fully embrace and benefit from digital financial services. In conclusion, a complex interaction between financial attitude, financial socialization, and digital financial literacy influences the "Personal Financial Management Behaviour of Women in Punjab." Improving financial outcomes for women in the area requires tackling the issues related to each of these elements, which all have a significant impact on how women handle their money. Stakeholders may enable women to take charge of their financial destinies and increase their financial stability, independence, and general well-being by improving financial education, utilizing community assistance, and closing the digital divide. This study offers a useful starting point for further research and initiatives targeted at enhancing Punjabi women's money management practices, which will ultimately support their social and economic growth.

5.8 Limitations

This study, while offering valuable insights into women's personal financial management behaviour (PFMB) in Punjab, is not without limitations, and these should be acknowledged to provide a balanced perspective. First, the study's geographical focus is confined to Punjab due to time and logistical constraints. Although Punjab provides an important context, the findings may not be generalizable to the wider population of India, where socio-cultural, economic, and financial practices vary significantly across states and regions. Future research could expand to other states to enable comparative analysis and enhance the external validity of the results. Second, while the study achieved a robust sample size of 546 respondents, the reliance on purposive sampling and the concentration of respondents within particular demographic segments—such as age groups, occupations, or socioeconomic classes—may limit representativeness. This raises the possibility of sampling bias, as certain voices and perspectives could be underrepresented, thus affecting the comprehensiveness of the findings.

Third, the study is heavily reliant on self-reported data collected through surveys. Although self-reported measures are practical and commonly used in behavioural research, they are inherently vulnerable to biases such as recall bias, where respondents may not accurately remember past behaviours, and social desirability bias, where respondents may provide answers they perceive as more socially acceptable rather than reflecting their true behaviours. Such factors may compromise the precision and authenticity of the findings, particularly given the sensitive nature of financial decision-making. Additionally, while efforts were made to

ensure clarity of the survey instrument, the possibility of misinterpretation of certain items by respondents cannot be entirely ruled out.

Fourth, the study employs a cross-sectional research design, which limits its ability to infer causality. Although significant associations were identified between digital financial literacy, financial attitude, financial socialization, and PFMB, the design only allows for correlation, not cause-and-effect relationships. A longitudinal approach in future research could provide more robust evidence regarding the causal pathways underlying these relationships. Fifth, while the constructs studied provide meaningful insights, the scope of financial behaviours examined remains selective. Other critical dimensions, such as investment behaviour, risk management practices, informal borrowing, or intergenerational financial decision-making, were not captured, which may restrict the comprehensiveness of the study's conclusions.

Sixth, cultural and societal influences specific to Punjab may have shaped respondents' financial attitudes and behaviours. As such, findings may not be fully applicable to regions with different cultural norms, social structures, or economic conditions. The results should therefore be interpreted within this contextual boundary. Furthermore, financial behaviours are not static; they evolve with economic shifts, technological advancements, and policy reforms. Since the data reflect a single time frame, the study does not account for potential changes in financial practices resulting from dynamic factors such as inflation, digital banking reforms, or government financial inclusion initiatives.

Lastly, the study does not sufficiently capture the role of informal financial systems, such as chit funds, self-help groups, or community savings practices, which are prevalent in parts of Punjab and significantly shape women's financial lives. These informal mechanisms often operate parallel to formal systems and can provide important insights into grassroots-level financial management. Their exclusion represents a gap that future research could address to offer a more holistic view of PFMB.

In summary, while these limitations do not undermine the validity of the study's findings, they highlight methodological and contextual constraints that should be considered when interpreting the results. They also point toward future research directions that can build on this work by expanding geographic coverage, employing more representative sampling strategies, using longitudinal designs, and incorporating both formal and informal financial practices to create a richer and more generalizable understanding of women's financial management behaviour.

5.9 Future Research Direction

The findings of this thesis open several avenues for future research into Punjabi women's personal financial management practices, and addressing these can significantly strengthen the depth and breadth of scholarship in this domain. First, future studies should focus on increasing the sample size and enhancing demographic diversity by including women from varied age groups, occupations, marital statuses, and income categories across both rural and urban areas of Punjab. This would not only improve the representativeness of the findings but also capture more nuanced differences in financial behaviours across subgroups.

Second, researchers should employ longitudinal research designs to trace behavioural patterns and causal pathways over time, thereby overcoming the limitations of cross-sectional analysis. Such an approach would make it possible to examine how changes in economic conditions, technological adoption, or financial literacy initiatives shape women's financial management behaviour over the years.

Third, future research should integrate socio-cultural, psychological, and familial dimensions in greater detail. Specifically, studies could examine how traditional gender roles, intergenerational financial socialisation, and household decision-making dynamics influence women's financial attitudes and behaviours. A deeper cultural analysis would not only enrich theory but also guide the creation of more context-sensitive financial empowerment programs.

Fourth, scholars should expand the scope of inquiry by examining the influence of informal financial systems such as rotating savings groups, self-help groups, and microfinance institutions, which remain particularly significant in rural and semi-urban Punjab. Understanding the intersection between these informal mechanisms and formal financial institutions could provide a holistic picture of financial practices.

Fifth, given the rapid spread of fintech innovations, future research should investigate the impact of digital tools such as mobile banking apps, Unified Payments Interface (UPI) platforms, and digital wallets on women's financial literacy and behaviour. This line of inquiry is particularly relevant in light of India's push toward digital financial inclusion, where women are often left behind due to barriers in access and trust. Sixth, the long-term effectiveness of financial literacy interventions should be systematically evaluated. Randomised controlled trials or quasi-experimental designs could be employed to measure how targeted financial education programs influence financial attitudes, confidence, and well-being among Punjabi women. Seventh, comparative studies between Punjab and other Indian states—or even cross-

national studies—would allow researchers to identify regional variations in financial behaviour and highlight contextual factors shaping these differences. Such comparisons could help policymakers design state-specific or culturally tailored financial empowerment strategies.

Finally, future research could adopt mixed-method approaches, combining large-scale quantitative surveys with in-depth qualitative interviews or focus groups. This would allow for richer insights into the lived experiences, challenges, and aspirations of women in managing their finances, thereby addressing gaps left by purely survey-based studies.

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<https://www.unesco.org/en/articles/why-educating-women-more-important-we-realize#https://timesofindia.indiatimes.com/blogs/voices/why-educating-women-is-more-important-than-we-realize/>

<https://www.phdcci.in/wp-content/uploads/2024/07/Recent-RBI-Developments-July-2024.pdf>

Appendices

1. Questionnaire

I am a research scholar at LPU, Phagwara, Punjab and I want to collect data on personal financial management behaviour of women (working and non-working) of Punjab. The data will be kept confidential and it will be used for research purpose only. Please spare your valuable time to fill my questionnaire so that I could start the process of data collection.

Questionnaire on Personal Financial Management

Sec 1: Demographic Profile

Please tick the right option

1	Write your district					
2	Area/ Locality	Rural ☐	Urban ☐			
3	Type of family	Nuclear ☐	Joint ☐			
4	Marital Status	Married ☐	Unmarried ☐	Divorced ☐	Widow ☐	Separated ☐
5	Age band	18 – 25 ☐	26 – 35 ☐	36 - 45 ☐	46 - 55 ☐	56 & above ☐
	Level of Education	Matric ☐	Sr. Sec ☐	Graduation ☐	Post - Graduation ☐	Other ☐
7	Level of income	Upto ₹ 5 lakh ☐	₹5 lakh– ₹10 lakh ☐	₹10 lakh- ₹15 lakh ☐	₹15 lakh – ₹20 lakh ☐	₹20 lakh & above ☐
8	Current profile	Working ☐	Non - Working ☐			

Sec- 2

Financial Attitude

Kindly rate your opinion on following statements:

Tick 1-Strongly Disagree, 2 – Disagree, 3 –Neither Agree nor Disagree, 4 – Agree, 5 – Strongly Agree

Sr. No.	Particulars	1	2	3	4	5
1	I carefully consider my affordability before buying something					
2	I find more satisfaction in spending money than saving for long run					
3	When I go for shopping or go out to restaurants, I spend more than what I had planned					
4	If I borrow money, I have a responsibility to return it as soon as possible					
5	I tend to worry about paying my normal living expenses					
6	I keep a check on my financial affairs regularly to stay within budget					

7	I keep money separate for bills from daily expenses					
8	I pay my bills on time					
9	I try to save as much as I can on regular basis					
10	I am satisfied with my present financial situation					
11	I set long term financial goals and strive to achieve them					
12	The way I manage my finances today will affect my future					
13	I try to meet my future financial goals through savings/ investment					
14	I like to meet any unexpected expenditure through borrowings					
15	I prefer saving in fixed deposit to achieve long term financial goals					
16	I am prepared to risk some of my own money while saving or making investment					
17	I prefer long term investment with regular income					
18	Even though it is a little risky, I prefer to invest in the stock market because of the possibility of getting high returns.					
19	I compare and calculate risk before making investment					
20	My present situation restricts my ability to invest in risky projects					

Sec 3: Financial Socialisation

Please rate your opinion regarding following statements:

Tick 1-Strongly Disagree, 2 – Disagree, 3 –Neither Agree nor Disagree, 4 – Agree, 5 – Strongly Agree

Sr no.	Particulars	1	2	3	4	5
1	I freely discuss financial matters with my family					
2	I take financial support from my family in case of need					
3	I take financial decisions based on what my family/friends have done in similar situations					
4	My family is my role model for financial management					
5	I get influenced by my family, friends, colleagues, financial advisors before taking any financial decision					

6	Social media advertisements/ internet influenced my financial decisions					
7	I rely on financial information given on financial company's website					
8	I attend online financial education workshops, seminars to update financial knowledge					
9	I read magazines, newspapers, searching online financial news and watch market trend to update my financial knowledge					
10	I take all financial decisions independently					
11	I host parties at home or pay for my friends if we go out for dinner.					
12	I learnt from my life experiences how to deal with financial matters					
13	I manage my daily household budget independently					
14	I depend upon my family for taking any financial decision					

Sec4: Digital Financial Literacy

How frequently you are using following digital financial services

tick 1- Strongly Disagree, 2- Disagree, 3- Neither agree nor disagree, 4-Agree, 5- Strongly Agree

Sr No.	Particulars	1	2	3	4	5
1	I know how to open a bank account online					
2	I use to take credit/ loan online					
3	I use to check the balance and financial transactions of bank account online					
4	I prefer to Pay bills online					
5	I feel comfortable to transfer money online					
6	I prefer to request/Pay for goods & services via digital payment apps (using Mobile wallet, Google pay, Paytm, Phone pe, bank apps etc.)					
7	It is more convenient for me to make purchases through various online platforms like Amazon, Mynta, Flipkart, Meesho, Ajio etc					
8	I am able to operate digital bank account independently					
9	I use online platform for trading in shares/ mutual fund					

10	I prefer to take most of the services (ticket booking, hotel booking, Zomato etc) online					
11	I keep on changing my password for online payments regularly to remain protected from digital financial frauds					
12	I accidentally provided personal financial information (Password/ Card Number) in response to an email, phone call or message that I later found out was not genuine					
13	I accepted advice to invest in an online financial product that later found to be a scam					
14	I know how to protect myself from digital scam or frauds					
15	I know the procedure and authorities for filing complaints of digital frauds					

Sec 5: Personal Financial Management Behaviour

Kindly rate your opinion on following statements:

Write 1-Strongly Disagree, 2 – Disagree, 3 –Neither Agree nor Disagree, 4 – Agree, 5 – Strongly Agree

Sr. No.	Particulars	1	2	3	4	5
1	I set reminders on phone or make a note of upcoming bills to remember their due dates					
2	I review my financial plans periodically (monthly, quarterly, yearly)					
3	I weigh all the pros and cons and analyse all the facts before taking any long- term financial decision					
4	I compare the services offered by different financial companies before taking any long - term financial decision					
5	I consider the coverage offered by insurance company before taking any policy					
6	I have sufficient insurance policies to make myself and my family financially secure in case of any mishappening					
7	I consider risk and return attached with investment before making any investment decision					
8	I prefer to invest in more than one investment plan to minimise the risk					
9	I consider tax benefits linked with the financial plans					
10	I know how taxes would be applied on different investment avenues					

11	I utilize various tax rebates while filling tax return					
12	I have started planning for my retirement					
13	Retirement planning should be started at an early working age					
14	I know the amount I need to fund a comfortable retirement					

2. List of Publications in Journals

1. Kaur, K., & Sahni, N. (2023). Influence of financial attitude, financial socialisation and digital financial literacy on personal financial management behaviour of women of Punjab. *International Journal For Multidisciplinary Research*, 5(3).
2. Kaur, K., & Sahni, N. (2024). Understanding Regional Differences in Financial Attitudes and Their Effects on Personal Financial Management Behaviour: A MICOM Investigation. *Corrosion Management* ISSN: 1355-5243, 34(1), 230-250.
3. Kaur, K., & Sahni, N. (2024). A study of mediating effect of DFL among Financial attitude, Financial Socialization and Personal Financial Management Behaviour. A SEM Approach. *Frontiers in Health Informatics*, 13(3), 4455-4470
4. Kaur, Kuldip & Sahni, Nancy. (2025). The Effect of Digital Financial Literacy on Personal Financial Management Behaviour of Women of Punjab: Exploring the role of Digital Financial Socialisation as A Mediating Variable. *International Journal of Accounting and Economics Studies*. 12(3), 130-139.

Publications in Book Chapters

S. No.	Indexing (Scopus/ UG C/Web of Science)	Book/ Book Chapter	Book Title	Title of the chapter	Volume, Issue & Page Number	ISBN Number
1		Book Chapter	Edutech Enabled Teaching: Opportunities & Challenges	Conceptual framework of Digital transformation in Higher Education an emerging trend	Issue 1 Page No. 93-110	9781003254942
2	Scopus	Book	Contemporary	Digital Transformation of	Issue 13	9798369312735

		Chapter	Management & Global Leadership for Sustainability	Banking and Sustainable Development: Challenges and Opportunities Under Banking 5.0	Page No. 163-180	
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3. List of Conferences

1. Paper presentation in International Conference Vishleshan organized by IIMS Pune, Maharashtra	A study of personal financial management behaviour of non- working women of Doaba region of Punjab	16 th 17 th Dec 2022
2. Paper Presented at 2nd International Conference organized by Eudoxia Research University, New Castle, USA and Research Centre, Bangalore, Guwahati, India	To explore the effect of financial socialization on PFMB of Women in Punjab	27 th and 28 th June, 2023
3. Paper presentation in 8th International Conference organized by Taylor's University, Malaysia	A study to examine the mediating effect of digital financial literacy on the relationship among Financial attitude, financial socialization and personal financial management behavior of Women	12 th Nov, 2024
Paper Presentation in International Conference organized by Mittal School of Business at LPU, Punjab	“Digital Financial Literacy as a Tool for Empowering Rural Women: A Study of Personal Financial Management Behaviour of Women of Punjab”	7 th Feb, 2025 Accepted for Publication
Paper Presented in ICSSR Sponsored National Seminar organized by Sanatan Dharama College, Hoshiarpur	“Digital Transformation and Sustainable Development of Higher Education in Industry 5.0”	22 nd Feb, 2025

Paper Presented in National Seminar Sponsored by CDC, PU, Chandigarh organized by PG Department of Commerce, D A V College, Hoshiarpur	A Framework for Sustainable Development of Banks: Opportunities & Challenges	24 th Feb, 2025
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4. List of Workshops & FDP

FDP, Workshop, Online course Attended	Date
Short Term Course on Research Methodology using Statistical Tools organized by LPU	May 24 to May 29, 2021
Refresher Course on Mixed Method Research organized by LPU	Jan 10 to Jan 31, 2022
Join NPTEL 8- week course cum FDP on Behavioural and Personal Finance	Jan to Mar 2022
One week online National FDP on Research Methodology and Data Analysis organized by D.A.V. College of Education Hoshiarpur	Mar 3 to 9, 2022
5 days FDP on Hands on Python organised by Chitkara university	June 6th to 10th 2022
Short Term Course on Scale Development and Standardization	Nov 21-26, 2022
Attended FDP on SEM from FORE School of Management	8th May to 10th May
Attended FDP on Systematic Literature Review & Meta Analysis organized by IIMS Pune	3rd June 2023
Attended International FDP on Business Analytics and Business Intelligence organized jointly by WIU and Research Foundation of India	19th -23 March 2024
Attended Short term course on Excel Mastery: Quantitative Data Analysis organized by LPU	22nd April to 27th April 2023
Workshop on PLS SEM using Smart PLS4	5th Nov to 12th Nov 2024