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Addressing Financial Exclusion through Financial Literacy training programs: a Systematic Literature Review

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Abstract

The development of financial literacy (FL) is significantly influenced by financial literacy training programs (FLTPs), which aid in creating an ecosystem that is more inclusive and participative. This study reviewed 22 studies on FLTPs for marginalised women in developed and developing countries. It seeks to comprehend (a) the characteristics of FLTPs and (b) the impact of FLTPs on women's financial behaviour. The findings highlight that existing research has demonstrated an overall improvement in post-training financial behaviour, particularly in bank ownership, savings, and expenditure. This indicates that FL programs and interventions can positively impact women's financial inclusion and empowerment. However, the study also acknowledges the need for further research to delve into women's specific challenges in various regions and contexts. Understanding these unique challenges is crucial for developing targeted strategies that address women's particular needs and circumstances in different situations. This study provides valuable insights and guidance to various stakeholders – practitioners, academics, and policymakers – enabling them to make informed decisions and implement impactful measures to promote FL and inclusion among women.

Keywords Financial literacy, Financial inclusion, Women, Training, Sustainable development, Empowerment

Introduction

Credit availability is expanding, and financial markets are becoming more digitised. Thus, financial literacy (FL hereafter) has been recognised as an increasingly crucial skill in recent years for influencing individual lives and serving as a foundation for informed social involvement and decision-making. It contributes significantly towards financial inclusion, positively affecting the real economy (Grohmann et al. 2018). According to OECD (2014), FL is defined as the “knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic

life". (OECD, 2014). People with FL can better organise their finances to manage their daily costs, maintain contingency fund reserves, accumulate savings for their children's upbringing and quality education, reduce the burden of liabilities and enjoy post-retirement years without any stress.

Considering its importance, developing FL as become a top policy agenda (OECD, 2014). However, evidence from numerous nations reveals that vulnerable populations lack basic knowledge of the ideas that guide saving and investment choices. It affects their financial well-being, particularly concerning the development of retirement wealth (Klapper and Panos 2011; Lusardi and Mitchell 2008). Not only is financial ignorance pervasive, but it is also awful among women.

Financial illiteracy is significant among women since they have different savings demands than males. Moreover, the death of a husband is a substantial factor in determining women's poverty in their old age (see (Sevak et al. 2005; Weir & Willis, 1998). Additionally, women frequently experience interrupted careers due to parenting and may have fewer financial resources. Women's positions in the job market are weaker than men's. For instance, in 2011, 72% of the male and 60% of the female population participated in the labour force throughout the OECD countries. Approximately 25% of working women were part-time employees, compared to only 9% of men who had jobs. Women made 15% less than men on average when working full-time.

Moreover, women's financial security after serving the job may be jeopardised due to a lack of resources and longer life expectancies. For instance, Lusardi and Mitchell (2008) demonstrate that females are significantly less likely than males to plan and are, as a result, less likely to be ready for retirement. Therefore, women need to become financially independent and conscious about managing more significant financial risks they confront because they also outlive men on average, have shorter working lives, and earn less on average. Any financial goods and services must be accessible to women so that they can directly use them to empower women's roles as producers, grow different economic activities even at the micro level, and benefit from such economic opportunities. At the local level, the situation is murkier because most rural credit, insurance, savings, and other financial products do not consider women's economic and social standing in their community.

Prior review on FL

FL research focuses on analysing FL results, evaluating its stages among different population characteristics, factors impacting FL, and the effects of financial education on enhancing FL. FL is determined to be the culmination of good economic behaviour (Santini et al. 2019), but many other elements also influence this behaviour (Riitsalu and Pöder 2016). To understand this, scholars have applied different behavioural theories to understand the aspects influencing financial behaviour. The most frequently cited theories in the literature include the Theory of Planned Behaviour (TPB) (Ajzen 1991), the Theory of Consumer Socialization (TCS) (Moschis 1985), and the Social Learning Theory (SLT) (Bandura 1986). According to the assumptions of TPB theory, intentions and behaviour are likely to be in FL directed by one's attitude toward behaviour, subjective norms, and recognized behavioural control. However, according to the TCS theory, family members can operate as socialisation agents if they follow the family's culture and traditions. According to the lifetime model created by Lusardi and Mitchell (2014),

individuals who perceive financial education outperform from the people who refrain from understanding the necessity of FL. Numerous empirical research has examined the effect of at-home financial socialisation on young people's FL (Danes 1994). According to SLT, young individuals' social connections impact their economic attitudes and knowledge. Previous research has shown that FL develops due to financial education, but how to translate that knowledge into action remains unclear.

Table 1 lists the extant literature reviews written in the context of FL and training. Review studies have been conducted on different population cohorts, including children and adolescents, entrepreneurs, teachers and women. Previous research has shown that FL develops due to financial education, but how to translate that knowledge into action remains unclear.

Gap and justification

While there is growing interest in FL in the women population, to our knowledge, there have been no systematic reviews of the research literature on FL programs explicitly targeted to the women population. Research to develop and evaluate support measures, whether in the context of initial vocational education or continued vocational education and training, is required to address this issue and effectively promote FL. The impact of financial education on FL is an emerging topic of study; there is a favourable correlation between the two (Xiao and O'Neill 2016). Financial education impacts student loan behaviour in academic and professional settings (Fan and Chatterjee 2019), and it has the most significant impact when it is delivered cross-curriculum or as a component of other disciplines (Cordero and Pedraja 2019).

Research question

This systematic literature review (SLR) is an attempt to answer the following research questions:

- i. What is the profile of financial literacy training programs (FLTPs) targeted to empower marginalised women?

Table 1 Extant literature reviews on FL

Paper title	Year	Focus	Context
(Baluja 2016)	2016	To explore the issues and challenges of FL among Indian women	Women
(Amagir et al. 2018)	2018	To assess the success of initiatives designed to teach children and adolescents about money management and its impact on future success	Children and adolescents
(Faulkner 2015)	2014	To explore the definition of FL, its importance, the locations where the public has been able to access FL education, the challenges faced, by authorities, in providing this education, and potential solutions to resolve these problems.	Conceptual
(Anshika and Singla 2022)	2022	To investigate the relationship between entrepreneurs' FL and access to financial resources for micro, small, and medium-sized enterprises (MSMEs).	Entrepreneurs
(Compen et al. 2019)	2019	To investigate what makes teacher professional development (TPD) in FL teaching effective	Teacher
(Matewos et al. 2016)	2015	To explore the meaning and relevance of FL, identify how it may aid in advancing the financial sector, alleviate poverty, and promote long-term economic progress in Africa's less developed nations.	African countries
(Furrebøe and Nyhus 2022)	2022	Explore the conceptualisation and measurement of financial self-efficacy	Conceptual

- ii. What is the impact of financial literacy training programs (FLTPs) on women's financial behaviour?

Contribution of the study

Existing studies have provided information on numerous aspects of the financial inclusion phenomenon. This study can contribute to the literature in several ways. First, by examining the profile of FLTPs targeted at marginalized populations, the study can provide important insights into the design and implementation of these programs. This can help policymakers, NGOs, and other stakeholders to develop more effective and targeted FLTPs that meet the specific needs of different populations. Second, by analysing the impact of FLTPs on women's financial behaviour, the study can help identify the specific outcomes and benefits of these programs. This can help to build the evidence base for the effectiveness of financial education programs and to guide the design and implementation of future programs. Overall, this study can contribute to the broader literature on FL and inclusion by highlighting the importance of targeted FLTPs for marginalized populations and providing insights into these programs' impact on women's financial behaviour. This can help inform policy and practice in this area and promote greater financial empowerment and inclusion for individuals and communities worldwide.

Research methodology

Based on Kitchenham's (2004) recommendations for systematic literature reviews, this study was broken down into seven stages: (i) formulating a review protocol; (ii) research identification through keyword strategy; (iii) selection of most relevant studies; (iv) additional search for the relevant studies; (v) quality assessment test of studies; (vi) pooling of data from studies; and (vii) synthesis of data results. To begin, a strategy for carrying out the review was developed. The protocol was peer-reviewed by an external expert and modified in response to the recommendations. The protocol elucidated upon the following components of the review: the study purpose; research databases; keyword strings; research questions; study identification; selection criteria; and data extraction. The compact report served as a comprehensive guide for conducting a thorough evaluation.

Search strategy

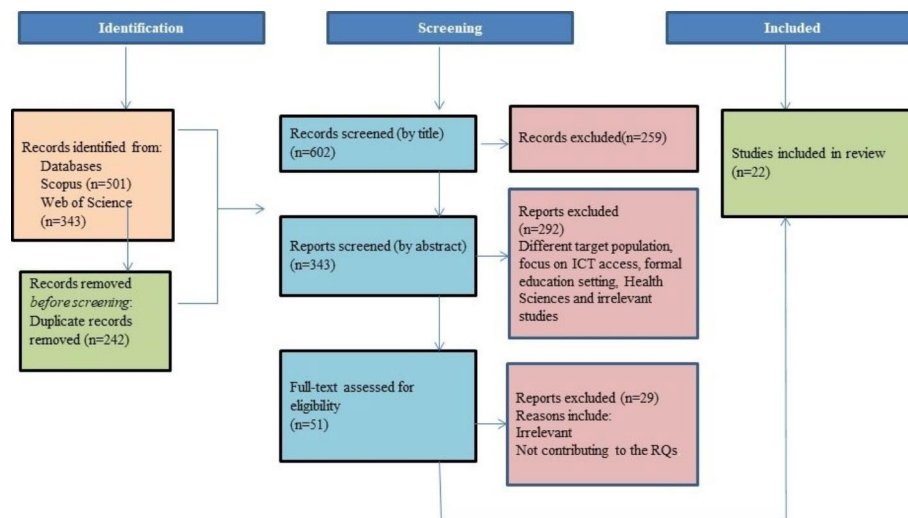
Because of the recent surge in attention paid to women's FL and training needs, we made an effort to be as thorough as possible in our investigation as possible. Different search strings were required to seek relevant studies. Some supplementary search phrases were discovered and implemented during the initial article screening. The strings we mixed were "financial literacy", "financial knowledge", "financial capability", "finance education", "finance awareness", "financial knowledge" and "financial skills". Since the study aims to identify the effectiveness of the FLTP, the keywords above were searched along with the training-related search strings "training", OR "program", OR "intervention". Scopus and Web of Sciences databases were used for exploring relevant studies using title words, abstracts, and keywords.

Inclusion and exclusion criteria

A few criteria were set to review the most relevant studies. Table 2 mention the inclusion and exclusion criteria set for the study selection.

Table 2 Inclusion and Exclusion criteria

Criteria	Inclusion	Exclusion
Focus	Related to the FL and training literature	Papers not contributing to FL and training literature
Language	Given the author's linguistic background, the publication's English language format facilitates rapid reading and evaluation.	Language other than English
Research Design	Both qualitative and quantitative	-
Study population	Women	Population other than women
Context	Situated in the domain of Education and Training	

**Fig. 1** Schematic diagram of literature search result

Study selection

The study selection was made primarily by reading the titles and abstracts of the studies. Later, the included studies were given a thorough read and excluded, if not found relevant, to answer the study's research questions. It is common practice to use a combination of a title and abstract screening followed by a thorough read of the included studies to determine their relevance to the research questions of a literature review. This approach is often used to efficiently narrow down the list of potential studies to a manageable number for full-text review. Moreover, it is essential to acknowledge that this approach is not foolproof and that some studies that may have been relevant could have been missed. However, using a systematic and transparent approach to study selection minimises the risk of missing relevant studies, and the overall quality of the review is improved.

Selection results

A PRISMA flow diagram (see Fig. 1) summarises the search and selection process for a literature review. Using a PRISMA flow diagram and transparent documentation of the study selection process is essential to ensuring the reproducibility and credibility of the evaluation. Figure 1 presents that the initial keyword search yielded 844 studies across Scopus and Web of Sciences databases, of which 259 duplicates were eliminated, leaving 602 studies for screening. After reading the titles and abstracts of the 602 studies, a

further selection process was carried out against inclusion and exclusion criteria, excluding an additional 575 studies, leaving 27 studies for inclusion in the final review. The reasons for excluding studies were based on their irrelevancy in answering the research questions. This approach demonstrates that the study selection process was systematic and based on explicit inclusion and exclusion criteria rather than subjective judgement, thereby increasing the reliability and validity of the review's findings.

Data extraction

DEF or Data Extraction Form, is a tool used in Systematic Literature Reviews (SLRs) to collect and record data from each selected study consistently and in an organised manner. The purpose of the DEF is to ensure that data extraction is conducted in a detailed, thorough, transparent, and consistent manner and to facilitate the analysis and synthesis of the data. Using a standardized data extraction form, researchers can reduce the risk of errors, biases, and inconsistencies in the data collection process. This study adopted the SPIDER tool for data extraction. It is generally used in qualitative research to help researchers identify relevant studies and synthesize the findings in a structured and systematic way (Cooke et al. 2012; Methley et al. 2014). SPIDER is an acronym for Sample, Phenomenon of Interest, Design, Evaluation, and Research type. Sample refers to the participants or population being studied in the research. The phenomenon of interest refers to the central research question or topic being investigated. Design refers to the research methodology being used to answer the research question. Studies may use a variety of designs, such as case studies, ethnography, or grounded theory. Evaluation refers to what is being examined or explored in the study; it relates to the specific research question or hypothesis the investigation is designed to address. Research type refers to the kind of study being conducted, such as a review, survey, randomised control trial or experimental.

Results and findings

Profile of FLTPs

Research growth

The Fig. 2 illustrates a steady increase in the literature on FLTP targeting women. The rising trend in the literature on FLTP for women indicates a growing recognition of the

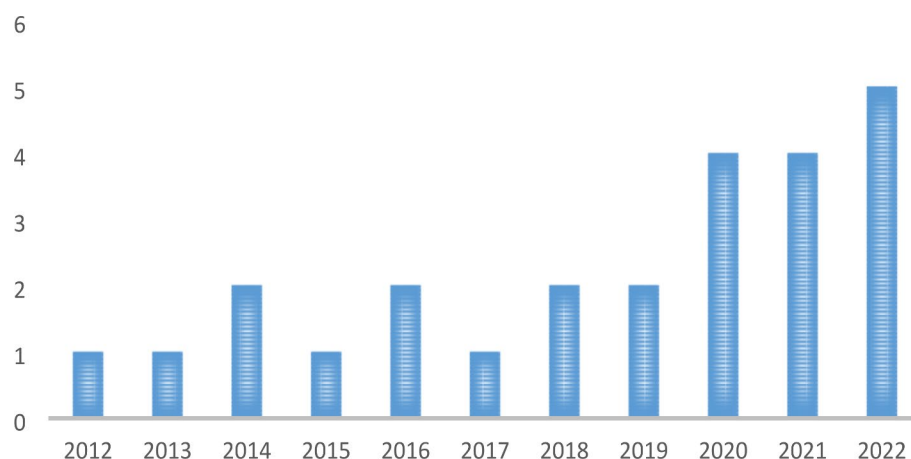
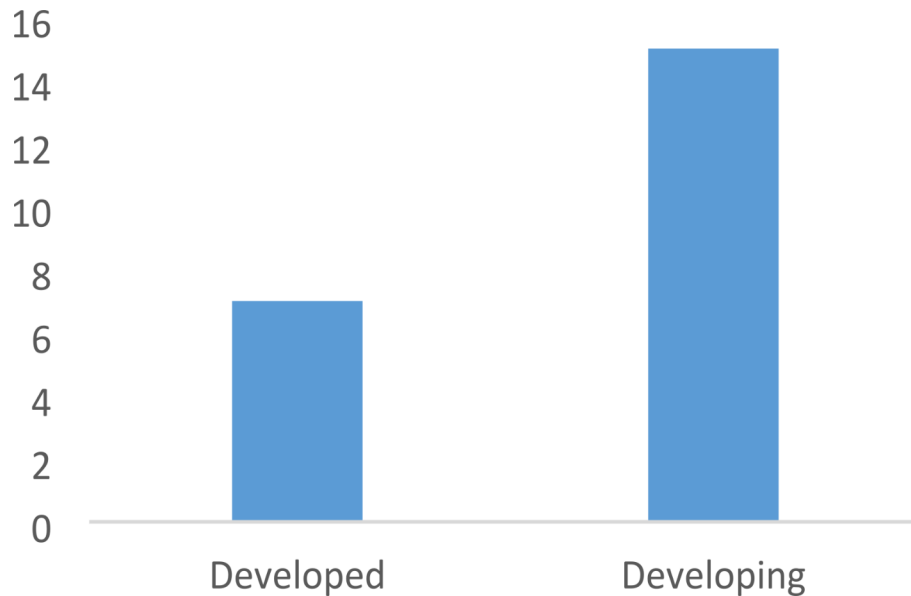


Fig. 2 Growth of FL studies focused on women's training

Table 3 Geographical distribution of the studies

Geographical region	Country	#	#
America	USA (North America)	7	7
Asia	Kazakhstan (Central Asia)	1	6
	India, Bangladesh, Myanmar (South Asia)	3	
	Indonesia, Philippines (Southeast Asia)	2	
Africa	Zambia (Southern Africa)	2	9
	Ghana (West Africa)	3	
	Uganda, Tanzania (East Africa)	4	

**Fig. 3** Geographical distribution of the studies

importance of empowering women economically and improving their financial literacy skills. It is noteworthy that the first study in this area emerged in 2012. Rustad and Smith (2012) were pioneers in emphasizing the importance of inclusive and equitable growth for marginalized and disconnected women. By integrating financial education with nutrition-related topics, they recognized the potential for improving the overall well-being of women facing economic hardships. This approach acknowledges the broader socio-economic factors that influence women's financial decisions and their ability to access essential resources.

Geographical distribution of studies

Table 3 presents the distribution of FLTP studies based on geographical regions and the countries where these programs were implemented. According to Fig. 3, out of the total 22 included studies, 68% of them (15 studies) were conducted in developing countries, including those classified as the least developed. In contrast, only 31% of studies (7 studies) were completed in developed countries. The findings suggest that most of the studies analyzed focused on FLTP programs implemented in developing countries, particularly in regions with lower indicators of socio-economic development. This distribution highlights the greater need for interventions and initiatives in these regions due to higher poverty levels, food insecurity, and malnutrition. The prevalence of studies in

less developed countries may reflect the urgency to address financial literacy and related issues in areas facing significant socio-economic challenges. The emphasis on developing countries in the literature indicates a recognition of the critical role that financial literacy can play in uplifting women and communities from disadvantaged backgrounds. These studies likely aim to address the unique economic and social circumstances prevalent in developing countries, where financial education and empowerment can transform women's lives and contribute to broader socio-economic development. On the other hand, the smaller proportion of studies conducted in developed countries suggests that financial literacy programs in these regions may be relatively more established or have received greater attention in previous research. Nevertheless, it is essential to note that financial literacy remains a topic of relevance and significance in both developed and developing countries, as individuals of all backgrounds can benefit from improving their financial knowledge and skills.

Women in focus

In the FLTP literature, specific attention is given to women from low-income, ethnically diverse women (primarily homemakers or farmers) in informal community settings, adolescent girls and young women, orphaned or migrants working in factories, victims of domestic, women who use drugs and are sex workers, female entrepreneurs, and transgender women. The participant sample sizes for each study were adequate, but they were appropriate for each study's design and goal of making generalisations to only the targeted demographics. The focus on these specific groups of women in FLTP literature is essential as it recognizes that these groups may face unique challenges and barriers to accessing FL information and services. By tailoring interventions to these groups' specific needs and circumstances, FLTPs can effectively promote financial empowerment and inclusion among marginalized communities.

Overall focus of programs

The studies discussed in the literature focus on developing women's FL (FL) and financial capabilities. Some initiatives aimed to enhance women's understanding of financial concepts; and empower them to make informed financial decisions. They emphasized the integration of short and long-term social, economic, and educational outcomes to support women's sustainable growth and address the specific needs and challenges faced by women in relation to FL. The aim was to equip women with the necessary knowledge and skills to manage their finances, make wise investment decisions, and plan for their financial future.

In addition to FL, some initiatives took a broader view of empowerment. They recognized that financial empowerment is interconnected with other aspects of women's lives, such as education, employment, and social inclusion. These programs aimed to provide women with the tools and resources to enhance their well-being and achieve economic independence. Moreover, public libraries and community centres were identified as typical venues for delivering these programs. These accessible and community-oriented spaces served as platforms for disseminating FL information and facilitating interactive workshops and courses. The content of the courses or workshops was typically provided by a diverse range of professionals, including librarians, researchers, program trainers,

and subject matter experts. This multi-disciplinary approach ensured a comprehensive and holistic learning experience for the participants.

Research design

Most selected studies used a pre-and post-test group design that was primarily experimental. An intervention follow-up was included in several articles (Hewett et al. 2017; Karasz et al. 2021; Koomson et al. 2020). One study performed the follow-up immediately following the intervention. (Jennings et al. 2016) performed the assessments at baseline, 12, and 24 months post-baseline. Two studies completed the follow-up after six months of the intervention (Austrian and Muthengi 2014), after a year of the intervention (Karasz et al. 2021), and after three years (Clark et al. 2018). The follow-up for (Park et al. 2021) will be conducted by the end of 2023.

FLTPs and their impact

The compiled information regarding the population type, topic of interest, research design, and outcomes of the FLTPs is summarised in Table 4. Notably, each intervention's methods and objectives are clarified for simple understanding. In microeconomic interventions with other populations, FL has been identified as a critical element of economic and gender empowerment. For instance, (Poteat et al. 2021a) highlighted the potential value of incorporating financial education into microeconomic interventions aimed at disadvantaged transgender women. The modestly positive impacts on FL, saving behaviour, and self-efficacy were noted by (Austrian et al. 2020). According to (Pérez-Roa et al., 2022), the impact of such training is not just felt by the beneficiary; it indirectly educates entire households. Additionally, FLTPs make women self-dependent and reduce dependence on male partners (Pettifor et al. 2019).

Offering FL training encourages account ownership since it increases beneficiaries' understanding, particularly those using financial products for the first time (Koomson et al. 2020). Economically vulnerable transgender women support flexible microeconomic interventions that promote gender-affirming therapies, enhance FL, and offer living-wage non-stigmatising work (Poteat et al. 2021b). To help develop future structural HIV prevention interventions, (Poteat et al. 2021b) planned to identify and examine the intervention preferences of economically precarious transgender women. Findings reveal that vouchers receive the most enthusiastic support from participants, primarily if the funds could be used for high-priority items like gender affirmation and had no restrictions. Empirical data show a significant link between financial conditions and intimate partner violence (Sanders 2014; Sanders and Weaver 2015). Financial services must thus be created and adapted to the unique requirements of battered women. Although a limited number of programs are targeted at battered women, asset development techniques and economic education have become prominent measures to promote the economic well-being of people with low incomes in recent years (Sanders and Weaver 2015).

The difference in FL between men and women significantly affects their capacity to save money and safeguard themselves against financial issues (Toosi et al. 2020). Research also shows that financial security promotes specific FL budgeting skills and income stability through savings. For instance, (Toosi et al. 2020) challenge the widespread belief that income level is the primary determinant of savings. As a result, differences in FL between the community's various groups—particularly those based on

Table 4 FLTPs included for review

Study (S)	Sample (S)	Phenomenon of Interest (PI)	Design (D)	Evaluation (E)	Research type (R)
(Rustad and Smith 2012)	Low-income, ethnically diverse women	Aims to increase FL concerning making purchases with a tight budget.	Randomised control trial	positive perspectives towards the means to purchase	Experimental
(Koomson et al. 2021)	Female and young households	Effect of a training programme on households' consumption as a welfare indicator.	Randomised control trial	Significant improvement in household consumption	Experimental
(Clark et al. 2018)	Adolescent girls	To assess how micro-savings initiatives affect girls' FL, saving habits, and academic performance	Randomised control trial	Initial evidence of increased financial planning, knowledge, and savings, but these effects faded after two years.	Experimental
(Austrian and Muthengi 2014)	Adolescent girls	Impact of intervention on social, health, and economic resources	Randomised control trial	A rise in financial assets	Experimental
(Pettifor et al. 2019)	Adult girls and young women	Analysing the Importance of Contextual factors is crucial in determining how cash transfer programs affect HIV risk.	Interview	1. Strengthened ability to successfully start businesses, generate income 2. Decreased dependency on partners.	Qualitative
(Prandini and Bacongus 2021)	Woman Migrants	Assessing the Impact of FL and entrepreneurship (FLE) education on financial management and decision-making processes.	Semi-structured interviews	1. Foster more beneficial mindsets toward financial management 2. Identify long-term strategies for aiding families who have fallen behind	Qualitative
(Curley et al. 2016)	Orphaned children	Effects of standard healthcare with an element of economic empowerment.	Randomised control trial	Increased sense of security and confidence	Experimental
(Hewett et al. 2017)	Adolescent girls	To more confidently credit girls' participation for the changes in their lives	Randomised control trial	1. Enhanced knowledge and abilities 2. Increased self-assurance and efficacy 3. High aspirations	Experimental
(Bhutoria and Vignoles 2018)	low-income families living in unofficial community settings	To examine the effectiveness of RoT-FLTP's in improving consumer financial outcomes.	Randomised control trial	Increase in personal savings	Experimental
(Toosi et al. 2020)	Line operators in apparel factories	Analyse the results of an FLTP for women workers in Bangladesh and India.	Randomised control trial	1. Increased savings. 2. Improvements in perceived pay clarity.	Experimental
(Sanders and Weaver 2015)	Victims of domestic violence	To make people more conscious of their financial options, opportunities, and effects	Randomised control trial	1. Increased awareness of financial choices, opportunities, and consequences	Quasi-experimental design

Table 4 (continued)

Study (S)	Sample (S)	Phenomenon of Interest (PI)	Design (D)	Evaluation (E)	Research type (R)
(Sprow Forté 2013)	Single mothers	To improve career pathways, wealth creation, leadership, and social supports	Interviews, observations, document analysis	1. Change is observed in behaviour concerning the personal money management 2. Rise in motivation for change	Qualitative
(Jennings et al. 2016)	Orphaned adolescents	Impact of intervention over time on attitudes toward future savings and cash savings	Randomised control trial	1. Increased cash savings over time	Experimental
(Park et al. 2021)	High School Girls	Effect of the programme on participants' knowledge, behaviour, and decision-making in the future	Longitudinal design	1. Increased confidence 2. Widened occupational pathways	Quasi-experimental
(Huang et al. 2022)	Young mothers	To determine how the use of assets and debt products is influenced by financial knowledge, expertise, and education	Randomised control trial	1. Increased use of an asset- and debt-product 2. Increased financial knowledge and financial skills	Experimental
(Koomson et al. 2020)	male and young beneficiary	Impact of training on financial inclusion behaviour	Randomised control trial	1. Significant impact on account ownership	Experimental
(Adhariani 2022)	Female entrepreneurs	Investigating the role of accounting in empowering women	Observation, interview and thematic analysis	1. Increased sense of being empowered. Not only women but the whole family is empowered 2. The cooperative loans transform them into neoliberal agents, and success comes from the family's support. 3. Simple accounting system proved helpful in enhancing financial skills to support small businesses	Qualitative
(Mergenova et al. 2019)	Women who use drugs and are sex workers	Addressing the needs of women who face HIV and other STIs	Randomised control trial	1. Opening of saving accounts 2. Learnt to address loans and strategies to pay them off	Experimental
(Sanders 2014)	Survivors of domestic violence	To aid women in accumulating assets for their long-term social and economic well-being.	Randomised control trial	1. Successfully able to save and invest in assets 2. Efficient use of saving withdrawals	Experimental
(Karasz et al. 2021)	Low-income women	Economic strengthening via training programs	Randomised control trial	1. Significant reduction in depression 2. Participation in household economic decision-making, improved	Experimental

Table 4 (continued)

Study (S)	Sample (S)	Phenomenon of Interest (PI)	Design (D)	Evaluation (E)	Research type (R)
(Austrian et al. 2020)	Adolescent girls	Impact of training on girls' economic assets	Randomised control trial	1. Modest, positive impacts on FL, savings behaviour, and self-efficacy.	Experimental
(Poteat et al. 2021a)	Transgender women	To comprehend the distinctive attitude towards microeconomic initiatives and their acceptability	Interview	1. Improved FL 2. Provide living-wage non-stigmatising employment	Qualitative

gender—could be seen. However, although there is a strong correlation between FL and financial behaviour, this relationship might shift over time and in different situations (Clark et al. 2018; Hewett et al. 2017; Jennings et al. 2016; Rustad and Smith 2012).

Research demonstrates that a specific focus on acquiring financial assets may increase the likelihood that unfortified adolescent girls may encounter sexual harassment and assault. Therefore, it is crucial to concentrate on economic strengthening and raise a variety of assets simultaneously when dealing with vulnerable adolescent girls. For instance, (Austrian and Muthengi 2014) found an increase in financial support for all girls who received the training, and it was discovered that social and economic resources are even protective against sexual harassment. Moreover, the FLTPs proved beneficial to the migrants because they taught them how to manage remittances efficiently and helped them to critically evaluate what must be done to improve their perspective to have a self-sufficient and reliable future (Prandini and Baconguis 2021).

The results of (Curley et al. 2016) justify the introduction of more extensive Child development accounts (CDAs) programs in developing nations where the realisation of free and universal secondary education for orphan girls is still a long way off. Further, the CDA policy is viewed by (Huang et al. 2022) as a novel approach to granting women financial access under the financial capabilities framework, (Huang et al. 2022) regards the CDA policy as a novel method of financial access for women. A CDA-based asset-based family intervention programme could be vital to this strategy.

The impact is significantly increased when FL training is combined with women empowerment (WE) training. This is because women become more influential consumers in their households after receiving such training (Koomson et al. 2021). Offering FL-only instruction to homes with younger heads, as opposed to families with older heads, significantly impacts spending (Koomson et al. 2021). Additionally, beneficiaries with training are more likely to receive financial aid, but, like with savings, men are more likely to benefit from the outcome. Further, the life-cycle analysis demonstrates that the impact of FL training is significantly more significant on young people than on adults (Koomson et al. 2020a).

Social support from friends, family, and other programme participants is essential for effective programme implementation and for helping participants achieve their financial goals (Pettifor et al. 2019). The social support of the FL learning community can be credited to the study (Sprow Forté 2013), enabling people to fully utilise the financial knowledge and skills they had learned, supporting Mezirow's (2003) claim that adult education can facilitate the process of emancipatory transformation. They gained from it because it strengthened their intentions, provided a new frame of reference for spotting

opportunities, and ensured they had the financial and psychological backing they needed to reach their objectives. Bhutoria and Vignoles (2018) aimed to evaluate the effects of a so-called “rule of thumb” (RoT) FLTP on the personal savings and financial practises of women who have joined a self-help group (SHG). Given the consensus that most traditional classroom-style financial education interventions are unlikely to pass a cost-benefit test, findings concluded that RoT-FLTPs are a viable and cost-effective alternative (Fernandes et al., 2014).

Discussions

The present study specifically looked for FL programs targeted towards women and found a limited number of FLTPs explicitly targeted towards women. This gap in programming highlights the need for evidence-based interventions that meet the FL needs of vulnerable populations such as women. The lack of programs in this area may be due to the relative newness of FL as a field of study and the need to identify its causal pathway linking financial outcomes. Moreover, this study focuses on promoting FLTPs for women since these programs aim to help women acquire the knowledge and skills they need to make informed decisions about their finances, which can ultimately lead to a better quality of life.

The FLTPs emphasize preventive behaviours, coping strategies, data-driven decision-making, and behaviour change (Khan et al. 2022). The interactive activities in these FLTPs are designed to help women develop individual competencies related to understanding financial information. This includes locating and evaluating the quality and relevance of financial information for making informed decisions about personal savings and expenditures. Therefore, it is essential to recognize that FL is an ongoing process and requires continuous education and support. Interactive programs that provide practical skills and hands-on experiences can be particularly effective in promoting FL among women. In addition to developing FL skills, it is essential to consider women's unique needs and challenges, such as family planning, healthcare costs, and managing fixed incomes. Programs that address these specific issues can be beneficial in promoting successful financial decision-making and overall financial well-being.

It is also important to note that FL is not just an individual responsibility but also a societal one. Efforts at the individual and systems levels are needed to promote FL and support women in achieving their financial goals. Collaborative efforts between government agencies, financial institutions, and community organizations can help to create a more supportive and accessible economic landscape for women (Khan et al. 2022). Moreover, various factors impact financial health literacy at the individual and systems levels. Interventions that take a comprehensive and collaborative approach are more likely to be effective in meeting the financial needs of women and improving their financial health outcomes. This may include addressing individual factors such as financial knowledge, attitudes, and behaviours and broader systemic factors such as access to financial products and services, regulatory policies, and social and cultural norms around money management. By addressing these complex factors in a coordinated and collaborative manner, we can work towards promoting FL and improving economic outcomes for women. Further, the success of financial education programs like FLTPs is also attributed to the concept of “Women Empowerment (WE)” (Bijli 2017). This idea is a shared emotional connection between members, a sense of identification and belonging,

similar symbol systems, shared values, and standards (Israel et al. 1994). When empowerment is achieved within the context of a community, it can create supportive, inclusive environments that encourage individuals to take control of their financial futures.

Research gaps and future directions

FL is still an emerging area, and researchers are still trying to determine how it influences economic outcomes in FL (Hastings et al. 2013). However, there are not many FLTPs that are specifically aimed at women. This review's findings corroborate existing literature (Sholevar and Harris 2020) that points to the necessity of creating evidence-based interventions tailored to the FL requirements of particular populations. One of the reasons for the lack of FLTPs aimed at women may be a lack of awareness or understanding of the specific needs and challenges facing women in different regions and contexts. Without this understanding, it can be challenging to develop effective and targeted financial education programs that meet the needs of women in developing countries. To address this gap, more research is needed to identify the specific challenges facing women in different regions and contexts, and to develop targeted strategies for promoting FL and inclusion. This research should involve a range of stakeholders, including policymakers, financial institutions, NGOs, and women themselves, and should prioritize the voices and perspectives of women in developing countries. By developing FLTPs that are specifically aimed at women in developing countries, we can help to empower women to take control of their financial futures and participate more fully in the economy. This, in turn, can support broader economic growth and development in these countries.

Based on the above findings, we suggest that FLTPs be combined with women empowerment (WE) training if their goal is to increase household consumption (as a welfare measure) quickly. This advice applies to all nations with a development strategy that wants to improve household welfare utilising FL as a critical instrument for policymaking. The FLTPs should concentrate on younger beneficiaries and engage men in the WE training to produce the best effects. Unfortunately, the duration and scope of such interventions are limited. Future research could consider extending the time between training and the end-line survey and broadening the focus to include rural and urban-based households.

The fundamental purpose of microfinance programs needs to be made more explicit. Included is the definition of empowerment, which extends beyond women's access to microloans or the reduction of household poverty. According to (Mayoux 2001), rather than serving as the ultimate goal of gender policy, ensuring an adequate and non-discriminatory regulatory framework for microfinance should be seen as a human rights issue. Since women may not always benefit from income gains even when they are essential contributors to the home, poverty alleviation as measured by increased income may not be sufficient to define women's empowerment. To determine power and women's empowerment in the context of microfinance more meaningfully, future studies can investigate the problems of intra-household inequality.

While the articles we reviewed showed promising effects of FL instruction for women, we cannot generalise these findings due to the specifics of the studies we read and the evaluation methods we employed. FLTPs must be evaluated for their efficacy to determine which processes are most helpful. Due to the novelty of the study's topic and the

small sample size, the authors acknowledged this as a caveat. Further, because of the scarcity of high-quality research on the topic of FL in women, there is a pressing need for more in-depth intervention programs, including active follow-up procedures and specific evaluation techniques. Research promoting the development of women's FL skills faces limitations in sample size; thus, careful thought must be given to the experimental design used. Their long-term effects must be studied to prove further these initiatives' worth in improving women's financial behaviour.

Besides, no research used accurate and reliable FL assessment tools to assess FL abilities and the success of FL programs in fostering their development. Without these standardised measures, it is not easy to draw broad conclusions about the effectiveness of different programs in raising people's FL levels. Thus, there is a need for more validation research because the many additional measures of financial self-efficacy available hinder generalizability. In light of the growing availability and accessibility of information online, researchers (Huston 2010; Walstad and Rebeck 2017) have created a validated FL assessment instrument to test individuals' abilities to comprehend and interactively use these finances. This will be useful for assessing FLTPs that employ digital platforms to disseminate information about finance management. There is also a lack of research focusing on the socio-economic disparities between men and women or the factors affecting financial self-efficacy. More research has to be focused on these variables. Digital FL skills promote the savings and economic well-being of the vulnerable, although more investigations are required to determine this (Hasan et al. 2022). Employers can improve their employees' financial well-being by offering training in life skills, particularly FL.

We acknowledged the necessity for "just in time" financial education rather than "one size fits all" financial education. Alternative educational resources are needed because the efficacy of conventional financial education, such as high school courses, seminars, etc., has been questioned. Moreover, teaching pedagogical styles such as group teaching and counselling more explicitly based on participants' financial circumstances can be promoted (Peeters et al. 2018). Future initiatives can also use an individual rather than a group-based strategy. The FLTPs curriculum may also impact results (Atkinson and Messy 2012). Given these flaws in the experimental design, it is wise to investigate this topic using an RCT and to construct the FL training to include material that transcends the idea of financial knowledge, attitude, and practise (KAP) (Atkinson and Messy 2011).

Furthermore, (Carpena et al. 2019) demonstrate how goal setting and financial counselling can enhance financial education by bridging the gap between knowledge and behaviour. Many people who need financial education benefit from personal finance blogs (Hoffmann and Otteby 2018), whereas television shows are more affordable options for less advantaged people (Crawford et al. 2018). Thus, decision-makers can focus on these modes of developing FL. While expensive, a customised strategy may focus on women's unique needs based on their life experiences. Similarly, more extensive vocational training could guarantee sufficient skill and capacity development to aid in the changeover to occupations utilising matching savings. This merits more investigation.

Conclusion

Financial inclusion of women can significantly advance their economic and social empowerment. It provides comprehensive solutions to combat poverty, promote inclusive development, and help achieve Sustainable Development Goals (SDGs). Access to and using various online services as tools would enable women and women-owned enterprises to enjoy their financial freedom and contribute to economic growth. However, gender inequalities and the persistent digital divide hinder their DFI. This study attempted to explore prior literature on the effectiveness of FLTPs designed for the inclusion and empowerment of women. Twenty-two studies were reviewed during the study process. The findings conclude that FLTPs should be promoted to encourage increased women's involvement and advocacy and facilitate women's empowerment. The advantages for women as a whole outweigh numerous social problems. This study will help FL researchers and policymakers create the ideal framework for implementing FLTPs and assessing their effectiveness. The research findings can also enhance DLTPs that aren't producing tangible results and develop methods for making teaching and learning procedures efficient and outcome-based. Governments, academic institutions, and businesses must collaborate and invest significant resources to close the FL gap, characterised by a discrepancy between the required and available financial capabilities.

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Authors' contributions

HC designed the study and conducted the review together with the co-author HJ. Both authors analysed and extracted the data (partly jointly, partly independently). HJ wrote the manuscript, HC supported and reviewed. Both authors read and approved the final manuscript.

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Data Availability

The corresponding author will provide the datasets used and/or analysed during the current study upon reasonable request.

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Competing interests

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