

## WOMEN'S FINANCIAL LITERACY: AN INTEGRATIVE ANALYSIS OF SOCIOCULTURAL, BEHAVIORAL, AND SOCIOECONOMIC FACTORS

ALFABETIZAÇÃO FINANCEIRA FEMININA: UMA ANÁLISE INTEGRADORA DOS FATORES SOCIOCULTURAIS, COMPORTAMENTAIS E SOCIOECONÔMICOS

ALFABETIZACIÓN FINANCIERA FEMENINA: UN ANÁLISIS INTEGRADOR DE LOS FACTORES SOCIOCULTURALES, CONDUCTUALES Y SOCIOECONÓMICOS

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**RESUMO:** Este estudo tem como objetivo analisar os fatores associados ao conhecimento financeiro entre mulheres, considerando a influência de processos de socialização de gênero, vieses cognitivos e comportamentais, condições socioeconômicas e acesso à informação financeira. Parte-se da distinção conceitual entre educação financeira, entendida como processo formativo, e alfabetização financeira, compreendida como constructo multidimensional que envolve conhecimento, atitudes e comportamentos financeiros. Metodologicamente, adotou-se uma revisão sistemática da literatura, permitindo identificar padrões explicativos recorrentes e lacunas teóricas no debate sobre desigualdades de gênero na gestão financeira. Os resultados indicam que o menor conhecimento financeiro feminino não decorre exclusivamente de limitações cognitivas, sendo fortemente influenciado por processos de socialização diferenciada, menor autoconfiança, maior aversão ao risco e desigualdades de acesso a experiências e informações financeiras. Evidencia-se ainda que fatores socioeconômicos, como renda, escolaridade e estado civil, interagem com aspectos comportamentais e institucionais, contribuindo para a persistência do gap de gênero. Conclui-se que políticas e programas de educação financeira sensíveis às especificidades das trajetórias femininas são fundamentais para fortalecer a alfabetização financeira e promover maior autonomia econômica das mulheres.

**Palavras-chave:** Educação financeira. Alfabetização financeira. *Gap* de gênero, Mulheres. Comportamento financeiro.

**ABSTRACT:** This study aims to analyze the factors associated with women's financial knowledge, considering the influence of gender socialization processes, cognitive and behavioral biases, socioeconomic conditions, and access to financial information. The study adopts a conceptual distinction between financial education, understood as a learning and training process, and financial literacy, defined as a multidimensional construct encompassing financial knowledge, attitudes, and behaviors. Methodologically, a systematic literature review was conducted to identify recurring explanatory patterns and theoretical gaps in the debate on gender inequalities in financial management. The findings indicate that women's lower financial knowledge cannot be explained solely by cognitive limitations, being strongly influenced by differentiated socialization processes, lower self-confidence, higher risk aversion, and unequal access to financial experiences and information. Socioeconomic factors such as income, education, and marital status interact with behavioral and institutional aspects, contributing to the persistence of the gender gap. The study concludes that gender-sensitive financial education policies and programs are essential to strengthen women's financial literacy and promote greater economic autonomy.

**Keywords:** Financial literacy. Financial education. Gender gap. Women. Financial behavior.

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**RESUMEN:** Este estudio tiene como objetivo analizar los factores asociados al conocimiento financiero de las mujeres, considerando la influencia de los procesos de socialización de género, los sesgos cognitivos y conductuales, las condiciones socioeconómicas y el acceso a la información financiera. Se adopta una distinción conceptual entre educación financiera, entendida como un proceso formativo, y alfabetización financiera, definida como un constructo multidimensional que incluye conocimientos, actitudes y comportamientos financieros. Metodológicamente, se realizó una revisión sistemática de la literatura para identificar patrones explicativos recurrentes y vacíos teóricos en el debate sobre las desigualdades de género en la gestión financiera. Los resultados muestran que el menor conocimiento financiero femenino no puede explicarse únicamente por limitaciones cognitivas, estando fuertemente influenciado por procesos de socialización diferenciada, menor autoconfianza, mayor aversión al riesgo y desigual acceso a experiencias e información financiera. Factores socioeconómicos como ingresos, educación y estado civil interactúan con aspectos conductuales e institucionales, contribuyendo a la persistencia de la brecha de género. Se concluye que políticas y programas de educación financiera sensibles al género son fundamentales para fortalecer la alfabetización financiera y promover una mayor autonomía económica de las mujeres.

**Palabras clave:** Alfabetización financeira. Educación financeira. Brecha de género. Mujeres. Comportamiento financiero.

## INTRODUCTION

In recent years, financial education has gained prominence as an essential tool for promoting full economic citizenship. Studies show that adequate financial knowledge contributes to better personal decisions, as individuals with greater financial education tend to make more informed financial decisions (Lusardi; Mitchell, 2007, 2014; Potrich; Vieira; Paraboni, 2022).

However, despite advances in financial education research, the literature still has limitations in understanding the mechanisms that explain gender differences in financial knowledge, especially in contexts marked by structural inequalities and differentiated financial trajectories. As a result, little research has been done on how social, behavioral, and institutional factors interact in the formation of women's financial skills.

On average, women perform worse than men on financial literacy tests and express less confidence in their economic abilities (Bertola; Lo Prete, 2025). Research shows that only 30% of women are considered financially literate, compared to 35% of men worldwide (Hasler; Lusardi, 2017). In this context, Lusardi (2019) points out that women are less likely than men to answer questions about financial knowledge correctly, illustrating male overconfidence in contrast to lower female self-confidence.

This disparity stems from social and behavioral factors. Potrich, Vieira and Ceretta (2013) state that families tend to “protect women” while encouraging men to manage household finances, which naturally limits women’s exposure to economic decisions. In this context, Hsu (2011) observes that women generally only have more direct contact with financial matters at times such as marriage or widowhood, when they need to take sole responsibility for managing

family resources. Single women experience higher levels of psychological distress compared to married women (Bertola; Lo Prete, 2025). There is also a psychological factor: women tend to show less confidence in their economic knowledge, more often opting for the answer “I don’t know” when asked financial questions—which increases the apparent gender gap in financial education (Bucher-Koenen *et al.* 2017; Costa *et al.*, 2019).

The literature also points out that, historically, financial management has been largely delegated to men, which limits women's financial experience and learning throughout their lives (Fonseca *et al.*, 2012; Elder; Rudolph, 2003). These elements combine with structural challenges, such as unequal access to financial education and information, contributing to maintaining low levels of financial literacy among women (Costa *et al.* 2019). In this regard, the OECD highlights that financial education programs tailored to the specific needs of women can be promising in overcoming these barriers.

The growing participation of women in the labor market and the search for financial autonomy have driven the need to address the issue of financial education with a specific focus on their needs and challenges (Assis, 2023). It is observed that most studies focus on differences in financial performance between men and women, while research that comprehensively examines the sociocultural, behavioral, and information access factors that shape the development of women's financial knowledge is still limited.

Given this context, the objective of this study is to analyze the factors associated with financial literacy among women, considering the interaction between socialization processes, behavioral biases, socioeconomic conditions, and access to financial information. By exploring these dimensions, the study broadens the understanding of gender inequalities in financial management and provides input for the development of educational policies and strategies that are more sensitive to the specificities of women's financial trajectories.

The relevance of this study is justified by the persistence of the gender gap in financial education, which directly impacts women's economic autonomy and the formulation of public policies for financial inclusion (Haque; Zulfiqar, 2016; Hung, 2012). Furthermore, understanding the factors associated with this phenomenon contributes to the advancement of research on financial behavior from a gender perspective.

## FINANCIAL EDUCATION

In recent years, financial education has gained prominence as an essential tool for promoting greater economic freedom for individuals. Studies show that adequate financial

knowledge contributes to better decisions (Lusardi; Mitchel, 2014; Hira, 2019). In this sense, several studies have developed methodologies to measure financial education in a comprehensive manner, incorporating not only knowledge but also financial attitudes and behaviors.

Financial education is the process by which individuals are able to better identify and understand financial products, concepts, and risks, and develop the ability to make safe decisions for their well-being (OECD, 2013). Financial education is a set of knowledge and skills that enable individuals to make assertive decisions, build wealth, and thereby achieve financial independence (Iriobe; Akinyede; Iriobe, 2017).

Andrade (2018) points out that the concept of financial education addresses specific financial knowledge capable of generating skills that can be applied throughout life and differentiates it from financial literacy, which is capable of encompassing “financial knowledge, attitude, and behavior.” For example, a financially literate person understands concepts such as compound interest, knows how to draw up a household budget, compares prices before buying, and avoids uncontrolled debt. Hira (2019) also points out that financial literacy can have different meanings for different people, acting as a particular concept.

It should also be noted that financial education enables individuals to identify concepts such as simple and compound interest, risk, return, and inflation (OECD, 2013). Based on these concepts, it is possible to manage financial resources (Hilgert; Hogarth; Beverly, 2003), make decisions (Elder; Rudolph, 2003), and make investments for the future (Lusardi; Mitchell, 2014).

People with greater knowledge, education, and financial capacity are more skilled at managing their finances and achieve better results in their decision-making (Hsu et al., 2021). A higher level of financial education allows for greater financial planning capacity, making it possible to achieve personal goals, increase purchasing power, and contribute positively to the country's economic development (Potrich; Vieira; Paraboni, 2022).

### **Financial Education Among Women**

Financial education is a fundamental element for making informed economic decisions and promoting financial independence. However, research indicates that women, on average, have a lower level of financial knowledge than men, which impacts their economic participation, their ability to manage resources efficiently, and creates uncertainty when making decisions (Bucher-Koenen *et al.*, 2017; Costa *et al.*, 2019).

The new job market, although still facing deep-rooted barriers, has been increasingly occupied by women, driving the need to understand and exercise their financial freedom (Assis, 2023). In this sense, financial education emerges as an essential tool for empowerment, allowing women to manage their resources effectively, make informed decisions, and achieve their goals (Andrade, 2018).

The importance of financial education for women is intensified in a social context in which they are taking on more and more responsibilities, such as heading households and managing household budgets, and facing challenges such as wage inequality and double workloads (Fernandes, 2015). In this sense, the author emphasizes that raising awareness about the benefits of financial education and offering programs and tools that address their specific needs are essential to promoting women's financial independence and well-being.

The complexity of the financial market, coupled with the gender pay gap that still exists, makes financial education a crucial tool for female empowerment, allowing women to make more informed and assertive decisions about their resources (Assis, 2023). It is estimated that closing the gender gap in labor market participation and leadership positions could add up to US\$7 trillion to global GDP. This data reinforces the economic and social importance of developing financial education among women..

The level of financial literacy among women is strongly influenced by socioeconomic and demographic variables such as age, gender, income, marital status, education, occupation, and race (Fonseca, 2012). These variables show significant differences when analyzed, with married women with dependents, higher income, aged between 34 and 46 and 47 and 62, white and with higher levels of education having the highest financial literacy rates (Costa; Vieira, Becker; Matheis, 2021). This reality may be perpetuated by various historical, cultural, social, and economic factors in which women live.

In Brazil, the 2024 Global Gender Gap Report highlights a significant gender disparity, ranking it 70th out of 146 countries overall and 88th out of 146 countries specifically in terms of economic participation and opportunity. This alarming statistic underscores the urgent need to address the educational and economic imbalances faced by women in Brazil.

Furthermore, historically, men have taken on the primary role in managing household finances (Fonseca *et al.*, 2012; Elder; Rudolph, 2003), which gives them more experience and confidence in making financial decisions (Babiarz; Robb; Woodyard, 2012).

Cúpak *et al.* (2018) analyzed OECD/INFE data from 12 countries, including Brazil, and found a significant gap in the level of financial literacy between men and women, with the

exception of Croatia and Russia. The authors associate this figure with social and economic conditions arising from the communist period, when women actively participated in daily life and decision-making.

A recent study by the TIAA Institute-GFLEC Personal Finance Index (2024) found that over the past eight years, women have had a lower success rate than men, even when sociodemographic characteristics are taken into account. Women with a greater command of financial concepts have greater autonomy in managing resources, participate more in family decisions, and have a greater perception of financial well-being. In addition, the survey points out that positive financial attitudes enhance the effects of financial literacy, acting as a bridge between knowledge and practical behavior (Haque; Zulfiqar, 2016). This finding reinforces the need for educational programs that go beyond technical content, incorporating elements of behavioral change and encouragement of autonomy.

However, structural and sociocultural barriers hinder women's access to financial education, such as the absence of specific public policies, social norms that reinforce economic dependence, and the lack of training initiatives aimed at women. The low level of financial education among women is also a reflection of social conditions that discourage female financial autonomy.

The inclusion of women in financial education leads to economic growth and promotes financial stability in the country. In countries where there is a higher level of female financial literacy, women tend to participate more in the financial sector, in addition to having a greater chance of participating in higher-level management positions in banks and financial institutions (IMF, 2018). Therefore, reducing the gender gap benefits the country's economy socially and economically, causing the population as a whole to grow.

### **Factors contributing to the gender gap in educational attainment**

The gender financial education gap is related to the persistent difference in the level of financial knowledge and skills between men and women. Several studies confirm that, on average, women have lower financial literacy than men (Lusardi; Mitchell, 2014). In other words, it is not just a matter of individual differences in opportunities or education; there is also a gender component that influences financial education, according to recent global surveys (OECD, 2013). Factors such as sociocultural differences in education and the division of financial responsibilities within the family, as well as women's lesser exposure to financial decisions since childhood, intensify this disparity.

One of the key factors behind this gender gap in financial education is sociocultural and historical in nature. The literature points out that, historically, financial management has been largely delegated to men, while women have played a secondary or indirect role in this sphere. This division of economic responsibilities has limited women's financial experience and learning throughout their lives (Fonseca et al., 2012; Elder; Rudolph, 2003).

In addition, social norms and gender stereotypes perpetuate the idea that finance belongs to the “male universe.” The process of socialization between genders occurs differently. From childhood, boys are encouraged to deal with money and related activities, while girls tend to receive less encouragement in this area (Haag; Brahm, 2025). As a result, women have less exposure to financial decisions, basic concepts of finance and investment, and consequently less financial education in adulthood, both due to barriers imposed by traditional gender roles and the lack of cultural incentives for them to deepen their knowledge of economics or investment. This sociocultural context creates an unequal basis for financial literacy between the sexes, contributing to the observed gap.

Another factor is behavioral and cognitive biases. Kahneman (2012) defines biases as systematic tendencies to deviate from rational decision-making, which can lead to predictable errors in financial choices. One of the biases that adversely affects women is the tendency to have less confidence in themselves when it comes to financial skills compared to men (Cwynar, 2021). This lack of confidence stems from several conditions, including the historical tendency to stereotype men as responsible for managing finances (Elder; Rudolph, 2003), since gender roles have been established as social norms, generating a social identity linked to cognitive biases.

Behavioral biases function as systematic alternative paths to the rational system that influence decision-making (Costa; Carvalho; Moreira, 2019). Based on this concept, research by Hsu *et al.* (2021) shows that men tend to be more prone to self-attribution biases, illusions of control, and confirmation biases, while women show greater aversion to regret. Financial education emerges as a mitigating factor for these differences, where higher levels of financial literacy result in a significant reduction in these behavioral biases in both genders, albeit with different rates of reduction.

Another relevant bias is financial self-control. Research suggests that women tend to plan their personal finances more and exercise greater discipline in spending when they have a satisfactory level of self-control. A comprehensive study conducted with women belonging to class C in the metropolitan region of São Paulo identified that women who have higher levels

of self-control and a greater predisposition to financial planning demonstrate superior ability in managing their personal finances (Miotto; Parente, 2015).

However, the research also revealed that, in cases where these women find themselves in debt, the main causes can be attributed predominantly to two main factors: a significant imbalance between income and expenditure in their family budget, or the occurrence of critical and unexpected events in their lives, such as sudden job loss or the dissolution of marriage through divorce. This study corroborates the theory of cognitive biases by confirming that self-control bias and financial planning obtained from a financial education base are reduced and induce women's economic well-being.

In addition, there is a notable bias in confidence in one's own financial abilities, with a striking difference between genders. In general, men tend to be more self-confident when dealing with money and investments, while some women reveal less confidence in their personal financial abilities (Cwynar, 2021). This lack of confidence stems from several factors, including the historical tendency to stereotype men as being responsible for managing finances (Elder; Rudolph, 2003).

Linked to this low level of self-confidence, another strand of literature highlights that the gender gap in financial education research is influenced by how financial knowledge is measured. Successive studies indicate that women tend to answer “I don't know” when this is one of the alternatives (Bucher-Koenen *et al.*, 2017; Potrich; Vieira; Paraboni, 2022; Bertola; Lo Prete, 2025). This inclination may be associated with risk aversion and self-confidence biases among women, as these negatively influence female audiences more than male ones.

The influence of these biases is noticeable in surveys, especially when, upon removing the “I don't know” option, women tend to respond and score, demonstrating that many women had the knowledge but not the confidence to express it. This phenomenon highlights the importance of understanding not only gender differences in behavioral biases as a factor, but also how financial education can act as an equalizer for these disparities.

In addition, a lack of knowledge about financial planning, investment, and credit can lead to debt and compromise the realization of their life projects, contributing to women's financial vulnerability. On the other hand, financial literacy can increase formal financial inclusion (Zahid *et al.*, 2024), acting as the main agent of socioeconomic transformation for women.

Information is another important factor for investment and financial planning, and women often lack access to the financial world and the banking system (Fletschner; Mesbah,

2011). In this sense, it should be noted that information and knowledge can promote the inclusion of women in the financial world, reducing ideological, social, and behavioral barriers.

## METHODS

This study seeks to understand the factors that contribute to the low level of financial education among women and to analyze the specific challenges they face and the impacts of this limitation on their daily financial lives. To this end, it is essential to understand and identify the scientific literature on the subject.

The current literature includes various forms of bibliographic reviews based on two types of reviews: the narrative review, which aims to “describe the state of the art of a specific subject” (Botelho; Cunha; Macedo, 2011), and the systematic bibliographic review, which is based on a rigorous analysis with the purpose of synthesizing results (Farenhof; Fernandes, 2016).

The systematic literature review also acts as an umbrella that covers four other types of study (Botelho; Cunha; Macedo, 2011). As Whitemore and Knafl (2005) point out, meta-analysis, systematic review, qualitative review, and integrative review are systematic reviews, but they are based on different purposes, definitions, samples, and types of analysis.

For the purpose of this study, a Systematic Literature Review (SLR) is necessary, as it is the first step in understanding and producing any scientific knowledge. Through it, it will be possible to analyze multiple studies on the level of financial literacy among women and identify the factors and difficulties they face.

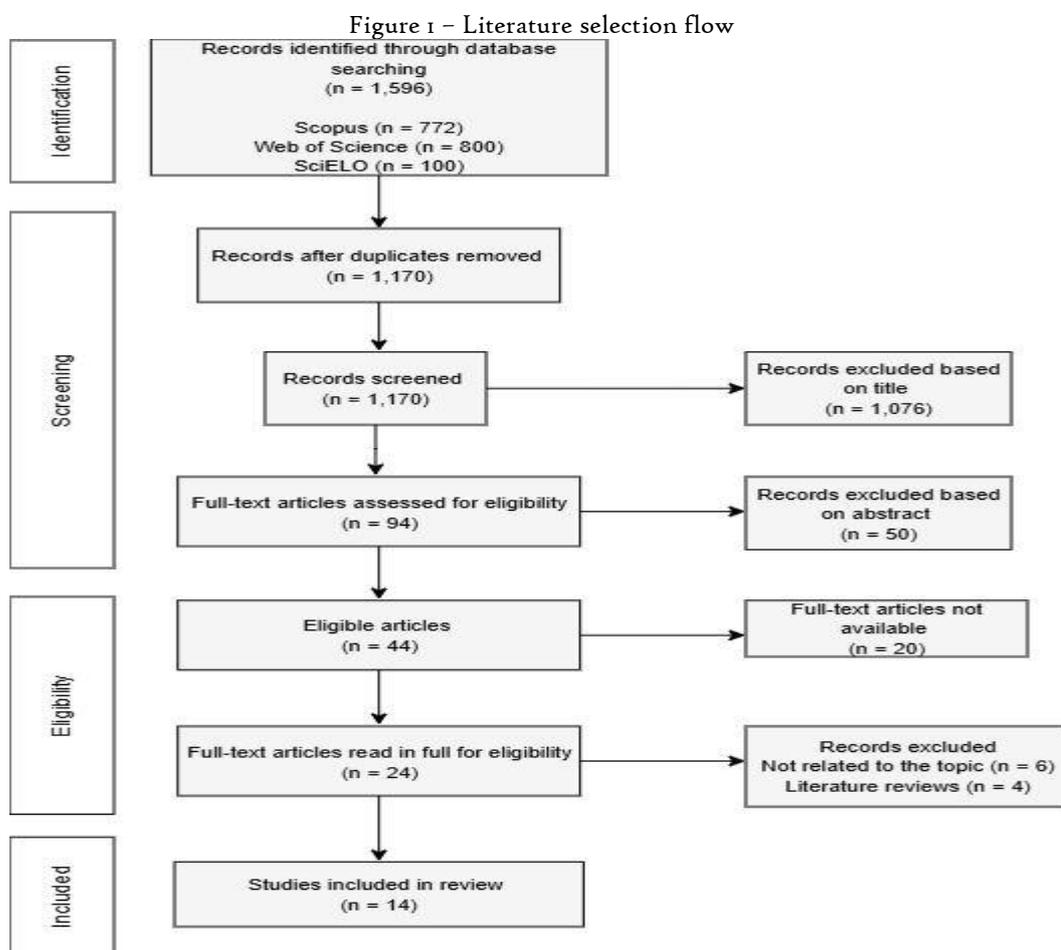
This study was conducted based on the guidelines of the PRISMA Statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This choice is justified by the need to rigorously and transparently gather, analyze, and synthesize studies that point to evidence on the factors that contribute to women's low level of financial education and the challenges they face in this context.

Based on the methodological guidelines, search strategies, inclusion and exclusion criteria, and temporal and linguistic filters were defined to ensure the quality and relevance of the selected studies. Data collection was performed in the Scopus, Web of Science, and SciELO databases, as they are widely recognized and provide broad access to national and international studies. The filters applied were publications between 2011 and 2024, with full texts available in Portuguese and English. The descriptors used were a combination of “financial literacy,”

“financial education,” “woman,” and “gender gap,” with the Boolean operators “and” and “or” in the title, abstract, and keyword fields.

The study selection process was based on selection criteria established in advance based on the objective of the RSL and followed the steps of excluding duplicates, reading titles and abstracts, reading the selected texts in full, and applying the inclusion and exclusion criteria. Articles were included that focused on financial education among women in a different or significant way, focusing on the factors and barriers that limit women's access to this knowledge. Another inclusion criterion was that the texts were in Portuguese and English, with full access available, and that they presented results, data, or analyses on factors/barriers related to financial education among women.

The exclusion process followed the four steps recommended by PRISMA: (i) titles not aligned with the theme, (ii) abstracts not directly related to the research objectives, (iii) duplicate articles, (iv) unavailable texts. After this initial stage, the preselected texts were read, and studies that were not relevant to the research were excluded. The selection flow and the numbers for each stage are detailed in Figure 1.



## RESULTS AND DISCUSSIONS

Based on the Systematic Literature Review, conducted in accordance with the PRISMA Statement guidelines, it was possible to identify, select, and analyze the main studies addressing factors related to low levels of financial literacy among women.

When analyzing the context of the studies, there is a growing trend of interest in the topic of financial education among genders from the perspective of factors associated with the financial literacy gap, especially since 2018. This behavior suggests not only the maturing of the academic debate on the inequality of financial knowledge between men and women, but also a response to recent socioeconomic changes, such as the digitization of finance, female empowerment, and the impacts of COVID-19, which have exacerbated disparities in knowledge and access (Hung; Yoong; Brown, 2012; Haque; Zulfiqar, 2016; Dogra; Kaushal; Sharma, 2023; Lee; Kelley, 2023).

Although there is a greater concentration of studies in developed regions, there is growing geographical diversification in the approach to financial literacy from a gender perspective (Table 1). With this greater diversity, the scope of the literature has broadened, making it possible to better analyze and understand the extent of the gender gap and the factors that impact this disparity in knowledge.

Table 1 – Studies by region

Region	Number of papers (%)	Authors
Europe	4 (28,6%)	Arellano <i>et al.</i> (2018) (Spain)
		Broihanne (2022) (France)
		Lind <i>et al.</i> (2020) (Sweden)
		Oggero <i>et al.</i> (2020)
Asia	4 (28,6%)	Hsu <i>et al.</i> (2021) (Taiwan)
		Hapsoro <i>et al.</i> (2022) (Indonesia)
		Okamoto; Komamura (2021) (Japan)
		Kumar <i>et al.</i> (2023) (India)
North America	3 (21,4%)	Park <i>et al.</i> (2021) (United States)
		Hsu (2011) (United States)
Middle East	1 (7,1%)	Fonseca; Lord (2020) (Canada)
		Iram <i>et al.</i> (2022) (Pakistan)
South America	1 (7,1%)	Potrich <i>et al.</i> (2018) (Brazil)
Australia and Oceania	1 (7,1%)	Farrell <i>et al.</i> (2016) (Australia)

When analyzing the age range of the study sample group (Table 2), there is a greater concentration of adults. In this context, two studies that focus specifically on couples stand out. Broihanne (2022) investigated the financial knowledge gap between partners, providing a deeper understanding of the subjective and relational factors involved. Hsu (2011) analyzed

financial literacy behavior among elderly couples. This gap contrasts with global population aging and the specific financial risks faced by this age group, such as retirement and dependence on fixed incomes, seen mainly among women (Lusardi; Mitchell, 2008).

Table 2 – Studies by age

Type	Number of papers	References
Children and teens	2	Arellano et al. (2018); Park et al. (2021)
Adults	10	Broihanne (2022); Farrell et al. (2016); Fonseca; Lord (2020); Hapsoro et al. (2022); Hsu et al. (2021); Iram et al. (2022); Kumar et al. (2023); Lind et al. (2020); Oggero et al. (2020); Potrich et al. (2018)
Seniors	1	Hsu, J. W. (2011)
Adults and Seniors	1	Okamoto e Komamura (2021)

In addition, the sample includes two articles covering younger age groups, which allowed us to infer the gender gap from the early stages of life. This approach is extremely relevant, as it allows us to analyze how women's level of financial knowledge evolves throughout their life cycle, identifying, from an early age, the sociocultural and structural factors that may contribute to the origin and perpetuation of this historical gap.

The results show consistent differences in women's financial knowledge, indicating that the phenomenon is not limited to individual variations in information, but stems from the interaction between structural, behavioral, and contextual factors. The analyses suggest that the observed inequality is associated with mechanisms that operate throughout the life cycle, influencing both the formation and mobilization of financial knowledge. To deepen the interpretation of the findings, the discussion is organized into four analytical axes articulated in the literature: (i) differentiated socialization and gender stereotypes; (ii) cognitive and behavioral biases; (iii) socioeconomic and demographic factors; and (iv) access to information and formal financial education..

### Differentiated socialization and gender stereotypes

The literature shows that financial socialization occurs unevenly between men and women, constituting one of the main factors explaining the gender gap in financial education. Historically, the management of financial resources has been predominantly assigned to men, while women have played a secondary or indirect role in household economic decisions, limiting their practical experience and opportunities for lifelong financial learning (Fonseca et al., 2012; Elder; Rudolph, 2003). This traditional division of responsibilities reinforces male financial expertise in the family context and contributes to maintaining lower levels of

financial literacy among women, especially when financial decision-making remains concentrated in one spouse.

This process is deeply associated with the internalization of social norms and gender stereotypes that position finance as a typically male domain. From childhood, boys tend to be more encouraged to deal with money, investments, and negotiations, while girls receive less encouragement to develop financial skills or interest in economic issues (Haag; Brahm, 2025). As a result, women have less exposure to basic financial concepts, investment experiences, and risk-involving decision-making processes, which negatively impacts the development of financial confidence and knowledge in adulthood.

The theory of family financial socialization reinforces this argument by highlighting that cultural norms, social roles, and early interactions in the home environment shape individual financial skills. Studies indicate that gender differences in financial education emerge as early as the school years, influenced by family discussions about money, gender stereotypes, and the division of responsibilities between parents (Fonseca et al., 2012; Elder; Rudolph, 2003; Bucher-Koenen et al., 2011). This pattern of unequal learning tends to perpetuate an asymmetrical basis of financial knowledge and self-confidence between men and women throughout the life cycle.

Additionally, evidence indicates that persistent social stereotypes affect not only access to knowledge, but also perceptions of women's financial competence. Lower self-confidence in one's own financial abilities is associated with the historical construction of the idea that men are responsible for managing money, reinforcing psychological barriers that hinder women's active participation in financial decisions and investments (Cwynar, 2021; Elder; Rudolph, 2003). Thus, differentiated socialization not only restricts learning opportunities, but also influences financial beliefs, attitudes, and behaviors, contributing to the reproduction of the gender gap.

In the context of financial decision-making, additional studies indicate that the attribution of social roles and stereotypes continues to explain persistent differences in financial knowledge between men and women across generations, even in the face of advances in women's participation in education and the labor market (Bucher-Koenen, 2016; Cwynar, 2021; Lusardi et al., 2016). Thus, differentiated socialization and gender stereotypes constitute a structural mechanism that influences the formation of financial knowledge, self-confidence, and women's participation in economic decisions, consolidating inequalities that extend into adulthood.

## Cognitive and behavioral biases

The literature highlights that cognitive and behavioral biases are an important mechanism explaining gender differences in financial education and economic decision-making. These biases correspond to systematic deviations from rational judgment that influence perceptions, attitudes, and financial choices, and can result in suboptimal decisions even in the presence of adequate knowledge (Kahneman, 2012). In the context of female financial literacy, such biases are often associated with self-confidence, risk perception, and response patterns in the face of uncertainty.

One of the most recurrent biases refers to women's lower financial self-confidence. Evidence indicates that even when they have similar levels of knowledge to men, women tend to underestimate their financial skills and show greater insecurity when dealing with financial products and investments (Cwynar, 2021). This phenomenon is related to the social construction of gender roles, which has historically associated financial management with the male universe, influencing the perception of individual capacity and reducing women's propensity to actively participate in financial decisions (Elder; Rudolph, 2003).

Another relevant bias concerns risk aversion and regret. Studies show that women tend to be more cautious in financial decisions and more sensitive to potential losses, which can limit their participation in more profitable investments and reduce opportunities for wealth accumulation over time (Hsu et al., 2021). In contrast, men show a greater propensity for biases such as overconfidence, illusion of control, and self-attribution, factors that lead them to take more financial risks and participate more frequently in investment markets.

The literature also points to the so-called “don't know” response bias, often observed in financial literacy surveys. Women are more likely to select this alternative when confronted with financial questions, which may reflect not necessarily a lack of knowledge, but less confidence in expressing it (Alessie; Van Rooij; Lusardi, 2011; Bucher-Koenen et al., 2017; Cúpak et al., 2018; Potrich et al., 2022; Bertola; Lo Prete, 2025). Evidence indicates that when this option is removed, the performance gap between genders tends to narrow, suggesting that psychological factors play a central role in measuring financial knowledge.

Additionally, financial self-control bias has ambiguous effects on women's economic behavior. Research indicates that women with greater self-control and a predisposition toward financial planning demonstrate a better ability to manage resources and maintain financial stability (Miotto; Parente, 2015). However, situations of indebtedness can occur when adverse events, such as loss of income or family changes, interact with budgetary constraints and

structural limitations, showing that contextual factors also modulate the manifestation of these biases.

Finally, it should be noted that financial education acts as a mitigating factor for behavioral biases. Higher levels of financial literacy are associated with a reduction in cognitive distortions and an improvement in the quality of economic decisions in both genders, although with different effects between men and women (Hsu *et al.*, 2021). Thus, understanding the role of cognitive and behavioral biases allows us to advance in explaining the gender gap in financial education, showing that inequality stems not only from access to knowledge, but also from psychological and social factors that influence how this knowledge is perceived and used.

### **Socioeconomic and demographic factors**

Analysis of socioeconomic and demographic factors reveals that the development of women's financial education is deeply conditioned by structural inequalities that shape learning opportunities and financial experiences throughout the life cycle. The literature indicates that variables such as income, education, age, marital status, occupation, and race significantly influence the development of financial literacy among women (Fonseca, 2012). These variables reflect preexisting social inequalities that translate into different learning opportunities, exposure to the financial system, and economic autonomy.

Among these factors, education and income stand out as key elements. Women with higher levels of education tend to have a better understanding of financial concepts, greater planning skills, and greater participation in economic decisions. Similarly, higher income levels increase access to financial products and practical experience in resource management, favoring the development of financial knowledge. Evidence indicates that married women with dependents, belonging to intermediate age groups and with higher levels of education have higher levels of financial literacy, suggesting the interaction between family factors, life cycle, and human capital in explaining the phenomenon (Costa; Vieira; Becker; Matheis, 2021).

Marital status also has a significant influence, especially due to the division of financial responsibilities within the family. Studies indicate that women's participation in financial management tends to increase in situations of need, such as widowhood, separation, or head of household, when women take direct control of family resources (Hsu, 2011). This dynamic shows that women's financial experience does not always result from a gradual learning process, but often from transitional events that require adaptation and the late development of financial skills.

In addition, structural inequalities in the labor market contribute to maintaining the gender gap in financial education. Persistent wage inequality, a higher probability of career interruptions, and double shifts reduce the availability of time and resources for developing financial skills and participating in investment and long-term planning activities (Fernandes, 2015). These conditions reinforce women's economic vulnerability and limit opportunities for wealth accumulation, even in contexts of greater participation in the labor market.

Generational differences are also highlighted as relevant. Studies focusing on adults show that experiences accumulated throughout life influence the level of financial literacy, while research with young people indicates that the gender gap can emerge even in the early stages of life, reflecting the interaction between socialization, educational opportunities, and social expectations (Arellano et al., 2018; Park et al., 2021). This finding reinforces the cumulative nature of financial inequalities, which tend to intensify when initial differences in knowledge and experience are not mitigated over time.

Finally, the literature highlights that socioeconomic factors do not act in isolation, but interact with cultural and behavioral elements. Thus, limitations in income, education, and access to the labor market can amplify the effects of cognitive biases and gender stereotypes, contributing to the persistence of the female financial literacy gap. Understanding this interdependence is essential for the formulation of policies and educational interventions capable of reducing structural inequalities and promoting greater financial inclusion among women.

### **Access to information and formal financial education**

Access to information and formal financial education is a determining factor in reducing the gender gap in financial literacy, directly influencing women's ability to understand financial products, plan resources, and participate in the formal financial system. The literature indicates that limitations in access to financial information, banking services, and specific educational initiatives restrict the development of women's financial knowledge and reinforce inequalities previously established by social and economic factors (Fletschner; Mesbah, 2011).

Structural and sociocultural barriers contribute significantly to this scenario. The absence of targeted public policies, the low supply of gender-sensitive educational programs, and social norms that reinforce female economic dependence hinder women's participation in formal financial learning processes. These restrictions reduce opportunities for contact with

content on financial planning, credit, and investment, compromising economic autonomy and confidence in decision-making (Costa et al., 2023).

Furthermore, the literature shows that unequal access to financial information is not limited to formal education, but also involves integration into the financial system and familiarity with banking instruments and services. Women, especially in contexts of greater socioeconomic vulnerability, tend to have less access to the financial universe and make less use of formal products, which limits experience-based learning and reduces the likelihood of participation in investments and long-term planning (Fletschner; Mesbah, 2011). This restriction reinforces a cycle of exclusion in which the lack of knowledge reduces the use of financial services, and the lack of use limits the acquisition of new knowledge.

On the other hand, evidence shows that expanding financial education—especially when combined with digital inclusion—contributes to increasing women's participation in the formal financial system and strengthening economic empowerment. Women with greater financial literacy demonstrate greater autonomy in resource management, greater participation in family decisions, and greater perception of financial well-being, indicating that access to information acts as a mediator between knowledge and financial behavior (Haque; Zulfiqar, 2015). Furthermore, digital financial literacy has been associated with a greater likelihood of using formal banking channels and strengthening women's entrepreneurial initiatives (Hasan et al., 2023).

In this context, educational programs tailored to women's specific needs are particularly relevant. The literature suggests that interventions that integrate technical content, self-confidence development, and the reduction of sociocultural barriers have greater potential to promote financial inclusion and reduce gender inequalities. Such initiatives not only expand financial knowledge but also favor behavioral changes and greater engagement of women in economic decisions throughout their lives.

Thus, access to information and formal financial education emerges as a structuring element in understanding the gender gap, acting simultaneously as a limiting factor and as a mechanism for transformation. The expansion of educational opportunities, associated with financial and digital inclusion, is a central strategy for strengthening women's economic autonomy and reducing persistent inequalities in financial literacy.

In summary, the results indicate that the gender gap in financial education results from the interaction between socialization processes, behavioral factors, socioeconomic conditions, and restrictions on access to information, dimensions that are summarized in Table 3.

Table 3 – Factors contributing to the gender gap in financial education

Factor	Definition	Authors
Differentiated Socialization and Gender Stereotypes	Refers to the process by which social norms, gender roles, and family dynamics unevenly shape men's and women's exposure to financial experiences from childhood, influencing the development of knowledge, self-confidence, and women's participation in economic decisions throughout their lives.	Fonseca <i>et al.</i> (2012); Elder; Rudolph, (2003); Bucher-Koenen <i>et al.</i> (2011)
Cognitive and Behavioral Biases	It refers to systematic biases in judgment and perception that affect financial decision-making, including lower self-confidence, greater risk aversion, and a tendency to underestimate one's own knowledge among women, factors that contribute to differences in financial performance and participation even when the level of knowledge is similar to that of men.	Kahneman (2012); Cwynar (2021); Alessie; Van Rooij; Lusardi (2011); Bucher-Koenen <i>et al.</i> (2017)
Socioeconomic and Demographic Factors	These correspond to individual and contextual characteristics—such as income, education, age, marital status, and labor market participation—that influence access to financial learning opportunities, practical experience with resources, and women's economic autonomy, which can either widen or narrow the financial literacy gap.	Fonseca (2012); Costa <i>et al.</i> (2021); Fernandes (2015)
Access to Information and Formal Financial Education	Refers to the availability and quality of women's access to financial information, educational programs, and formal financial services, the limitation of which reduces learning, financial inclusion, and economic autonomy, while its expansion favors empowerment and participation in financial decisions.	Fletschner; Mesbah (2011); Haque; Zulfiqar (2015); Hasan <i>et al.</i> (2023)

## CONCLUSION

This study analyzed the factors associated with female financial literacy using an integrative approach that combines gender socialization processes, cognitive and behavioral biases, socioeconomic conditions, and access to financial education. The results show that the gender gap in financial literacy cannot be explained solely by differences in objective knowledge, but rather constitutes a multidimensional phenomenon influenced by sociocultural, psychological, and structural factors that shape women's financial trajectories.

From a theoretical perspective, the study contributes to advancing the conceptual distinction between financial education and financial literacy, reinforcing the understanding of the latter as a construct that integrates financial knowledge, attitudes, and behaviors.

Furthermore, by systematizing scattered evidence in the literature, the study broadens the understanding of the mechanisms that underpin gender inequality in financial management, highlighting the role of differentiated socialization, financial self-confidence, and risk aversion as central elements in the formation of women's financial skills. This integrative approach helps to overcome reductionist interpretations focused exclusively on cognitive factors, offering a more comprehensive analytical perspective for the study of financial behavior from a gender perspective.

The findings also highlight relevant implications for the field of financial education, indicating that interventions focused exclusively on knowledge transfer tend to have limited effects when they disregard behavioral and contextual dimensions. In this sense, educational programs and policies that are sensitive to the specificities of women's trajectories, incorporating strategies to strengthen financial self-confidence and increase exposure to financial experiences, are potentially more effective for developing financial literacy and promoting women's economic autonomy.

Despite these contributions, the study has limitations. The nature of the systematic review implies dependence on the methodological approaches and contexts investigated in the studies analyzed, which may restrict the generalization of the results. Additionally, the predominance of research conducted in specific contexts and with different strategies for measuring financial literacy makes direct comparisons between evidence difficult, indicating the need for greater conceptual and methodological standardization in the area. Another limitation refers to the scarcity of investigations that consider intersectionalities, such as race, social class, and life cycle, dimensions that can deepen the understanding of the inequalities observed.

As a future research agenda, we recommend the development of empirical studies that investigate the interaction between sociocultural and behavioral factors in the formation of female financial literacy, especially in emerging contexts. Longitudinal studies can contribute to understanding the evolution of financial skills throughout the life cycle, while experimental approaches can assess the effectiveness of gender-sensitive educational interventions. In addition, investigations exploring the influence of financial digitization, fintechs, and transformations in family dynamics represent promising avenues for advancing the field. Finally, studies incorporating intersectional perspectives can broaden the understanding of the multiple vulnerabilities that affect women's financial autonomy.

In summary, by highlighting the multidimensional nature of financial literacy and the relevance of sociocultural and behavioral factors, the study contributes to the debate on gender inequalities in financial management and provides insights for the development of more inclusive and effective financial education strategies.

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