European Journal of Contemporary Education
E-ISSN 2305-6746
2025. 14(3): 304-316
DOI: 10.13187/ejced.2025.3.304
https://ejce.cherkasgu.press

Factors Influencing Financial Well-being Among High School Students: Do They Differ by Gender?

Esmeralda Tejada-Peña [a], Arturo García-Santillán [b, c, *], Rosalba Cabrera-Gutiérrez [d], Violetta S. Molchanova [e, f]

[a] Instituto Tecnológico Nacional de México, campus Tuxtepec, Mexico
[b] UCC Business School, Cristóbal Colón University, Mexico
[c] Tecnológico Nacional de México, Sede ITSM, Mexico
[d] Estudios de Posgrado & UAA, Mexico
[e] Cherkas Global University, Houston, USA
[f] Volgograd State University, Volgograd, Russian Federation

Abstract

This research focuses on assessing financial well-being among high school students and exploring any potential differences between male and female students. It uses a quantitative, non-experimental, cross-sectional approach. A total of 556 students, aged 11 to 16, participated in the study. The data was gathered through an online questionnaire, and the sample was based on voluntary participation rather than random selection. The results identified six key factors of financial well-being: 1) Confidence in financial decision-making; 2) Spending control and discipline in saving; 3) Financial security and well-being; 4) Financial burden and lack of control; 5) Financial understanding and seeking guidance; and 6) Financial insecurity and perception of limitations. These findings are consistent with previous studies, such as those by Lusardi and Mitchell (2014), but no significant gender differences were found, which contrasts with other studies that suggest such variations. From a theoretical perspective, this study expands the financial well-being model by including emotional and psychological dimensions. Practically, it suggests that financial education programs for students should address not only technical aspects but also the development of emotional and psychological skills. Furthermore, educational policies should focus on the individual needs of students, regardless of gender. Future research could examine how digital financial education, along with family and sociocultural influences and financial self-efficacy, shapes adolescents' economic decision-making. This study highlights the need for a comprehensive approach to financial education, suggesting that gender differences are not

* Corresponding author
E-mail addresses: agarcias@ucc.mx (A. García-Santillán)

particularly significant at this stage. It also emphasizes the importance of exploring these dynamics across diverse socio-economic contexts to gain a deeper understanding.

Keywords: Financial well-being, high school students, financial skills, gender differences, financial education.

1. Introduction

In recent years, academic interest in financial well-being has grown steadily, driven by ongoing economic uncertainty, the fast-paced evolution of digital technologies, and the increasing debt burden among younger generations. Researchers and policymakers alike have started paying closer attention to this issue, recognizing its importance for both personal and broader economic stability. Contemporary research defines financial well-being as a multidimensional concept shaped by various factors, including financial knowledge, personal financial habits, access to financial services, confidence in managing money, and broader social, cultural, and psychological influences. Lusardi and Mitchell (2014) highlight financial literacy as a key foundation for making sound financial choices, and a crucial element in fostering greater financial wellbeing. Later, Xiao, and O'Neill (2016) point out that financial behaviors such as saving regularly and managing debt responsibly, play a direct role in helping individuals reach and maintain long-term financial wellbeing. Even before this, Gutter and Copur (2011) had already stressed the value of financial inclusion and self-efficacy, arguing that people who have access to financial services and feel confident in their ability to handle money are more likely to enjoy a greater sense of financial well-being. In this regard, it is increasingly evident that financial well-being not only depends on individual factors but also on the contextual conditions and the social and economic environment in which individuals develop. Therefore, it becomes relevant to question: What is the current level of financial well-being among high school students? Additionally, is there a gender difference? Based on this context, the study focusses to assess the levels of financial wellbeing among high school students and explore whether any differences exist between male and female students.

2. Literature Review

A growing body of research supports the idea that financial literacy plays a significant role in improving financial well-being. For example, Philippas and Avdoulas (2021) highlight that university students in Greece who demonstrate higher financial literacy – particularly those with parents holding advanced education or who habitually track their expenses – tend to handle unexpected financial difficulties more effectively. Similarly, research by Zhu, Yu, and Chou (2019) in Hong Kong found that while financial education boosts knowledge and attitudes significantly, it doesn't always lead to immediate changes in financial behavior, indicating that these aspects should be seen as distinct. Looking at the bigger picture, Setiyani and Solichatun (2019) in Indonesia revealed that financial literacy, combined with factors like social influences, money attitudes, and financial confidence, has both direct and indirect effects on financial wellbeing, with financial behavior acting as a key link in this relationship.

Gilenko and Chernova (2021) also emphasized the role of literacy but warned about the endogeneity bias in its relationship with savings among adolescents, highlighting the need for robust evaluation methods. In line with this critical view, Frisancho (2020), through a randomized trial in Peru, showed that financial education programs can have limited or even undesirable effects if not carefully designed. On the other hand, Ayuninggar et al. (2024) emphasized that family influence outweighs socio-economic status in the financial literacy of adolescents.

Meanwhile, Saeedi and Nishad (2024) provided a bibliometric view of the field, noting a shift in the conceptualization of financial well-being: from an income and wealth-centered perspective to one that considers behavioral and psychological variables. In this context, Alqam and Hamshari (2024) found that financial literacy, especially which focused on consumer rights, strengthens both financial inclusion and well-being in young Jordanians. Similarly, She, Ma, and Pahlevan (2024) incorporated future orientation as a moderator, showing that this variable enhances the effect of financial knowledge on behavior and, consequently, on well-being.

Studies in emerging contexts have further explored how financial inclusion and digital literacy also play a relevant role. In India, Kamble, Mehta, and Ranin (2024) found that both financial literacy and financial inclusion contribute positively to financial well-being, with financial inclusion having a greater influence. In the workplace, Samuel and Kumar (2024) noted that having a positive financial attitude and access to proper education can improve workers' financial

well-being, while financial stress tends to undermine it. Similarly, Shankar et al. (2022) emphasized that financial behavior stands out as the most significant predictor of well-being among Generation Z students, surpassing even financial knowledge and access to technology.

In the university context, Montalto et al. (2019) emphasized the importance of the educational environment in building financial capabilities, including responsible credit use, self-efficacy, and stress management. However, Robb and Chy (2023) pointed out that short-term courses have limited effects on financial well-being and stress, although they do improve financial socialization. Public policies have also shown positive results in promoting financial well-being. In China, Xie et al. (2020) found that financial support for students living in poverty can improve their well-being, especially when those students are able to move beyond that condition. Early financial education has been examined as well. In the Netherlands, Dare et al. (2020) observed that programs targeting children help develop basic transactional skills, though they found no clear evidence of an impact on responsible spending. On the other hand, longitudinal research such as the study by Cherney et al. (2019) revealed that student debt has a lasting negative effect on subjective financial well-being, particularly when influenced by the socio-economic background of the family.

Other approaches emphasize psychological and cognitive dimensions. Castellanos-Alvarenga et al. (2022) showed that planning and organization, as executive functions, mediate the relationship between subjective knowledge and financial control. At the regional level, studies like that of Russell et al. (2025) in Australia and New Zealand reported high levels of financial stress among university students, affecting their performance and mental health, particularly among low-income and international students. In Latin America, Avendaño, Rueda, and Velasco (2021) found that, despite favorable attitudes, practical weaknesses persist in students' financial management.

On the other hand, Wheeler and Brooks (2024), building on previous work on Marcia's (1966) identity status theory, as well as research by Barber et al. (2011), Bosch et al. (2016), and Sorgente et al. (2020), introduced the concept of financial identity. They found that students with achieved financial identity were better prepared to take on financial responsibilities, while those with identity moratorium experienced greater financial anxiety and lower financial well-being. Furthermore, students with diffuse identity showed poor preparation for assuming financial responsibilities, poorly managed credit, and exhibited higher levels of materialism and compulsive buying. These results suggest that promoting the achievement of financial identity and financial socialization could help emerging adults improve their financial management and reduce financial anxiety.

In India, Bhat et al. (2025) linked digital literacy with lower impulsivity and greater self-control, both of which are predictive of financial well-being. Some works such as those by Obenza et al. (2024) and Glenn et al. (2025) highlighted financial self-efficacy as a key mediating variable between behavior and well-being. Similarly, Limbu and Sato (2019) demonstrated that literacy specific to credit card use, mediated by self-efficacy, improves well-being, particularly when students have fewer cards, thus maintaining greater financial control. Nguyen (2021) observed in Vietnam that attitudes, behaviors, and financial self-confidence exert a direct influence on financial well-being, whereas financial knowledge and skills tend to have a more indirect effect. Meanwhile, qualitative research like the study by Douwes et al. (2023) offers a broader view of student well-being, highlighting the need to balance academic pressures with personal life. Norvilitis and Linn (2021), using a mixed-methods approach, identified that how students perceive debt, experience anxiety, and learn about finances at home are crucial factors affecting their financial well-being. The authors suggest that for interventions to be truly effective, they should address not only individuals but also involve their families.

Method

The study employed a non-experimental, cross-sectional design to examine the factors influencing the relationship between financial literacy and financial well-being. A total of 556 secondary school students, aged 11 to 16, participated in the research. A non-probability, self-selection sampling method was employed, and data were collected through an electronic questionnaire designed in Google Forms, aiming to maximize accessibility and encourage voluntary participation. The test used was composed of three sections: sociodemographic data, items related to financial literacy, and ten items assessing financial well-being, this last component based on the scale developed by the Consumer Financial Protection Bureau (CFPB, 2018). This instrument has been previously applied in García-Santillán et al. (2024).

The study was carried out in compliance with the ethical principles established in the Declaration of Helsinki and received formal approval from the Ethics Committee of the Business School at Universidad Cristóbal Colón (Project ID: P-12/2024). Participants were informed about the purpose of the study at the time of completing the questionnaire. Full confidentiality and anonymity of the information provided were ensured. The questionnaire included an informed consent section, and submission of responses was considered an explicit indication of voluntary participation.

3. Results

Data analysis

To evaluate the dataset's internal consistency and reliability, Cronbach's coefficients was calculated. The results indicated an acceptable level of internal consistency, with a Cronbach's alpha of .609.

Participant Characteristics

The characteristics of the study participants are as follows: 47.8 % (n = 266) were male, 49.5 % (n = 275) were female, and 2.7 % (n = 15) identified as LGBTQ+. The largest percentage of participants were in the 13 to 14-year age range, with 59.4 % (n = 330), followed by 24.6 % (n = 137) in the 11 to 12-year range, 13.7 % (n = 76) in the 15 to 16-year range, and 2.3 % (n = 13) were older than 16 years. Regarding financial influencers, the highest percentage was the mother, with 48.4 % (n = 269), followed by the father at 30.6 % (n = 170). Additionally, 14.4 % (n = 80) reported no one influenced their finances, 4.7 % (n = 26) were influenced by siblings, and 2.0 % (n = 11) by friends. In terms of living situation, the highest percentage lived with their father, accounting for 64 % (n = 356), followed by 29.3 % (n = 163) who lived with family, 4.7 % (n = 26) with others, and 2 % (n = 11) with friends. Regarding the source of income, the highest percentage reported being financially dependent on their parents, with 75 % (n = 417), followed by 8.8 % (n = 49) receiving a scholarship, 6.8 % (n = 38) working, 5.4 % (n = 30) had no income, and 4.0 % (n = 26) received income from siblings.

Bartlett's Test Results

The KMO result reached .782, suggesting suitability for factor analysis. Additionally, Bartlett's test of sphericity was significant, with a Chi-square value of 2032.560 (df = 190, p < .001). The Measure of Sampling Adequacy (MSA) values were all greater than .5, and the correlations were acceptable, with the determinant value close to zero, supporting the factorization (see Tables 2 and 2b). Table 3 shows the total variance explained by six components (55.238 %).

Table 2. Correlations matrix

	FS1	FS2	FS3	FS4	FS5	FS6	FS7	FS8	FS9	FS10	MSA
FS1	1.000										,835a
FS2	0.478	1.000									,840a
FS3	0.501	0.425	1.000								,863a
FS4	0.459	0.430	0.495	1.000							,876a
FS5	0.288	0.218	0.286	0.266	1.000						,784a
FS6	0.253	0.281	0.350	0.281	0.554	1.000					,795a
FS7	0.368	0.337	0.400	0.401	0.409	0.422	1.000				,892a
FS8	0.308	0.258	0.285	0.322	0.332	0.269	0.340	1.000			,834a
FS9	0.217	0.206	0.270	0.234	0.175	0.218	0.348	0.416	1.000		,790[a]
FS10	-0.178	-0.078	-0.077	-0.077	-0.041	-0.032	0.008	0.094	0.165	1.000	,570[a]

Determinant: -6.773E-05

Table 2a. Correlations matrix

	FWB1	FWB2	FWB3	FWB4	FWB5	FWB6	FWB7	FWB8	FWB9	FWB10	MSA
FWB1	1.000										,618[a]
FWB2	0.438	1.000									,653[a]
FWB3	0.181	0.080	1.000								,596[a]

	FWB1	FWB2	FWB3	FWB4	FWB5	FWB6	FWB7	FWB8	FWB9	FWB10	MSA
FWB4	0.308	0.347	-0.038	1.000							,643[a]
FWB5	0.179	0.139	0.244	0.171	1.000						,665[a]
FWB6	-0.010	-0.032	0.128	0.048	0.222	1.000					,568[a]
FWB7	0.019	-0.029	0.104	-0.017	0.078	0.149	1.000				,683[a]
FWB8	0.111	0.079	0.011	0.056	0.058	-0.003	-0.032	1.000			,742[a]
FWB9	0.081	0.000	0.095	0.000	0.051	0.055	0.266	-0.025			,571[a]
FWB10	0.010	0.054	0.123	0.054	0.117	0.079	0.167	0.123	0.273	1.000	,553[a]

Determinant: -6.773E-05

Table 3. Variance explained

	Initial eigenvalues			Sum of squared loadings of the rotation		
Factor	Total	% variance	% accumulate	Total	% de variance	% accumulate
1	3.802	19.009	19.009	2.925	14.623	14.623
2	2.001	10.007	29.016	1.910	9.549	24.172
3	1.628	8.139	37.155	1.824	9.119	33.292
4	1.359	6.797	43.952	1.504	7.518	40.809
5	1.163	5.813	49.765	1.462	7.312	48.122
6	1.095	5.473	55.238	1.423	7.116	55.238

Extraction method: Principal components

Table 4. Rotated component matrix with Varimax rotation

	1	2	3	4	5	6	CR	AVE
FS2	0.777							
FS1	0.760							
FS4	0.731							
FS3	0.692							
FS7								
FS5		0.733						
FS6		0.724						
FWB8								
FWB2			0.776					
FWB1			0.772					
FWB4			0.669				0.777	0.574
FWB9				0.741				
FWB10				0.719				
FWB7				0.575				
FS10					0.740			
FS9					0.584			
FS8								
FWB5						0.680		
FWB6						0.678		
FWB3						0.638		

Notes: Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser Normalization. [a.] The rotation has converged in 7 iterations.

Factor Rotation Results

The results of the factor rotation are shown in Table 4, which displays the rotated matrix using the Varimax rotation method. The analysis results indicate six key factors in the rotated matrix, which reflect various aspects of money management. Factor 1, labeled *Confidence in Financial Decision Making*, involves participants' confidence in their ability to handle new or complex financial challenges, recognize valuable investment opportunities, and meet their financial goals. Factor 2, named *Spending Control and Saving Discipline*, involves the skill to resist unnecessary expenses and consistently save money. On the other hand, Factor 3, *Financial Security and Well-being*, reflects the sense of stability in the face of unforeseen circumstances, future planning, and the ability to enjoy life due to good money management.

In contrast, Factor 4, *Financial Burden and Lack of Control*, highlights situations where finances cause stress, are disorganized, or are affected by even small extraordinary expenses. Factor 5, titled *Understanding and Seeking Guidance*, addresses the difficulty in understanding financial information and recognizing when financial advice is needed. Finally, Factor 6, related to *Financial Insecurity and Perception of Limitations*, reflects a sense of economic vulnerability, worries about depleting financial resources, and the belief that, given the current circumstances, the individual may be unable to reach certain personal goals or aspirations.

Table 5. Rotated component matrix [a]

	F1	F2	F3	F4	F5	F6
FS2	.771					
FS1	.764					
FS4	.744					
FS3	.714					
FS7	.535					
FS8						
FWB2		.775				
FWB1		.773				
FWB4		.669				
FS5			.708			
FS6			.695			
FWB8						
FWB9				.743		
FWB10				.713		
FWB7				.580		
FS10					.752	
FS9					.564	
FWB5						.680
FWB6						.680
FWB3						.637

Notes: Extraction method: Principal component analysis. Rotation method: Quartimax with Kaiser normalization. a. The rotation has converged in 7 iterations.

In the confirmatory analysis, Factor 5, which includes items FS10 and FS9, does not show values in the standardized estimates (Figure 1), and therefore are excluded from the analysis. The adjusted model is shown in Figure 2.

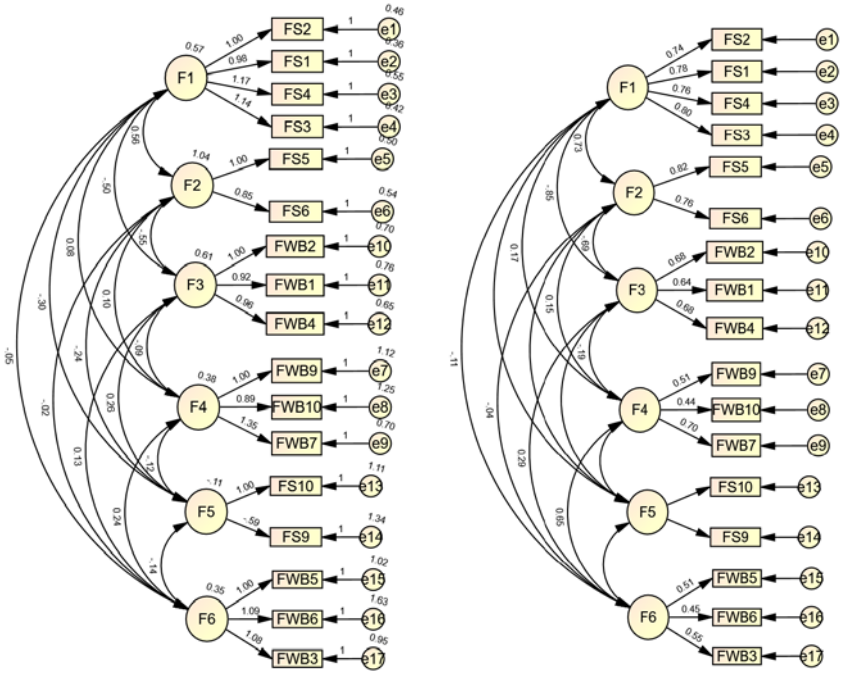

Fig. 1. Initial model of the underlying structure (unstandardized and standardized estimates)

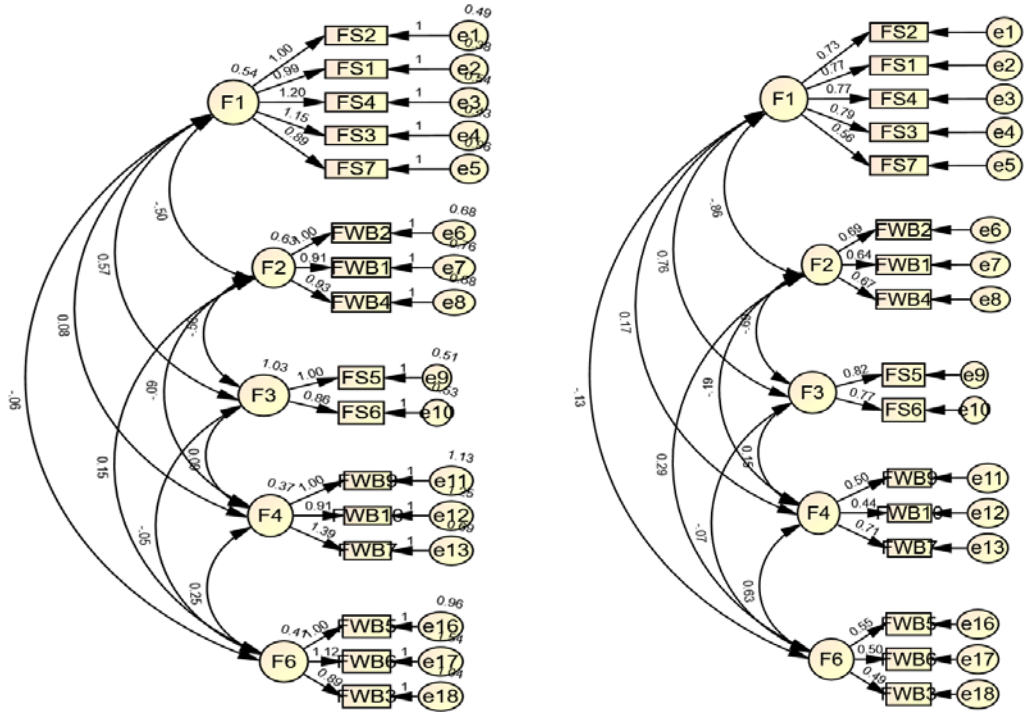

Fig. 2. Final adjusted model of financial well-being

In the study on the perception of well-being and personal financial management, five fundamental factors are identified that help to understand how people experience and cope with their economic reality.

Factor 1: Ability to make informed financial decisions includes skills related to feeling confident when facing new or complex financial situations, recognizing good investment opportunities, meeting personal financial goals, and knowing where to seek reliable financial guidance. Factor 2: Financial stability and well-being is associated with a sense of economic security, the ability to handle unexpected expenses, and the possibility of enjoying life thanks to responsible money management. Factor 3: Discipline in money management refers to the self-control required to prevent unnecessary expenses and to consistently maintain saving habits as part of deliberate financial planning. Factor 4:

Financial overload and lack of control describes a situation where individuals feel overwhelmed by their finances, believe that their money problems dominate their lives, and view social financial obligations as a heavy burden. Finally, Factor 5: Financial insecurity and sense of stagnation expresses a critical situation where individuals barely manage to survive, constantly worry about long-term financial insufficiency, and feel limited in achieving their life goals due to their current economic situation.

Following the refinement of the measurement model, the finalized version was achieved (see Figure 1), demonstrating strong structural coherence, adequate model fit, and adherence to the principle of parsimony, as supported by established theoretical guidelines. In terms of absolute fit, incremental fit and parsimony fit, several indicators confirm the model's adequacy (see Table 6).

Table 6. Summary index

Fit Type	Index	Value	Recommended Threshold	Interpretation
Absolute Fit	χ^2/df	1.54	Between 2 and 5	Acceptable fit
	RMSEA	0.052	≤ 0.06	Good approximation
	GFI	0.919	≥ 0.90	Adequate
	AGFI	0.883	≥ 0.80	Satisfactory
	RMR	0.094	≤ 0.08 (ideal)	Marginally acceptable
Incremental Fit	NFI	0.868	≥ 0.90	Slightly below ideal
	CFI	0.948	≥ 0.90	Strong fit
	TLI	0.934	≥ 0.90	Strong fit
Parsimony Fit	PGFI	0.635	≥ 0.50	Acceptable
	PNFI	0.68	≥ 0.50	Acceptable
	PCFI	0.743	≥ 0.50	Acceptable

As we can see, in Table 6 shows the model meets most of the conventional thresholds for goodness of fit, which indicate that the specified structural model is both adequate and parsimonious. While some indices are slightly below optimal levels, the overall results support the model's validity and suitability for the proposed analysis.

ANOVA

To answer the question about the existence of a difference by gender, the following hypothesis is established: $\mathbf{H_0}$: There is no significant difference between the means of the two groups. $\mathbf{H_1}$: There is a significant difference between the means of the two groups.

$$Ho: m_1 = m_2$$

$$Ha: m_1 \neq m_2$$

Now, it is important to determine whether there is homogeneity of variances before conducting the ANOVA. To verify this assumption, Levene's test is performed. This is necessary because ANOVA assumes that the groups have similar variances (Table 7).

Levene's test was applied to evaluate the assumption of homogeneity of variances between the groups based on gender. The result yielded a p-value greater than 0.05 in 19 out of the 20 items, indicating that there are no significant differences in variances. Therefore, the assumption of homoscedasticity is met, and it is appropriate to proceed with an analysis of variance (ANOVA).

Table 7. Levene test homogeneity of variances

		Levene statistic	df1	df2	p-value.
FS1	It is based on the mean	0.243	2	553	0.79
FS2	It is based on the mean	0	2	553	1
FS3	It is based on the mean	2.107	2	553	0.12
FS4	It is based on the mean	3.445	2	**553**	**0.03**
FS5	It is based on the mean	1.138	2	553	0.32
FS6	It is based on the mean	0.262	2	553	0.77
FS7	It is based on the mean	0.207	2	553	0.81
FS8	It is based on the mean	0.449	2	553	0.64
FS9	It is based on the mean	0.778	2	553	0.46
FS10	It is based on the mean	0.33	2	553	0.72
FWB1	It is based on the mean	1.041	2	553	0.35
FWB2	It is based on the mean	1.016	2	553	0.36
FWB3	It is based on the mean	0.877	2	553	0.42
FWB4	It is based on the mean	0.832	2	553	0.44
FWB5	It is based on the mean	0.849	2	553	0.43
FWB6	It is based on the mean	0.16	2	553	0.85
FWB7	It is based on the mean	2.156	2	553	0.12
FWB8	It is based on the mean	2.756	2	553	0.06
FWB9	It is based on the mean	1.558	2	553	0.21
FWB10	It is based on the mean	0.796	2	553	0.45

Subsequently, an ANOVA test was conducted to compare the means of the variables *financial well-being* and *financial ability* between men and women. The analysis yielded a p-value greater than 0.05 in 18 out of the 20 items, indicating that no statistically significant differences were found in the means between gender groups (see Table 8).

Table 8. ANOVA

		Sum of squares	dfl	Mean square	F	p-value
FS1	between groups	8.334	2	4.167	**3.644**	**0.027**
FS2	between groups	2.11	2	1.055	0.864	0.422
FS3	between groups	0.807	2	0.404	0.302	0.74
FS4	between groups	6.8	2	3.4	2.395	0.092
FS5	between groups	0.829	2	0.415	0.234	0.792
FS6	between groups	1.721	2	0.861	0.539	0.584
FS7	between groups	0.441	2	0.22	0.135	0.874
FS8	between groups	2.714	2	1.357	1.058	0.348
FS9	between groups	0.036	2	0.018	0.013	0.987
FS10	between groups	1.95	2	0.975	0.727	0.484
FWB1	between groups	5.9	2	2.95	2.097	0.124

		Sum of squares	dfl	Mean square	F	p-value
FWB2	between groups	1.668	2	0.834	0.595	0.552
FWB3	between groups	1.027	2	0.514	0.246	0.782
FWB4	between groups	1.075	2	0.538	0.378	0.685
FWB5	between groups	10.016	2	5.008	2.997	0.051
FWB6	between groups	2.87	2	1.435	0.655	0.52
FWB7	between groups	1.748	2	0.874	0.522	0.594
FWB8	between groups	3.487	2	1.744	1.152	0.317
FWB9	between groups	12.784	2	6.392	**3.72**	**0.025**
FWB10	between groups	2.349	2	1.174	0.674	0.51

The results of the ANOVA indicate that, for the majority of variables, there is insufficient evidence to reject the null hypothesis, as their p-values exceed the 0.05 significance threshold. This suggests that there are no statistically significant differences across groups for most factors. However, two variables – FS1 (p = 0.027) and FWB9 (p = 0.025)—did show significant between-group differences. Additionally, FWB5 (p = 0.051) may be considered marginally significant, warranting further exploration.

4. Discussion

The results obtained in this study on the financial well-being of high school students align in several respects with previous findings in the literature. For example, Factor 1: Confidence in Financial Decision-Making highlights the ability to handle complex financial situations, recognize valuable investment opportunities and reach financial goals, aligning with the arguments exposes by Lusardi and Mitchell (2014), whose refers that financial literacy is crucial for informed decision-making. Similarly, Setiyani and Solichatun (2019) also emphasize the importance of financial confidence and behavior in achieving adequate financial well-being, which is reflected in the inclusion of this factor in the study. Factor 2: Spending Control and Saving Discipline, this reflects the ability to avoid excessive spending and maintain a habit of saving, characteristics that Xiao and O'Neill (2016) also underline as fundamental for achieving financial sustainability. However, this study shows that this factor is more relevant than others in the context of high school students, possibly reflecting an earlier stage in the development of financial habits compared to young adults in other studies. Regarding Factor 3: Security and Financial Well-Being, the results are consistent with the conclusions of Frisancho (2020) and Castellanos-Alvarenga et al. (2022), who consider financial well-being to be related not only to economic stability but also to the ability to enjoy life, rather than focusing solely on the accumulation of resources.

In the Factor 4: Financial Burden and Lack of Control reflects a state of financial stress and disorganization, which is also supported by studies such as Russell et al. (2025), who identified high levels of financial stress among university students – affecting both academic performance and mental health. However, the context in this study focuses more on concerns among high school students who have not yet faced heavy debt situations. Factor 5: Understanding and Seeking Guidance refers to the difficulty in understanding financial information and the need for external guidance, aligning with studies by Zhu et al. (2019) and Gilenko and Chernova (2021), who point out that while financial education can improve knowledge, financial behavior changes more slowly and often requires additional support. Finally, Factor 6: Financial Insecurity and Perceived Limitation reflects a sense of economic vulnerability and the belief that financial constraints prevent individuals from achieving their goals. This is consistent with the findings of She et al. (2024), who note that concern for the future and unmet goals can negatively affect financial well-being.

This outcome differs from previous research that has identified gender-related differences. For instance, Xiao and O'Neill (2016) argue that financial behavior may vary between men and women depending on cultural and social contexts. In contrast, the present findings suggest that, within the sampled high school population, financial literacy and skills appear to be comparable

across genders. This may imply that such differences, if they exist, do not become pronounced until later stages of adulthood – highlighting the need for further investigation in future studies.

This analysis shows that although many of the findings align with the literature, there are also areas of divergence, particularly in the lack of clear gender differences and the prominence of certain factors, such as saving discipline, among younger students. These patterns may reflect the specific characteristics of the study group.

Theoretical and Practical Implications. The theoretical and practical implications of this study are significant for both understanding financial well-being and implementing educational strategies and public policies. From a theoretical perspective, the results expand the traditional model of financial well-being by identifying six key factors that encompass not only cognitive and behavioral aspects – such as financial decision-making and spending control – but also emotional and psychological dimensions, such as financial security and perceived economic insecurity. This enriches existing theories, like those proposed by Lusardi and Mitchell (2014), by incorporating variables that have been less explored in previous research. Moreover, the study prompts a reflection on the influence of gender on financial well-being. In contrast to previous studies that suggest significant differences between men and women, no notable variations were found in this research. This finding could encourage a reconsideration of theories that assume predominant gender differences in financial management, suggesting that in specific contexts – such as among high school students – these differences may not be as relevant.

In terms of practical implications, the results highlight the need for financial education programs at the high school level to adopt a more holistic approach. Rather than focusing solely on technical aspects of money management, these programs should also nurture students' emotional and psychological capacities, as well, building confidence in financial decision-making and encouraging the discipline needed for consistent saving. Moreover, the findings underscore the importance of implementing public policies that offer both financial and educational support, especially for students in vulnerable conditions. Such measures could play a crucial role in alleviating perceived financial insecurity among this population. Finally, the study's findings suggest that intervention strategies should not be solely based on gender differences but rather tailored to the individual needs of each student, regardless of their sex. This underscores the need to revise current financial education policies to make them more inclusive and responsive to the diverse contexts and experiences that characterize today's youth.

5. Conclusion

The study emphasizes the complex and multidimensional nature of financial well-being among high school students, identifying essential components such as confidence in financial decision-making, effective control over spending, and the perception of economic security. Despite expectations of gender-based differences, the results suggest that there are no significant variations between male and female students in terms of financial well-being and skills. This presents an opportunity to reconsider current approaches that assume more pronounced gender differences. Furthermore, the study underscores the importance of addressing both cognitive and emotional components in financial education programs to improve students' money management capabilities.

Suggestions for Future Research. Examine the effects of digital financial education on the financial wellbeing of young individuals. Additionally, analyze how family dynamics and sociocultural factors contribute to shaping the financial wellbeing of high school students. Study the role of financial self-efficacy in economic decision-making during adolescence. Finally, expand the analysis to different socioeconomic contexts to assess whether the conclusions regarding gender remain consistent across diverse populations.

References

Alqam, Hamshari, 2024 – *Alqam, M.A., Hamshari, Y.M.* (2024). The impact of financial literacy on financial inclusion for financial well-being of youth: evidence from Jordan. *Discov Sustain*. 5: 528. DOI: https://doi.org/10.1007/s43621-024-00704-6

Avendaño et al., 2021 – *Avendaño, W.R., Rueda, G., Velasco, B.M.* (2021). Percepciones y habilidades financieras en estudiantes universitarios. *Formación Universitaria*. 14(3): 95-104. DOI: https://doi.org/10.4067/s0718-50062021000300095

Ayuninggar et al., 2024 – *Ayuninggar, IL, Prayitno, PH, Wahjoedi, W. e Inayati, R.* (2024). Influencia de la educación financiera familiar y el estatus socioeconómico en la alfabetización financiera con el bienestar como mediador. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*. 4(4): 1512-1524. DOI: https://doi.org/10.53299/jppi.v4i4.806

Bhat et al., 2025 – *Bhat, S.A., Lone, U.M., SivaKumar, A., Krishna, U.M.G.* (2025). Digital financial literacy and financial well-being – evidence from India. *International Journal of Bank Marketing*. 43(3): 522-548. DOI: https://doi.org/10.1108/IJBM-05-2024-0320

Castellanos-Alvarenga et al., 2022 – *Castellanos-Alvarenga, L.M., Denegri-Coria, M., Sepúlveda-Aravena, J.* (2022). Relationship between Subjective Financial Knowledge and Financial Well-Being: The Mediating Role of the Financial Executive Function. *Revista de Cercetare si Interventie Sociala*. 78: 133-146. DOI: 10.33788/rcis.78.9

CFPB, 2018 – Consumer Financial Protection Bureau. Measuring financial well-being: A guide to using the CFPB Financial Well-Being Scale. [Electronic resource]. URL: https://www.consumer finance.gov/consumer-tools/financial-well-being/

Cherney et al., 2019 – *Cherney, K., Rothwell, D., Serido, J., Shim, S.* (2019). Subjective Financial Well-Being During Emerging Adulthood: The Role of Student Debt. *Emerging Adulthood*. 8(6): 485-495. DOI: https://doi.org/10.1177/2167696819879252 (Original work published 2020).

Dare et al., 2020 – *Dare, S. E., van Dijk, W. W., van Dijk, E., van Dillen, L. F., Gallucci, M., Simonse, O.* (2020). The effect of financial education on pupils' financial knowledge and skills: Evidence from a Solomon four-group design. *The Journal of Educational Research*. 113(2): 93-107. DOI: https://doi.org/10.1080/00220671.2020.1733453

Douwes et al., 2023 – *Douwes, R., Metselaar, J., Pijnenborg, G.H.M., Boonstra, N.* (2023). Well-being of students in higher education: The importance of a student perspective. *Cogent Education*. 10(1). DOI: https://doi.org/10.1080/2331186X.2023.2190697

Elisan et al., 2025 – *Elisan Glenn Bonie R., Aquino Aisa B., Niepes Jesse O., Magarao Quennie Mae M.* (2025). The Relationship between Financial Self-Efficacy and Financial Well-Being of College Students. *Journal of Education*. 2(1): 29-42. DOI: https://doi.org/10.55927/melas.v2i1.13828

Frisancho, 2020 – *Frisancho, V.* (2020). The impact of financial education for youth. *Economics of education review*. 78: 101918.

Gilenko, Chernova, 2021 – *Gilenko, E., Chernova, A.* (2021). Saving behavior and financial literacy of Russian high school students: An application of a copula-based bivariate probit-regression approach. *Children and Youth Services Review*. 127: 106122.

Gutter, Copur, 2011 – *Gutter, M., Copur, Z.* (2011). Financial Behaviors and Financial Well-Being of College Students: Evidence from a National Survey. *J Fam Econ Iss*. 32: 699-714. DOI: https://doi.org/10.1007/s10834-011-9255-2

Kamble et al., 2024 – *Kamble, P.A., Mehta, A., Rani, N.* (2024). Financial Inclusion and Digital Financial Literacy: Do they Matter for Financial Well-being? *Soc Indic Res*. 171: 777-807. DOI: https://doi.org/10.1007/s11205-023-03264-w

Limbu, Sato, 2019 – *Limbu, Y.B., Sato, S.* (2019). Credit card literacy and financial well-being of college students: A moderated mediation model of self-efficacy and credit card number. *International Journal of Bank Marketing*. 37(4): 991-1003.DOI: https://doi.org/10.1108/IJBM-04-2018-0082

Lusardi, Mitchell, 2014 – *Lusardi, A., Mitchell, O.S.* (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*. 52(1): 5-44. DOI: https://doi.org/10.1257/jel.52.1.5.

Montalto et al., 2019 – *Montalto, C.P., Phillips, E.L., McDaniel, A. et al.* (2019). College Student Financial Wellness: Student Loans and Beyond. *J Fam Econ Iss*. 40: 3-21. DOI: https://doi.org/10.1007/s10834-018-9593-4

Nguyen Minh Sang, 2021 – Nguyen Minh Sang (2021). Financial well-being of Vietnamese students. *Investment Management and Financial Innovations*. 18(4): 355-365. DOI: 10.21511/imfi.18(4).2021.29

Norvilitis, Linn, 2021 – *Norvilitis, J.M., Linn, B.K.* (2021). The Role of Student Debt and Debt Anxiety in College Student Financial Well-Being. *Journal of Student Financial Aid*. 50(3). Article 3. DOI: https://doi.org/10.55504/0884-9153.1721

Obenza et al., 2024 – *Obenza, B.N., Cuaresma, N.B.G., Carandang, Y.G.D., Dalugdug, L.J.S., Resus, K.S.M., Jumamoy, B.C.A., Mamon, P.A., Chi, K.C.Y.* (2024). The Mediating Effect of Financial Self-Efficacy on Financial Behavior and Financial Well-Being of College Students in Region XI. *American Journal of Economics and Business Innovation*. 3(1): 21-30. DOI: https://doi.org/ 10.54536/ajebi.v3i1.2313

Philippas, Avdoulas, 2021 – *Philippas, N.D., Avdoulas, C.* (2021). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. In Financial literacy and responsible finance in the FinTech era (pp. 64-85). Routledge.

Robb, Chy, 2023 – *Robb, C.A., Chy, S.* (2023). Undergraduate financial knowledge, attitudes, and behaviors: The impact of financial life skills course on college students. *Financial Planning Review*. 6(1): e1155.

Russell et al., 2025 – *Russell, J., Austin, K., Charlton, K.E., Igwe, E.O., Kent, K., Lambert, K., O'Flynn, G., Probst, Y., Walton, K., McMahon, A.T.* (2025). Exploring Financial Challenges and University Support Systems for Student Financial Well-Being: A Scoping Review. *International Journal of Environmental Research and Public Health*. *22*(3): 356. DOI: https://doi.org/10.3390/ijerph22030356

Saeedi, Nishad, 2024 – *Saeedi, S.E., Nishad, T.M.* (2024). Financial well-being and financial behavior: a bibliometric analysis. *SN Bus Econ*. 4: 162. DOI: https://doi.org/10.1007/s43546-024-00749-9

Samuel, Kumar, 2024 – *Samuel, S., Kumar, J.* (2024). Significance of Financial Attitude, Financial Education on Financial Well-Being. In: Khamis Hamdan, R., Hamdan, A., Alareeni, B., Khoury, R.E. (eds) Information and Communication Technology in Technical and Vocational Education and Training for Sustainable and Equal Opportunity. *Technical and Vocational Education and Training: Issues, Concerns and Prospects.* Vol. 38. Springer, Singapore. DOI: https://doi.org/ 10.1007/978-981-99-6909-8_44

Setiyani, Solichatun, 2019 – *Setiyani, R., Solichatun, I.* (2019). Financial well-being of college students: An empirical study on mediation effect of financial behavior. *KnE Social Sciences*, 451-474.

Shankar et al., 2022 – *Shankar, N., Vinod, S., Kamath, R.* (2022). Financial well-being – A Generation Z perspective using a Structural Equation Modeling approach. *Investment Management & Financial Innovations*. 19(1): 32.

She et al., 2024 – *She, L., Ma, L., Pahlevan Sharif, S. et al.* (2024). Millennials' financial behaviour and financial well-being: the moderating role of future orientation. *J Financ Serv Mark*. 29: 1207-1224. DOI: https://doi.org/10.1057/s41264-024-00281-9

Wheeler, Brooks, 2024 – *Wheeler, B.E., Brooks, C.* (2024). Financial Socialization, Financial Identity, and Financial Well-Being Among University Students Taking a Consumer Economics Course. *J Fam Econ Iss*. 45: 1-16. DOI: https://doi.org/10.1007/s10834-023-09930-y

Xiao, O'Neill, 2016 – *Xiao, J.J., O'Neill, B.* (2016), Consumer financial education and financial capability. *International Journal of Consumer Studies.* 40: 712-721. DOI: http://dx.doi.org/10.1111/ijcs.12285

Xie et al., 2020 – *Xie, X., Xie, M., Jin, H., Cheung, S., Huang, C.C.* (2020). Financial support and financial well-being for vocational school students in China. *Children and Youth Services Review*. 118: 105442.

Zhu et al., 2019 – *Zhu, A.Y.F., Yu, C.W.M., Chou, K.L.* (2019). Improving Financial Literacy in Secondary School Students: An Randomized Experiment. *Youth & Society*. 53(4): 539-562. DOI: https://doi.org/10.1177/0044118X19851311 (Original work published 2021).