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**The Impact of the Financial Literacy on the Financial Behavior and
its Effect on the Financial Decisions of University Students in
Lebanon**

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- 1- Jean Elia
Modern University for Business and Science (MUBS), Lebanon
- 2- Elena Toros
Cyprus International University (CIU), Lebanon
- 3- Chadia Sawaya
Lebanese University (LU), Lebanon
- 4- Fadi Bou Reslan
Cyprus International University (CIU), Lebanon
- 5- Mohamed Balouza
Lebanese University (LU), Lebanon
- 6- Nada Jabbour Al Maalouf
Modern University for Business and Science (MUBS), Lebanon

Corresponding Author: Jean Elia

Abstract

The term "financial literacy" describes a person's knowledge of finance, attitudes about financial opportunities, and behavior with money. To make wise financial decisions, financial literacy is essential. Young adults, especially university students, must make difficult financial decisions that affect their financial behavior in today's severe financial environment. This study aims to examine the association between financial behavior and financial decision-making among university students in Lebanon. The study's importance thus stems from the severe concerns it raises about the longer-term impact of financial literacy on financial behavior and its influence on financial decision-making. To achieve its main objectives, the study used a quantitative approach. A questionnaire was distributed among students from a variety of Lebanese universities. A convenience sampling technique was used ending with a sample of

598 respondents. SPSS was used for data analysis and precisely Pearson correlation and regression analyses were employed. The findings of the study revealed the positive impact of financial literacy on financial behavior. Also, they showed the positive impact of financial behavior in turn on the financial decision-making of Lebanese university students. Based on these findings, it is highly recommended that university students educate themselves financially to make effective financial decisions.

Keywords: University students; financial decision making; financial literacy; financial behavior; Lebanon

1. Introduction

1.1. General Background

Due to the complexity of today's financial environment and the density of financial products, it is impossible to exist without knowing how to manage money (Wagner, 2015). Consumer credit products, including loans, credit cards, and mortgage loans, are widely available in the financial markets. Customers who finance their purchases with credit must have an understanding of the costs of those purchases and other related information. Financial literacy is a person's understanding of financial instruments and tools. Financial literacy refers to an individual's ability to understand financial data and make knowledgeable choices and decisions on asset investments, financial planning, pensions, and debt (Lusardi & Mitchell, 2014).

Around the world, based on Standard and Poor's Global Financial Literacy Survey, the top ten countries with the highest financial literacy, as of April 2022, are Denmark (71%), Norway (71%), Sweden (71%), Canada (68%), Israeli Entity (68%), United Kingdom (67%), Germany (66%), Netherlands (66%), Australia (64%), and Finland (63%) (Klapper et. al, 2015).

Despite having a high level of consumer debt, Danish households often maintain substantial assets. Danish employees are already prepared to think about their future finances because they also receive pension plans that account for between 10% and 15% of their pay and accrue interest. Additionally, students in the 7th through 9th grades must take a course on financial literacy. Danish teenagers take part in Global Money Week, an annual event sponsored by Finance Denmark and the Danish Union of Teachers of Mathematics that brings financial experts to local schools to speak to students between the ages of 13 and 15.

Norway's high level of financial literacy may be attributed to youth financial education programs supported by the state bank. To assist individuals in achieving home ownership and other financial milestones, these programs provide interactive learning resources on personal finance-related subjects.

Sweden's high level of financial knowledge may date back to the late 1800s. Augustin Chaurand de Malarce, a French economist, launched the school savings movement in Europe in 1873 as a result of the Vienna World Exhibition. The Swedish Savings Bank Association launched a program in 1901 to advance financial education in classrooms. Students are now educated about financial literacy, math, and life skills including how to save for retirement and how to purchase a home.

The National Research Plan for Financial Literacy was established by Canada as part of a deliberate effort to address the issue of diminishing financial literacy. To increase financial literacy, this program involves the public, business, and non-profit sectors. The objectives are to encourage Canadians to manage their finances and debt, save money and make plans, and guard against fraud and other financial abuse.

There is a difference between financial literacy levels between the genders and between socioeconomic status in the Israeli Entity where men are more financially knowledgeable than women and the wealthy are more financially knowledgeable than the poor. Additionally, the nation teaches its high school students through "Financial Education Month in the School System," a collaboration between the Ministry of Education and the central bank that introduces financial topics like banking, investing, and general economics.

Despite having a financial literacy rate of 67%, the UK still finds gaps and has been working to address them. It became mandatory to teach personal finance in schools in 2014.

Germany takes its financial literacy very seriously since it believes that it is directly related to societal and individual financial well-being. All private and public employees are covered by a robust pension system that is prevalent in Germany. Men had somewhat higher financial literacy than women, and persons with minor educational levels, in general, had lower levels of financial literacy, highlighting glaring socioeconomic disparities.

The Dutch government is a firm believer in providing customers with financial education and empowerment. They may have a higher-than-average percentage of financial literacy since they have passed numerous regulations that aid in educating customers about their choices and battling debt.

Due to its wide socioeconomic disparities, Australia has attempted to increase young people's financial literacy by including it in elementary and secondary education. Australian pupils outperform the average of the top 10 financially literate nations. In Australia, 79% of 15-year-old pupils have a bank account, and these adolescents perform better on tests of financial literacy than their non-banking counterparts. The Money Smart Teaching initiative, which covers financial literacy for teachers, was launched by the Australian Securities and Investments Commission in 2012.

Finland places a high value on teaching financial literacy to schoolchildren. In the seventh grade, Finnish students take classes in Mathematics and home economics. In the ninth grade, they take another session in financial literacy as part of their social science coursework. Students from Australia reported having the most financial literacy tasks in school.

Although certain nations may have high rates of financial literacy, these numbers might differ among socioeconomic classes and can highlight injustices and imbalances. Although the United States still needs to do a lot to increase financial literacy, doing so could be advantageous, particularly for younger generations. Previous studies have shown that children are better prepared to manage their resources responsibly as adults the sooner financial education is taught to them.

Banks et al. (2010), Bernheim (1998), Clark et al. (2011), Guiso et al. (2009), Haliassos et al. (1995), Hastings et al. (2011), Jappelli (2010), Jappelli et al. (2011), Lusardi et al. (2007), van Rooji et al. (2011), Yoong (2011), and other empirical research on financial literacy found that people who engage in financial markets demonstrate, on average, a better comprehension of fundamental financial concepts pertinent to those markets than people who do not. Such studies

were conducted to examine the impact of financial literacy on financial market participation and the financial decision-making of individuals. They found that the variation in the levels of financial literacy affects individual financial decisions and market choices. Financially literate people have better investment decisions and better-diversified portfolios.

On the other hand, low-income individuals who are involved in simple financial purchases and transactions are a different case. Their financial literacy is important to guide their financial behaviors and decisions. Governments play a significant role in customer protection for low-income people with little financial literacy. Those consumers should be protected through consistent terminology in disclosure, transparency, and complaint units. Therefore, governments should play their role in ensuring that financial institutions do not systematically undercut consumer protection by leveraging their advantages in information, knowledge, and power.

Building financial capability is important in all countries. To exercise their rights, consumers must be aware of them. These rights include the ability to comprehend available product options and the freedom to select the services that best suit their needs. Customers/clients should be financially literate in order to fulfill this function effectively. Governments can assist in overcoming obstacles including those related to education, regulation, and finances so that consumers are better equipped to use financial services and take an active role in their own safety.

To discuss the idea of consumer financial competence, three overlapping concepts are employed. The first concept is financial education, which is a vital instrument for developing financial knowledge and capacity when combined with experience utilizing financial services. It educates people on sensible methods for earning, spending, saving, borrowing, and investing money. The second concept is financial literacy, which refers to the capacity to comprehend fundamental details about financial services and products. The third concept is financial competency, which is the capacity to use knowledge, make wise choices, and take effective action in relation to the management of money both now and in the future.

Wagner (2015) believed that it is critical to be monetarily educated to make effective financial choices. Moreover, Vieira (2012) found that financial literacy, defined as the capacity to comprehend financial concerns and the competence and motivation to act on that information, leads to more informed financial decisions.

1.2. Significance of the Study

Based on previous research, the notion of financial literacy and its effect on financial conduct and financial decision-making is noteworthy. The study's significance comes from the severe concerns it raises regarding the long-term effect of financial literacy on financial behavior and the financial decision-making of university students. Recognizing whether and in what way financial literacy affects financial behavior and decisions will assist in developing more efficient educational programs related to financials to prepare the younger generation, especially university students, when they enter the workforce and start their careers, to be competent personal financial managers (Kumar et al., 2017). The range of financial products accessible today from education loans to credit cards, mortgages, and annuities is significantly greater than before, and decisions made concerning these financial products have profound effects on people's well-being (Lusardi, 2019). It will be useful to comprehend whether and

how financial literacy may affect financial behavior and financial decisions in order to develop more finance-based educational programs to empower young university students to thrive through the financial markets and be knowledgeable and take wise financial decisions.

1.3. Statement of Research Problem

The study's research questions are as follows:

1. How does financial literacy affect the financial behavior of university students in Lebanon?
2. How does the financial behavior of university students in Lebanon affect their financial decisions?

1.4. Outline of the Article

The current article is divided into six parts. The first part is an introduction that provides an overview of financial literacy, financial behavior, and financial decisions. The second part is the literature review which provides a theoretical background of the topic and some previous research. The third part includes the plan to conduct the study. The fourth part lists the study findings and analysis. The fifth part includes a discussion of the results. The final part includes a conclusion of the results and recommendations.

2. Literature Review

This part of the study includes the theoretical background and previous research related to financial literacy, financial behavior, and financial decision-making.

2.1. Theoretical Background

This section includes mainstream literature discussing financial literacy, financial behavior, and financial decisions.

2.1.1. Financial Literacy

To be protected from financial problems, an individual should be financially literate (Ariante, 2018). Financial acquaintance and capability in an individual's money management are indispensable in everyday life (Arianti, 2018). Lusardi & Mitchell (2007) believed that financial literacy is a person's understanding of financial instruments and tools such as investments, savings, and insurance. It can also be defined as financial knowledge to obtain financial prosperity. Krishna et al. (2010) found that financial literacy prevents individuals from having financial troubles. Sabri (2011) stated that financial knowledge is the fundamental understanding that people require to thrive in today's world. The intricate ideas of spending, saving, and investing must be recognized and understood in order to achieve this fundamental understanding. As stated by the Financial Services Authority (2013), financial literacy is an assembly of procedures or actions intended to enhance the customer's and the general public's knowledge, abilities, and confidence so that they can better manage their financials.

Huston (2009) believed that the concept of financial literacy has two dimensions which are understanding and using financial information. Financial literacy, according to Huston (2010), is the input used to simulate the need for financial education. She found that to comprehend the effects of education and the obstacles to wise financial decision-making, it is crucial to explain

and measure financial literacy. The numerous financial literacy metrics that have been studied over the past ten years are summarized in her article. To highlight existing shortcomings and aid researchers in creating consistent, widely recognized financial literacy measures, a synopsis of the definition and measurement of financial literacy was provided in her paper.

Moreover, Huston (2010) believed that financial literacy, education, well-being, and behavior are related to each other. Financial literacy is the application of knowledge specifically related to personal money. A person's level of financial literacy is subjective to their overall level of gifted and acquired human capital. For instance, if a person has difficulty with math, this will undoubtedly affect how financially literate they are. For a financial literacy test, information directly relevant to effectively managing individual money is a more suitable emphasis than numeracy abilities because readily available instruments, such as calculators and computer software can make up for these shortcomings. As a part of human capital, financial literacy can be employed for financial actions to raise projected life benefits from spending which means behaviors that improve financial well-being. Factors such as behavioral bias, cognitive bias, self-control issues, pressures from family and acquaintances, and economic and institutional pressures influence financial behaviors and financial safety. Because of these additional factors, a financially literate individual could not display the expected behaviors or improvements in financial well-being. Financial education is a tool to improve individuals' financial knowledge and financial literacy. Using a clever financial literacy tool that precisely captures one's finance understanding and application, an individual finds it feasible to obtain a vision of how effective financial education creates the human capital necessary to act in ways that will promote financial well-being.

On the other hand, some studies such as Mandell (2005) indicate that financial education does not significantly improve high school pupils' test scores in financial understanding. Willis (2008) found that financial education initiatives are more expensive than they might be beneficial.

However, other researchers such as Fox et al. (2005) and Lusardi (2003) found that financial education, financial literacy, and advantageous financial results are directly related.

These contradictory results might propose that not all financial literacy programs are equally successful, that other variables contribute to financial distress or both.

The intended objective of the current research is to study the impact of financial literacy on financial behavior among university students in Lebanon.

2.1.2. Financial Behavior

For the past thirty years, consumer economists have researched financial behavior. Between 1970 and 1990, a fair overview of the financial behavior studies was given by Fitzsimmons, Hira, Bauer, and Hafstrom in 1993. Studies on financial habits in various contexts have increased recently such as studies done by Hilgert et al. (2003), Hogarth et al. (2002), Hogarth et al. (2003), Muske et al. (2001), O'Neill et al. (2003) and Xiao (2006).

Xiao (2008) believed that financial conduct or behavior refers to any human activity that is related to money management, credits, savings, or any other sorts of common financial activities. In his study, Xiao (2008) covered the use of two behavior theories in the study of financial behavior. The first is the theory of planned behavior (TPB), a motivational theory that aims to forecast and comprehend human conduct. The second is the transtheoretical model of

behavior modification (TTM), a multi-stage theory that was created to help people do positive activities one at a time.

Additionally, any individual conduct that is pertinent to money management can be categorized as financial behavior. Cash, credit, and saving are examples of financial behaviors. According to Xiao (2008), some things need to be made clear to define human or financial behaviors which are whether the focus is on conduct or results, whether the focus is on a specific action or a group of acts, how the aimed behavior is measured, and whether the data used is from self-reports or observations.

2.1.3. Financial Decisions

People make better choices as they become more financially aware. However, it is simpler to make poor judgments that have a detrimental impact on one's well-being and socioeconomic standing the less financially savvy one is. (Lusardi, 2019).

Usually, individuals use their cognitive skills to regulate their economic and financial transactions. However, sometimes transactions are complex and exceed individuals' ability to manage their finances effectively (El-Chaarani, 2016). Therefore, it is essential to have the necessary financial knowledge to improve decision-making in these domains (El-Chaarani, 2016).

Financial decisions are described as decisions or a set of options made with the use of financial literacy skills. The ongoing struggle between the marketplace's production of goods and services and an individual's restricted resources to purchase them has a substantial impact on financial decisions (Remund, 2010).

Individuals' purchase decisions mainly include two choices which are the choice of the product and the choice of the financing tool. Only a few individuals use financial information before deciding upon a certain purchase or an investment. The decision of purchase or investment; in order words, the financial decision, tends to be right or wrong based on the information collected about it and the financial literacy of an individual.

2.2 Previous Research

Many widely held studies on financial literacy and its effect on financial behavior have indicated that financial literacy does influence financial conduct (El-Chaarani, 2015; El-Chaarani et al., 2022). Others have shown a causal or even a link between financial literacy, financial behavior, and financial decision-making.

Sadalia et al. (2017) carried out a study to investigate the impact of the behavior of financial management on financial performance. The authors employed quantitative and qualitative approaches using a sample of small and medium-sized enterprise owners in Medan. They found that a person's money management behavior and financial literacy are related.

In their 2005 study, Perry and Morris looked at the impact of consumer financial knowledge, income, and locus of control on financial behavior. According to the findings, consumers' propensity to save, budget, and restrict spending is influenced by their perception of how much control they have over outcomes, as well as their knowledge and financial resources. There is conflicting evidence of racial and ethnic modifiers. The authors concluded that poor money management practices can have significant long-term social and societal repercussions.

Green et al. (2013) discussed the impact of financial knowledge on students' financial decisions using a survey. They found that there is no significant impact between financial literacy and financial decisions.

In their study, Gross, Ingrahm, and Matazar (2005) studied the negative effects of being financially illiterate. They mentioned that its major negative effects are high debt levels and sudden defaults. The sample of their study was law students who were offered financial literacy education and collected their responses using a questionnaire to measure their financial literacy. The authors concluded that financial literacy education may change students' awareness, attitudes, and actions concerning money and finance, expediting their management of these issues during school and beyond graduation.

More significantly, Mandell (2006) used surveys to measure the financial literacy of high school seniors from 1997 to 2006. The author discovered that financially literate high school seniors, compared to their counterparts, had a lower check bounce rate and a higher checkbook balance rate. The findings of the study revealed that students from families with greater financial incomes have higher financial literacy levels than students from families with lower financial incomes. Moreover, students who took finance courses did not have a raise in their financial literacy levels related to those who did not take such courses.

Furthermore, de Bassa Scheresberg (2013) examined financial literateness and financial conduct in a sample of nearly 4,500 young adults aged 25 to 34 using data from the United States 2009 National Financial Capability Study. According to his findings, people who are more financially literate or confident in their mathematical or individual finance abilities had superior financial results. They're more probable to save for emergencies or retirement and less probable to employ high-cost borrowing strategies.

Additionally, Ameer and Khan (2020) examined whether financial literacy is linked to financial behavior in a cross-sectional New Zealand sample of individuals using survey data. Adults with a finance and economics degree have stronger financial literacy and self-confidence in handling their funds. Moreover, individuals who are confident in their ability to manage their money but do not have the necessary financial literacy are more susceptible to engaging in hazardous financial conduct.

Bellofatto et al., (2018) studied the association between the financial literacy of investors and their financial trading behavior. They found that financially literate investors invest smarter regardless of their age, trading experience, and education. Also, financially literate investors have better capabilities in diversifying their portfolios than those who lack financial literacy.

Gathergood and Weber (2017) examined the association between financial literacy and financial decisions made by households related to mortgages. They believed that mortgages are the most important financial decisions made by households and that the current financial market provides complex mortgage products. Their study was based in the United Kingdom. They found that poor financial literacy raises the probability of choosing alternative mortgage products rather than choosing adjustable-rate mortgages where they can avoid paying the term premium of fixed-rate mortgages. Thus, they found that financial literacy enhances financial decisions related to mortgages.

Christelis et al. (2010) and van Rooij et al. (2011) found that advanced literacy in investors can help them predict stock market changes and enhance their financial decisions.

Almenberg & Dreber (2015) looked into how financial literacy affected men's and women's stock market decisions and the differences in the levels of financial knowledges between the genders. Their study was conducted in Sweden and their sample was a random sample of 1,300 persons representing the Swedish population. They found that women participate less than men in financial stock markets and have lower levels of financial literacy. Their lower financial literacy levels did not allow them to participate well in financial stock markets. From this, the authors concluded that financial literacy is significant in financial decisions and when women become more financially literate, their involvement in financial markets will upsurge.

Disney and Gathergood (2013) examined the association between financial literacy and consumer credit portfolios which reflects their financial decisions. Their research was conducted on a sample of households in the United Kingdom. The researchers discovered that borrowers with low financial literacy held a greater proportion of high-interest debt than borrowers with higher financial literacy. Moreover, they found that when analyzing credit terms, the confidence of individuals with poor financial literacy is lower than the confidence of those with high financial literacy. Individuals with low financial literacy are confused over financial terms and are less probable to engage in financial behavior which might aid them in improving their awareness of the financial market.

Shim et al. (2009) conducted a cross-sectional study to examine the financial socialization of first-year college students and they considered the role of parents, work, and education. Their study included a sample of 2,098 college students in their first years. They found that the role of parents, work, and education is very important in the financial learning of students, their financial behaviors, and their financial decision-making. Additionally, the authors discovered a relationship between early financial socialization and financial learning, which in turn is related to financial attitudes and ultimately, financial conduct. They concluded that college students' financial habits developed throughout their higher education years are likely to impact their future decisions.

Mandel and Klein (2009) investigated the effect of financial literacy on the financial behavior of school pupils. They believed that because financial conduct has an impact on financial safety, it is necessary to emphasize the significance of financial decision-making. Some university students are still unable to manage their finances properly. Many university students have opted to get their credit cards. To achieve their research objective, they took a sample of 79 high school students and divided them among those who took the financial management course and those who did not. They found that there is no association between financial literacy and taking this course and even there is no association between financial behavior and taking this course. Important questions are raised by this study concerning the effectiveness of high school financial literacy courses in the long term.

Assad (2012) discussed experimental finance research and emphasized how having access to financial information affects financial choices. The author reviewed psychological literature that shows how the limits of human cognition affect financial decision-making. Experiments in financial research in the lab also show a relationship between participant expectations and conduct. Neuroscience research identifies the part of the brain that controls particular behaviors, and empirical data from the entire market sheds light on the overall influence of individual decision-makers. Making better financial decisions will be made possible by all of this knowledge. The author found that the decision to utilize cash, credit, or savings is based on a

person's behavior, and financial literacy and perceived financial understanding influence financial decisions.

Karakurum-Ozdemir et al. (2019) believed that financial well-being has been shown to be significantly increased by having financial knowledge. They conducted their study in Mexico Lebanon, Uruguay, Colombia, and Turkey. Their main purpose was to identify public policies to increase financial literacy levels among citizens of the studied countries. They found that when the educational levels of individuals increase, their financial literacy scores will consequently increase. Moreover, they found that not only the number of years of education matters but the quality matters too. They suggested the necessity of financial inclusion.

Alaaraj and Bakri (2020) conducted a study to examine the influence of financial knowledge on decision-making among investors. The study covered the geographical region of South Lebanon. The authors used a quantitative approach and employed a survey as a data collection tool. The convenience sampling method was used and 150 participants responded to the questionnaire. The questionnaire was directed to clients of four diverse banks in the area. SPSS was used to conduct the data analysis. The authors found out that there is a positive significant association between investment decision-making and financial literacy. The authors recommended that future studies include other districts in Lebanon in a different and wider time horizon and that they consider other variables.

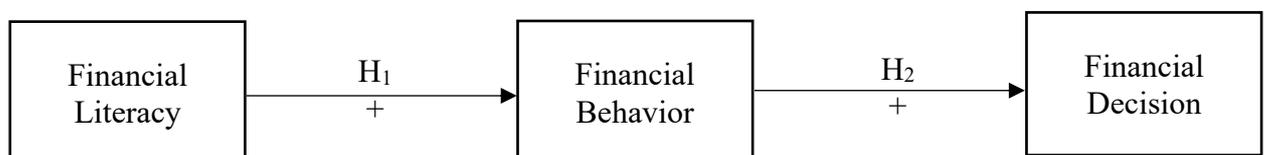
2.3 Hypotheses Development

Many research papers discussed the effect of financial literacy on financial decisions but a gap in the literature was found regarding the effect of financial behavior on financial decisions. In addition, no studies tackled this influence specifically in Lebanon. After surveying the literature and based on previous research, the succeeding hypotheses were developed:

H₁: Financial literacy has a positive influence on the financial behavior of university students in Lebanon

H₂: Financial behavior has a positive influence on the financial decision of Lebanese university students

Consequently, the study's hypotheses can be summarized in the below model:



3. Research Methodology

3.1 Research Approach

The research approach is a quantitative research approach to gain a clear understanding from a sample of participants. The study employed a quantitative approach since it emphasizes on precise statistical numerical data.

3.2 Instrumentation

A questionnaire was prepared using numerous measures according to the recommendations of Podsakof et al. (2003) in order to ensure contribution and reduce the probability of common method biases. The questionnaire was translated from the original English into Arabic using the back translation method (Brislin, 1970). The total number of questions in the questionnaire was twenty-three questions. Participants were first requested to reply to various demographic inquiries, including age, marital status, university, and faculty since demographic characteristics of participants are supposed to have explanatory value in the research (Geronimus et al., 1996). Then, Financial Literacy (FL) was measured by using a combination of five financial questions with a set of multiple-choice answers adapted from the scales of Lusardi and Mitchell (2011) and Rieger (2020). Financial Behavior (FB) was measured based on the model proposed by Potrich et al. (2016) by using a five-point Likert scale ranging from strongly agree (1) to strongly disagree (5) and it comprised eight questions. Finally, a developed form made up of five questions by the Department of Econometrics and Business Studies at Monash University (2006) was used to assess the financial decision (FD).

3.3 Population and Sample Selection

The questionnaire was distributed to undergraduate students at several Lebanese universities; public and private, from March 2022 to August 2022. Convenience sampling was used as an effective technique for its simplicity, low cost, less effort, and can be facilitated in a short time (Bell et al., 2022). The significance here is that this study considered the public and all the private universities in Lebanon. Students were contacted to fill out a structured questionnaire via a link developed by an online survey website (Google Forms). Nine hundred eighty-two participants from different Lebanese universities were approached through a private message. Of those, 598 were included in the analysis, indicating a 60.89 % response rate. Confidentiality and anonymity of participants were provided.

3.4 Variables of the Study

Based on the hypotheses, the study includes the following variables.

For H₁, the dependent variable is Financial Behavior (FB) and the independent variable is Financial Literacy (FL).

For H₂, the dependent variable is Finance Decision (FD) and the independent variable is Financial Behavior (FB).

3.5 Data Availability

The data supporting this study's findings are available from the corresponding author upon reasonable request.

3.6 Ethical Considerations

3.6.1 Consent to Participate

All study participants consented to participate in the study.

3.6.2 Consent for Publication

The authors consented to the publication of this article.

3.6.3 Ethics Approval

The 1964 Helsinki declaration and its later amendments, as well as any other relevant ethical norms, were followed in all procedures carried out in this study involving human volunteers.

3.6.4 Conflict of Interest

The authors declare that he has no conflicts of interest.

4. Results

4.1 Sample Profile

Table 1 shows the sample profile including the demographics of the respondents which are age, marital status, university, faculty, and business major (in case the faculty is Business).

Age	17-20 (25%), 21-24 (28%), 25-28 (20%), 29-30 (16%), 33-36 (8%), 37 and above (3%)
Marital Status	Single (65%), Divorced/Separated (1%), Married (34%)
University	Public (21%), Private (79%)
Faculty	Business (55%), Medicine (11%), Health Sciences (2%), Engineering (6%), Architecture (5%), Arts and Sciences (6%), Agriculture and Food Sciences (15%)
Business Major	Finance (32%), Accounting / Audit (40%), Management (15%), Marketing (4%), MIS (7%), HR (2%)

Table 1: Sample Profile

Table 1 shows that the majority of the respondents are between the ages of 17 and 24 which is the usual age group of university students in Lebanon. In addition, the majority are single and study in private universities in Lebanon. Moreover, the majority of the students are studying in the faculty of business and mainly in finance and accounting emphasis. This in turn shows that those students have taken financial courses which might affect their financial literacy.

4.2 Responses to Questions Measuring Financial Literacy

Five questions were asked to assess the financial literacy (FL) of the participants. The responses are found in Table 2.

	Correct Answers	Incorrect Answers	Total Responses
FL1	436	162	598

FL2	485	113	598
FL3	461	137	598
FL4	410	188	598
FL5	377	221	598

Table 2: Responses to Questions Measuring Financial Literacy

Table 2 shows that 73% of the respondents got correct answers to FL1, 81% of the respondents got correct answers to FL2, 77% of the respondents got correct answers to FL3, 69% of the respondents got correct answers to FL4, and 63% of the respondents got correct answers to FL5.

4.2 Responses to Questions Related to Financial Behavior

Eight questions were asked to investigate the financial behavior of the university students in Lebanon who participated in the study.

FB1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	307	51.3	51.3	51.3
	Agree	291	48.7	48.7	100.0
	Total	598	100.0	100.0	

Table 3: Frequency Distribution for FB1

Table 3 shows that 51.3% of the participants strongly agreed and 48.7% of the participants agreed that they pay their credit cards on time to avoid extra charges. This shows that the majority of the participants has wise financial behavior and pay their financial obligations on time.

FB2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	84	14.0	14.0	14.0
	Agree	153	25.6	25.6	39.6
	Undecided	147	24.6	24.6	64.2
	Disagree	58	9.7	9.7	73.9
	Strongly Disagree	156	26.1	26.1	100.0
	Total	598	100.0	100.0	

Table 4: Frequency Distribution for FB2

Table 4 shows that 14% of the respondents strongly agree, 25.6% of the respondents agree, 24.6% of the respondents have an undecided response, 9.7% of the respondents disagree, and 26.1% of the respondents strongly disagree that they worry about how best to manage their money. This illustrates that the majority of the participants (39.6%) consider money management as an important concern.

FB3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	239	40.0	40.0	40.0
	Agree	198	33.1	33.1	73.1
	Disagree	161	26.9	26.9	100.0
	Total	598	100.0	100.0	

Table 5: Frequency Distribution for FB3

Table 5 shows that 40% of the respondents strongly agree, 33.1% of the respondents agree and 26.9% of the respondents disagree that they take notes and control their personal expenses. This shows a keen financial behavior among the majority of the respondents.

FB4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	193	32.3	32.3	32.3
	Agree	107	17.9	17.9	50.2
	Undecided	244	40.8	40.8	91.0
	Disagree	54	9.0	9.0	100.0
	Total	598	100.0	100.0	

Table 6: Frequency Distribution for FB4

Table 6 shows that 32.3% of the respondents strongly agree, 17.9% of the respondents agree, 40.8% of the respondents have undecided responses, and 9% of the respondents disagree that they establish financial targets for the long term which influences their expense management. The responses show that the majority of the respondents (50.2%) set financial goals for the future to monitor their expenses which shows wise financial behavior.

FB5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	196	32.8	32.8	32.8
	Agree	253	42.3	42.3	75.1
	Disagree	149	24.9	24.9	100.0
	Total	598	100.0	100.0	

Table 7: Frequency Distribution for FB5

Table 7 shows that 32.8% of the respondents strongly agree, 42.3% of the respondents agree, and 24.9% of the respondents disagree that they pay their bills without delay. Thus, the majority of the respondents (75.1%) pay their obligations on time to avoid extra charges.

FB6					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	238	39.8	39.8	39.8
	Undecided	216	36.1	36.1	75.9
	Disagree	144	24.1	24.1	100.0
	Total	598	100.0	100.0	

Table 8: Frequency Distribution for FB6

Table 8 shows that 39.8% of the respondents agree, 36.1% of the respondents have undecided responses, and 24.1% of the respondents disagree that they save monthly. Saving is wise financial behavior in order to have some money in case of any emergencies.

FB7					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	362	60.5	60.5	60.5
	Agree	144	24.1	24.1	84.6
	Disagree	92	15.4	15.4	100.0
	Total	598	100.0	100.0	

Table 9: Frequency Distribution for FB7

Table 9 shows that 60.5% of the respondents strongly agree, 24.1% of the respondents agree and 15.4% of the respondents disagree that they compare prices when buying something. The majority of the respondents (84.6%) compare prices when they are purchasing which is wise financial behavior.

FB8					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	362	60.5	60.5	60.5
	Agree	144	24.1	24.1	84.6
	Disagree	92	15.4	15.4	100.0
	Total	598	100.0	100.0	

Table 10: Frequency Distribution for FB8

Table 10 shows that 60.5% of the respondents strongly agree, 24.1% of the respondents agree and 15.4% of the respondents disagree that they analyze their financial situation before a major purchase. Being financially wise requests checking the financial situation of an individual before conducting any purchase. The majority of the respondents (84.6%) behave in a financially wise manner before purchasing.

4.3 Responses to Questions Related to Financial Decision

Five questions were asked to reflect the financial decisions made by the 598 university students in Lebanon who constitute the study's sample.

FD1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A moderately low-risk taker	53	8.9	8.9	8.9
	An average risk taker	284	47.5	47.5	56.4
	A high-risk taker	261	43.6	43.6	100.0
	Total	598	100.0	100.0	

Table 11: Frequency Distribution for FD1

Table 11 shows that 8.9% of the respondents are moderately low-risk takers, 47.5% of the respondents are average risk takers, and 43.6% of the respondents are high-risk takers.

FD2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	25	4.2	4.2	4.2
	Agree	267	44.6	44.6	48.8
	Undecided	151	25.3	25.3	74.1
	Disagree	68	11.4	11.4	85.5
	Strongly Disagree	87	14.5	14.5	100.0
	Total	598	100.0	100.0	

Table 12: Frequency Distribution for FD2

Table 12 shows that 4.2% of the participants strongly agree, 44.6% of the participants agree, 25.3% of the participants have undecided answers, 11.4% of the participants disagree, and 14.5% of the participants strongly disagree that they are more comfortable putting their money in a bank account than in the share market. The majority of the participants take the financial decision to choose a safer investment.

FD3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	335	56.0	56.0	56.0
	Undecided	118	19.7	19.7	75.8
	Disagree	145	24.2	24.2	100.0
	Total	598	100.0	100.0	

Table 13: Frequency Distribution for FD3

Table 13 shows that 56% of the respondents agree, 19.7% of the respondents are undecided, and 24.2% of the respondents disagree that the best way to reduce financial risk is to diversify. This is a keen financial decision since diversification lowers the risk.

FD4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undecided	87	14.5	14.5	14.5
	Disagree	212	35.5	35.5	50.0
	Strongly Disagree	299	50.0	50.0	100.0
	Total	598	100.0	100.0	

Table 14: Frequency Distribution for FD4

Table 14 shows that 14.5% of the respondents are undecided, 35.5% of the respondents disagree and 50% of the respondents strongly disagree that during times of higher inflation it can be more expensive to borrow money due to higher interest rates.

FD5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	57	9.5	9.5	9.5
	Agree	88	14.7	14.7	24.2
	Undecided	99	16.6	16.6	40.8
	Disagree	316	52.8	52.8	93.6
	Strongly Disagree	38	6.4	6.4	100.0
	Total	598	100.0	100.0	

Table 15: Frequency Distribution for FD5

Table 15 shows that 9.5% of the respondents strongly agree, 14.7% of the respondents agree, 16.6% of the respondents are undecided, 52.8% of the respondents disagree, and 6.4% of the respondents strongly disagree that they are able to recognize a good financial investment. The majority of the respondents can not recognize a good investment.

4.2 Descriptive Statistics

As previously mentioned, the questionnaire included 5 socio-demographic questions, 5 questions to measure the financial literacy of students in universities in Lebanon, 8 questions related to financial behavior, and 5 questions related to financial decision-making. Thus, based on the responses to the questions, the following variables were created to test the two hypotheses of the study:

- FL: is the financial literacy score where the five questions to measure financial literacy were graded and a score out of 5 was obtained.
- FB is the average of all eight questions that measure financial behavior.
- FD is the average of all the five questions related to financial decision-making.

The minimum, maximum, mean, standard deviation and kurtosis for each variable are shown in Table 16.

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
FL	598	.00	5.00	3.6271	1.78953	-.770	.200
FB	598	1.50	3.25	2.1739	.46609	-.574	.200
FD	598	2.40	4.60	3.4027	.45427	.000	.200
Valid N (listwise)	598						

Table 16: Descriptive Statistics

4.3 H₁ Results

Table 17 shows that the means for FL and FB are 3.62 and 2.17 respectively. Thus, the average score of the questions measuring financial literacy is 3.62 out of 5. The average scale for the questions related to financial behavior is 2.17; which is close to “agree”. This means that the average response to all questions related to financial behavior was “agree”. The standard deviations for FL and FB are low; 1.78 and 0.46 respectively. This shows that there is a low dispersion among the values of the variables FL and FB.

To test H₁ and investigate the effect of FL on FB, the Pearson correlation is used. Pearson correlation coefficient enables quantifying the strength of the linear relationship between two quantitative variables. The coefficient ranges between -1 and +1 and the Significance (2-tailed) shows whether the correlation is significant at the level of 0.01 or not. It is significant if the p-value is less than 0.01. A perfect significance is rated in the Sig (2-tailed) at the 0.000 value.

Table 17 shows a positive and significant correlation between FL and FB since the Pearson coefficient is 0.136; which is weak but still significant at the 0.01 level (2-tailed) with a p-value of 0.001 which is less than 0.01.

		FL
FL	Pearson Correlation	1
	Sig. (2-tailed)	
	N	598
FB	Pearson Correlation	.136**
	Sig. (2-tailed)	.001
	N	598

** . Correlation is significant at the 0.01 level (2-tailed).

Table 17: Correlation between FL and FB

After finding out that the variables are correlated, a regression analysis is conducted where the independent variable is FL and the dependent variable is FB. R squared measures the goodness of fit of a regression model on a scale between 0 and 100%.

Table 18 shows an R squared of 1.9% which reveals that 1.9 % of the variability observed in the target variable is explained by the regression model. However, small R-squared values do not mean that the result is not reliable and conclusions about the relationships between the

variables can't be drawn. What mostly matters here is the statistical significance of the result. As noted in Table 18, the result is significant at a 1% significance level since the p-value is 0.001 which is less than 0.01. In addition, Table 18 shows that the values of R squared and Adjusted R squared is close to each other; 0.019 and 0.017 respectively which means that there are no missing variables.

Model Summary				
Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.136 ^a	.019	.017	.46213

a. Predictors: (Constant), FL

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.412	1	2.412	11.294	.001 ^b
	Residual	127.282	596	.214		
	Total	129.694	597			

a. Dependent Variable: FB

b. Predictors: (Constant), FL

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.045	.043		47.850	.000
	FL	.036	.011	.136	3.361	.001

a. Dependent Variable: FB

Table 18: Regression Analysis for FL and FB

Table 18 shows the coefficients of the linear regression for the independent variable FL and dependent variable FB. The p-value is 0.001 which means that the result is significant at level 1%.

Based on the analysis, H₁ is supported and it can be concluded that financial literacy has a positive influence on the financial behavior of university students in Lebanon.

4.4 H₂ Results

Table 16 shows that the means for FB and FD are 2.17 and 3.40 respectively. Thus, the average scale for the questions related to financial behavior is 2.17; which is close to “agree”. The average scale for the questions related to the financial decision is 3.40; which is close to “undecided”. The standard deviations for FB and FD are low; 0.46 and 0.45 respectively. This shows that there is a low dispersion among the values of the variables FB and FD.

In order to test H₂ and investigate the effect of FB on FD, Pearson correlation is used. Table 19 shows a positive and significant correlation between FB and FD. Pearson coefficient is 0.415; which is moderate but significant at the 0.01 level (2-tailed) with a p-value of 0.001 which is less than 0.01.

Correlations			
		FB	FD
FB	Pearson Correlation	1	.415**
	Sig. (2-tailed)		.000
	N	598	598
FD	Pearson Correlation	.415**	1
	Sig. (2-tailed)	.000	
	N	598	598

** . Correlation is significant at the 0.01 level (2-tailed).

Table 19: Correlation between FB and FD

After finding out that FB and FD are correlated, a regression analysis is conducted where the independent variable is FB and the dependent variable is FD. Table 20 shows an R squared of 17.2% which reveals that 17.2 % of the variability observed in the target variable is explained by the regression model. In addition, Table 20 shows that the values of R squared and Adjusted R squared is close to each other; 0.172 and 0.171 respectively which means that there are no missing variables.

As noted previously, a low value of R squared does not mean that conclusions can't be drawn from the result. What matters most is the significance of the result. Table 20 shows that F-statistic is significant at a significance value of 1% with a p-value of 0.000.

Model Summary				
Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.415 ^a	.172	.171	.41371

a. Predictors: (Constant), FB

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.189	1	21.189	123.799	.000 ^b
	Residual	102.007	596	.171		
	Total	123.196	597			

a. Dependent Variable: FD

b. Predictors: (Constant), FB

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.524	.081		31.251	.000

	FB	.404	.036	.415	11.127	.000
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a. Dependent Variable: FD

Table 20: Regression Analysis for FB and FD

Table 20 shows the coefficients of the linear regression for the independent variable FB and dependent variable FD. The p-value is 0.000 which means that the result is significant at level 1%.

Based on those results, it can be concluded that H₂ is true and that financial behavior has a positive influence on the financial decision-making of university students in Lebanon.

5. Discussion

In order to test the two hypotheses of the study, Pearson correlation and regression analysis were conducted in SPSS. For the first hypothesis, the dependent variable is Financial Behavior (FB) and the independent variable is Financial Literacy (FL). For the second hypothesis, the dependent variable is Finance Decision (FD) and the independent variable is Financial Behavior (FB).

The results of the Pearson correlation for H₁ showed a positive and significant correlation between FL and FB since the coefficient obtained is 0.136 significant at a significance level of 1%.

The results of regression analysis for H₁ showed a significant result. Based on the tests employed, H₁ is supported and it can be concluded that financial literacy has a positive influence on the financial behavior of university students in Lebanon.

The results of the Pearson correlation for H₂ showed a positive and significant correlation between FB and FD since the coefficient obtained is 0.415 significant at a significance level of 1%.

The results of regression analysis for H₂ showed a significant result. Based on the tests employed, H₂ is supported and it can be concluded that financial behavior has a positive influence on the financial decision-making of university students in Lebanon.

The results are similar to the findings of Assad (2012), Gross, Ingrahm, and Matazar (2005), Green (2013), Mandell (2006), de Bassa Scheresberg, (2013), and Ameer & Khan (2020).

Hypothesis	β values	t statistics	p values	R ²	Results
H ₁ : Financial literacy has a positive influence on the financial behavior of university students in Lebanon	0.136	3.361	0.001	0.019	Supported
H ₂ : Financial behavior has a positive influence on the financial decision of Lebanese university students	0.415	11.127	0.000	.172	Supported

Table 21: Final Regression Results for H₁ and H₂

6. Conclusion and Recommendations

6.1 Conclusion

The main purpose of the study was to investigate the impact of financial literacy on financial behavior and then the impact of financial behavior on the financial decision-making of university students in Lebanon. Based on the main purpose, two hypotheses were developed. The first hypothesis states that financial literacy has a positive influence on the financial behavior of university students in Lebanon. The second hypothesis states that financial behavior has a positive influence on the financial decision of Lebanese university students. To test those hypotheses, a questionnaire composed of 23 questions was distributed to students in numerous universities in Lebanon and convenience sampling was used. The obtained sample was 598 students. SPSS was used for data analysis and precisely Pearson correlation and regression analyses were employed. Based on the analysis of the findings, both hypotheses were supported. The findings of this study are in line with the findings of Sadalia et al. (2017), Perry & Morris (2005), Gross, Ingrahm, and Matazar (2005), Mandell (2006), de Bassa Scheresberg (2013), Ameer and Khan (2020), Bellofatto et al., (2018), Gathergood & Weber (2017), Christelis et al. (2010), van Rooij et al. (2011), Almenberg & Dreber (2015), Disney & Gathergood (2013), Shim et al. (2009), Mandel and Klein (2009), Assad (2012), Karakurum-Ozdemir et al. (2019), and Alaaraj & Bakri (2020). Only a few studies had contradictory findings, such as Green et al. (2013) there is no significant impact between financial literacy and financial decisions.

6.2 Implications

The study filled the gap in the literature attaining the objective of finding the relationship between financial literacy, financial behavior, and financial decision-making in the Lebanese context. The findings of the study implied the significance of financial literacy and its effectiveness on the financial behavior of students in the public and private universities in Lebanon. Also, the results indicated the importance of financial behavior and its effect on the financial decisions of students in universities in Lebanon. Thus, it is highly recommended that university students educate themselves financially to have wise financial behaviors and make sound financial decisions. The study suggests that one way to lessen the financial issues and avoid financial problems that individuals and university students deal with in Lebanon specifically is to create financial education programs that are explicitly intended to improve financial literacy.

Moreover, for Lebanon to be among the top countries with the highest financial literacy the Lebanese Ministry of Education and Higher Education should include within the curriculum of the intermediate and secondary classes some financial educational programs, workshops, and seminars. Additionally, they can bring experts to speak to students and inspire them about the importance of financial literacy. This will let students have exposure to basic financial knowledge and learn its significance and need in their decision-making.

Youth financial education programs which are interactive learning resources on financial concepts should also be supported by the Lebanese central bank to educate students about financial services and instruments.

By doing so, students will be well-educated on how to manage their finances and savings which will in turn improve their financial decision-making.

6.3 Contributions

The results of this research showed the importance of financial literacy and its effect on financial behavior and in turn the latter's effect on financial decision-making among students in universities in Lebanon. Based on these results, universities including all faculties should include some simple courses which educate students on financial concepts and services to help them in their financial conduct and decision-making. Currently, Lebanon has been facing a severe economic and financial crisis. Students in universities in Lebanon should benefit from financial knowledge and education in order to participate in financial markets. This in turn would help them earn passive income from financial trading and investments.

6.4 Limitations

There are several limitations of this study. The first limitation is the non-responsiveness of students in universities in Lebanon to whom the questionnaire via Google Forms was sent. This led to a sample size that was under expectations although a lot of efforts were made to spread the questionnaire and motivate responsiveness. The second limitation of the study is that it was done in Lebanon where financial instability prevails. The financial decisions of students might have been affected by the economic crisis that has been hitting the country and the devaluation of the Lebanese pound. Also, the findings can't be generalized to other countries since this study only considers Lebanese university students.

6.5 Recommendations for Future Studies

Future research is recommended to include a larger sample size in addition to conducting focus groups including representatives from several universities. Moreover, it is recommended that a simple finance course or workshop is addressed to the students to examine its effects on their financial literacy, financial behavior, and financial decision-making by comparing the pre and the post.

Further research is recommended to extend this study to other countries and do the necessary comparison among them. In addition, other variables can be included in the study to investigate if they have any effect on financial literacy, financial behavior, and financial decision-making. An example of those variables is socio-demographic variables such as level of income, work experience, and risk tolerance.

References

- Alaaraj, Hassan, and Ahmed Bakri. "The effect of financial literacy on investment decision making in Southern Lebanon." *International Business and Accounting Research Journal* 4, no. 1 (2020): 37-43. <http://dx.doi.org/10.35474/ibarj.v4i1.133>
- Almenberg, Johan, and Anna Dreber. "Gender, stock market participation and financial literacy." *Economics Letters* 137 (2015): 140-142. <https://doi.org/10.1016/j.econlet.2015.10.009>
- Ameer, Rashid, and Robert Khan. "Financial socialization, financial literacy, and financial behavior of adults in New Zealand." *Journal of Financial Counseling and Planning* 31, no. 2 (2020): 313-329 <http://dx.doi.org/10.1891/JFCP-18-00042>

- Arianti, Baiq Fitri. "The influence of financial literacy, financial behavior and income on investment decision." *EAJ (Economic and Accounting Journal)* 1, no. 1 (2018): 1-10. <http://dx.doi.org/10.32493/eaj.v1i1.y2018.p1-10>
- Asaad, Colleen Tokar. "Experimental finance: a cross-disciplinary exploration linking expectations and behaviours." *International Journal of Behavioural Accounting and Finance* 3, no. 3-4 (2012): 244-269. <https://doi.org/10.1504/IJBAF.2012.052189>
- Bellofatto, Anthony, Catherine D'Hondt, and Rudy De Winne. "Subjective financial literacy and retail investors' behavior." *Journal of Banking & finance* 92 (2018): 168-181. <https://doi.org/10.1016/j.jbankfin.2018.05.004>
- Christelis, Dimitris, Tullio Jappelli, and Mario Padula. "Cognitive abilities and portfolio choice." *European Economic Review* 54, no. 1 (2010): 18-38. <https://doi.org/10.1016/j.euroecorev.2009.04.001>
- Cohen, Monique, and Candace Nelson. "Financial literacy: A step for clients towards financial inclusion." *Global Microcredit Summit* (2011): 14-17. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.466.2029&rep=rep1&type=pdf>
- de Bassa Scheresberg, Carlo. "Financial literacy and financial behavior among young adults: Evidence and implications." *Numeracy* 6, no. 2 (2013): 5.: <http://dx.doi.org/10.5038/1936-4660.6.2.5>
- Department of Econometrics and Business Studies at Monash University (2006). Questionnaire: Financial Foundation. Retrieved on September 30th, 2021 from: <http://www.financialfoundations.com.au/pdf/NEW%20Risk%20Profile%20Questionnaire.pdf>
- Disney, Richard, and John Gathergood. "Financial literacy and consumer credit portfolios." *Journal of Banking & Finance* 37, no. 7 (2013): 2246-2254. <https://doi.org/10.1016/j.jbankfin.2013.01.013>
- El-Chaarani, H. (2016). Exploring the Impact of Emotional Intelligence on Portfolio Performance. *Humanomics* 32: 1–28/
- El-Chaarani H., (2015). The Impact of Financial and Legal Structures on the Performance of European Listed Firms, *European Research Studies*, Vol. 17 (3).
- El-Chaarani H., et al.. (2022). The impact of COVID-19 on financial structure and performance of Islamic banks: a comparative study with conventional banks in the GCC countries, *Journal of Economic and Administrative Sciences*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JEAS-07-2021-0138>.
- Fox, Jonathan, Suzanne Bartholomae, and Jinkook Lee. "Building the case for financial education." *Journal of consumer affairs* 39, no. 1 (2005): 195-214. <https://doi.org/10.1111/j.1745-6606.2005.00009.x>
- Gathergood, John, and Jörg Weber. "Financial literacy, present bias, and alternative mortgage products." *Journal of Banking & Finance* 78 (2017): 58-83. <https://doi.org/10.1016/j.jbankfin.2017.01.022>
- Green, Shelby. "Will Financial Literacy Impact Students' Financial Decisions?." (2013). <https://diginole.lib.fsu.edu/islandora/object/fsu:204568/datastream/PDF/view>

- Gross, Karen, Joanne Ingham, and Richard Matasar. "Strong palliative, but not a panacea: Results of an experiment teaching students about financial literacy." *Journal of Student Financial Aid* 35, no. 2 (2005): 7-26. <https://doi.org/10.55504/0884-9153.1071>
- Huston, Sandra J. "Measuring financial literacy." *Journal of consumer affairs* 44, no. 2 (2010): 296-316. <https://doi.org/10.1111/j.1745-6606.2010.01170.x>
- Karakurum-Ozdemir, Kamer, Melike Kokkizil, and Gokce Uysal. "Financial literacy in developing countries." *Social Indicators Research* 143, no. 1 (2019): 325-353. <https://doi.org/10.1007/s11205-018-1952-x>
- Klapper, Leora, Annamaria Lusardi, and Peter Van Oudheusden. "Financial literacy around the world." *World Bank. Washington DC: World Bank* (2015). https://www.cssf.lu/wp-content/uploads/S_P_Survey.pdf
- Krishna, A., R. Rofaida, and M. Sari. "Analysis of Financial Literacy Levels among Students and Influencing Factors (Survey on Indonesian Education University Students)." In *Proceedings of the 4th International Conference on Teacher Education Join Conference UPI & UPSI Bandung. Bandung, Indonesia*. 2010.
- Kumar, Suresh, Christalita Watung, Josephine Eunike, and Lusianna Liunata. "The Influence of financial literacy towards financial behavior and its implication on financial decisions: A survey of President University students in Cikarang-Bekasi." *Firm Journal of Management Studies* 2, no. 1 (2017): 169-179. <http://dx.doi.org/10.33021/firm.v2i1.158>
- Lusardi, Annamaria, and Olivia S. Mitchell. "Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth." *Journal of monetary Economics* 54, no. 1 (2007): 205-224. <https://doi.org/10.1016/j.jmoneco.2006.12.001>
- Lusardi, Annamaria, and Olivia S. Mitchell. "Financial literacy around the world: an overview." *Journal of pension economics & finance* 10, no. 4 (2011): 497-508. <https://doi.org/10.1017/S1474747211000448>
- Lusardi, Annamaria, and Olivia S. Mitchell. "The economic importance of financial literacy: Theory and evidence." *Journal of economic literature* 52, no. 1 (2014): 5-44. [10.1257/jel.52.1.5](https://doi.org/10.1257/jel.52.1.5)
- Lusardi, Annamaria. "Financial literacy and the need for financial education: evidence and implications." *Swiss Journal of Economics and Statistics* 155, no. 1 (2019): 1-8. <https://doi.org/10.1186/s41937-019-0027-5>
- Lusardi, Annamaria. "Saving and the effectiveness of financial education." (2003). https://repository.upenn.edu/cgi/viewcontent.cgi?article=1431&context=prc_papers
- Mandell, Lewis, and Linda Schmid Klein. "The impact of financial literacy education on subsequent financial behavior." *Journal of Financial Counseling and Planning* 20, no. 1 (2009): 15-22. https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2224231_code1099219.pdf?abstractid=2224231&mirid=1&type=2
- Mandell, Lewis. "Financial literacy: Does it matter." *Buffalo, NY: University of Buffalo. April* (2005).
- Mandell, Lewis. *Financial literacy: Improving education: Results of the 2006 national Jump \$ tart Coalition survey*. Jump \$ tart Coalition for Personal Financial Literacy, 2006.

- Otoritas Jasa Keuangan (OJK). 2013, National Strategy of Financial Literacy of Indonesia, Financial Services Authority (2013): https://sikapiuangmu.ojk.go.id/FrontEnd/images/FileDownload/184_OJK_NATIONAL%20STRATEGY%20FOR%20FINANCIAL%20LITERACY.pdf
- Perry, Vanessa G., and Marlene D. Morris. "Who is in control? The role of self-perception, knowledge, and income in explaining consumer financial behavior." *Journal of consumer affairs* 39, no. 2 (2005): 299-313. <https://doi.org/10.1111/j.1745-6606.2005.00016.x>
- Potrich, Ani Caroline Grigion, Kelmara Mendes Vieira, and Wesley Mendes-Da-Silva. "Development of a financial literacy model for university students." *Management Research Review* 39, no. 3 (2016): 356-376. <https://doi.org/10.1108/MRR-06-2014-0143>
- Remund, David L. "Financial literacy explicated: The case for a clearer definition in an increasingly complex economy." *Journal of consumer affairs* 44, no. 2 (2010): 276-295. <https://doi.org/10.1111/j.1745-6606.2010.01169.x>
- Rieger, Marc Oliver. "How to measure financial literacy?." *Journal of Risk and Financial Management* 13, no. 12 (2020): 324. <https://doi.org/10.3390/jrfm13120324>
- Sabri, Mohamad Fazli. *Pathways to financial success: Determinants of financial literacy and financial well-being among young adults*. Iowa State University, 2011. <https://www.proquest.com/openview/993b24f62f2502c53a36285979951b07/1?pq-origsite=gscholar&cbl=18750>
- Sadalia, I., and N. A. Butar-Butar. "Financial Behavior and Performance on Small and Medium Enterprises in Coastal Area of Medan City." In *IOP Conference Series: Materials Science and Engineering*, vol. 180, no. 1, p. 012257. IOP Publishing, 2017. <https://iopscience.iop.org/article/10.1088/1757-899X/180/1/012257/pdf>
- Shim, Soyeon, Jing J. Xiao, Bonnie L. Barber, and Angela C. Lyons. "Pathways to life success: A conceptual model of financial well-being for young adults." *Journal of Applied Developmental Psychology* 30, no. 6 (2009): 708-723. <https://doi.org/10.1016/j.appdev.2009.02.003>
- Van Rooij, Maarten, Annamaria Lusardi, and Rob Alessie. "Financial literacy and stock market participation." *Journal of Financial Economics* 101, no. 2 (2011): 449-472. <https://doi.org/10.1016/j.jfineco.2011.03.006>
- Vieira, Elisabete Fatima Simoes. "What do we know about financial literacy? A literature review." *Marmara Journal of European Studies* 20, no. 2 (2012): 23-38. https://web.archive.org/web/20200325181842id_/https://dergipark.org.tr/tr/download/article-file/1308
- Wagner, Jamie Frances. *An analysis of the effects of financial education on financial literacy and financial behaviors*. The University of Nebraska-Lincoln, 2015. <https://www.proquest.com/openview/9adca4785f9a19d4af3a74559bc4dcb6/1?pq-origsite=gscholar&cbl=18750>
- Willis, Lauren E. "Against financial-literacy education." *Iowa L. Rev.* 94 (2008): 197-285.
- Xiao, Jing Jian. "Applying behavior theories to financial behavior." In *Handbook of consumer finance research*, pp. 69-81. Springer, New York, NY, 2008. https://doi.org/10.1007/978-0-387-75734-6_5