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Saving Habits of High-School Students Associated with Their Future Retirement As Financial Literacy Topics

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Abstract

A wide variety of studies have pointed to the relevance of saving at an early age and how an adequate financial culture can generate efficient resource management, meeting the needs of the individual in the future during his or her old age. Derived from this reflection, the purpose of this study is to describe the current state of financial literacy presented by high school students in the Mexican Southeast and how this impacts their retirement savings habits. A non-probabilistic sample of 343 students was analyzed and a test designed by BANAMEX-UNAM (2008) was used to evaluate saving topics, knowledge about retirement, budgets, habits about the use and origin of their resources. Among the most important findings highlights that, in very few cases, savings refer to future projections and a large part of the population analyzed is unaware of basic concepts such as retirement age and institutions for retirement. In addition, evidence was obtained indicating that there is no dependence between gender and information on pensions, in terms of having heard about pensions, understanding pensions and knowing the institution and the age of retirement. Finally, we suggest to carry out a research to compare the level of financial literacy in young Mexicans and its relationship with parental banking, preferably in the southeast and other regions of Mexico.

Keywords: financial literacy, retirement savings, budgets, retirement.

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1. Introduction

The financial literacy term has been approached from different perspectives at the global level in response to a growing need to educate people about it. Given the conditions of social development and the collapse of social security systems, pointing out that economic sustainability will depend largely on citizens and not on government support.

According to the Organization for Economic Cooperation and Development (OECD) cited in Atkinson et al. (2015), education for long-term savings and retirement is a branch that seeks to provide consumers with tools, knowledge and skills that enable them to accumulate the resources to meet their long-term needs, such as pension, education, household support, funeral expenses, among others.

In 2010, Houston found that 72 % of studies analyzing the concept do not propose a specific definition (Warmath, Zimmerman, 2019). However, the commonly accepted OECD definition explains how financial education is "the process by which consumers and financial investors obtain a better understanding of different financial products, their risks and benefits, and, through information or instruction, they develop skills that allow them to make better decisions, which leads to greater economic well-being" (OECD, 2015).

Undoubtedly, the OECD is the institution worldwide that has shown the greatest concern to develop financial education at different levels in all countries so, in 2012, test questions to measure the level of financial literacy were added to PISA (Programme for International Students Assesment) obtaining poor results and very low levels, even in developed countries (Lobos, Lobos, 2018; Lusardi, 2015; Totenhagen et al., 2015).

Evidence points to widespread ignorance of basic knowledge and financial terms such as inflation, budgets, credit and debt, interest rate, savings and risk. Unfortunately, in its application in Mexico, the variables corresponding to financial education were eliminated, in as consequence, there is no data on statistics in our country of knowledge in our students and there is no mechanism to assess the financial capacities of children.

According to Lusardi, (2015) in the world, only 33 % of adults have adequate financial education. In Sweden, Norway and Denmark this figure is 71 %, in Canada 68 % and in the United Kingdom 67 %. It is important to note that in most countries, according to various studies with different objectives, women have been found to have less knowledge than men.

In the analysis generated by the OECD in 2013, *Financial Education in Latin America and the Caribbean*, it was found that although the region has shown sustained growth, the levels of poverty and inequality remain high and there is still financial exclusion, affecting future economic and social development. A high human poverty rate prevails with 31.4 % and 12.3 % of people in extreme poverty (García et al., 2013) (See Figure 1: GDP per capita and poverty level in Latin American and the Caribbean).

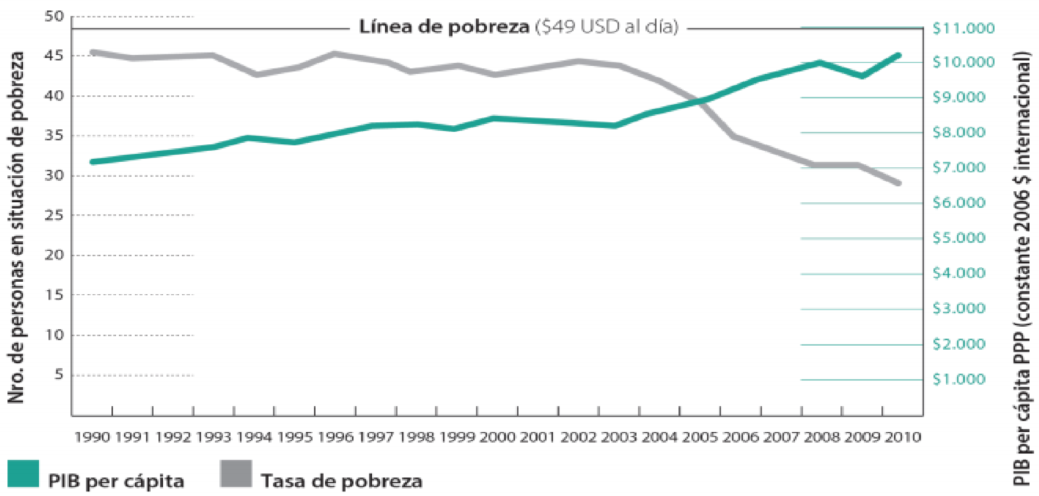

Fig. 1. GDP (PIB) per capita and poverty levels Latin America and Caribe (García et al., 2013)

In the above-mentioned context, it is a priority for countries and policy makers to focus efforts on reducing social inequality and in this search, financial education could be able to develop the necessary skills if implemented from the basic levels, considering at the same time the high school dropout rates in Latin American countries.

Observing the results obtained in the PISA test and its outcome in high school students, today 59 nations in the world are implementing strategies using the principles developed by the OECD, detecting at the local level challenges in the implementation, since several programs have been developed without identifying the needs of the population, target audiences and potential achievements, all leading to ineffective implementation.

According to the standards proposed by the OECD for the creation of strategies for the implementation of Financial Education, there are four fundamental elements to make it effective: i) the development of a diagnosis on the current state of financial education in the country and the barriers it faces; ii) the establishment of institutional arrangements to carry out the creation and implementation of the strategy; iii) the definition of targets and indicators for the evaluation of the national strategy; and iv) a framework of actions to ensure that the provision of financial education is carried out effectively and innovatively in the population (SHCP, 2017).

According to Rudeloff (2019) parents are the main actors in the transmission of financial knowledge to their children and habits, skills and attitudes will be directly related to their own knowledge and financial literacy. On the other hand, in the analysis carried out by Totenhagen et al. (2015), despite the fact that no precise age has been defined at which financial education must begin and the models have not been standardized, states that basic knowledge must be introduced to children before secondary education; that is, teach children basic concepts such as money, savings and other concepts associated with finance, allowing them to participate in a real environment of daily life and introducing them from to financial world implications at an early age.

Similar way, Whitebread and Bingham (2013) point out that good habits and financial behavior are learned from an early age and highlight the importance of financial education from childhood, seeking to make it a trigger for informed decision-making, demand for quality services, market innovation and efficient risk management.

The literature review concludes that among the positive impacts of an appropriate financial education is the reduction of individuals' over-indebtedness and the incidence of people being subjected to fraudulent and risky practices. At the same time, when savings are generated in the formal sector, there are more resources for the financing of productive projects.

Financial services have expanded around the world and this is the reason why governments have shown concern that many consumers do not have enough information and literacy to make the right decisions. This has resulted in voluntary programs in which public participation is very low (Bruhn et al., 2014).

On the other hand, from the educational point of view, the study conducted by Villagómez and Hidalgo (2017) in Mexican high school students, found a positive correlation between the level of mathematical ability and financial literacy. These abilities turn out to be, skills that stimulate logical thinking and the ability to solve problems, positively affecting the ability to plan for the future. In this study, it was concluded that only 10 % of young people of age have the necessary skills to make financial decisions.

In 2015, the average performance set by the OECD was 490 points in mathematics, obtaining the following results: Singapore (564) obtained the highest average of all participating countries, with 74 points above the OECD average; followed by China (548), Macau (544) and Taipei (542). Mexico obtained (408) and it can be seen that our country is above Costa Rica (400), Colombia (390), Peru (387), Brazil (377) and the Dominican Republic (328), as well as the AL average (391); however, it is below the average performance of Chile (423) and Uruguay (418).

In the specific case of the Mexican context, – derived from the change in pension systems in 1996 that replace defined benefit and distribution systems with defined contributions systems and individual accounts-, a necessary change is beginning to emerge that forces the population to take greater responsibility for the planning of their retirement, transferring to the population decisions that require greater knowledge, for example, on interest rates, compound interest, inflation and risk. (Briseño et al., 2019; Villagómez, 2016).

In 2017 the Ministry of Finance and Public Credit (SHCP) carried out a very significant proposal in support of the population called "National Financial Education Strategy", which had as main purpose to help citizens improve their financial management and achieve greater inclusion of the population in the access and use of financial services. One of the main axes of the above-mentioned strategy is to promote the implementation of financial education in basic education curricula in México, after concluding that long-term policies were necessary to complement efforts and generalize the responsible use of the Mexican population's finances.

The primary objective of the Committee on Financial Education is to contribute to ensuring that the entire population has the necessary knowledge to make efficient and responsible use of financial products and services (García et al., 2013). Among the objectives that were raised, a better use of the personal and household budget and promote formal savings through the use of financial products, financial education in schools and financial services consumer training.

According to the 2018 National Financial Inclusion Survey, there is under-utilization and widespread distrust of financial products and services in our country, based on the following results: 91.7 % of the adult population has never taken any courses on how to save, how to make a budget or on the responsible use of credit, 65.1 % of adults do not have a budget or record of their income and expenses, 31.7 % do not have any financial product, 21.5 % of all adults in Mexico do not save, 15.2 % do so formally and more than double, 31.4 %, do so only informally. 56 % of adults do not have an AFORE (retirement savings account) and only 525 thousand adults have a private pension plan. The use of cash predominates with a wide margin (60.9 %) (INEGI-ENIF, 2018).

Based on the above, it could be concluded that the perceived lack of sufficient income in families, distrust of financial institutions and membership of the informal economy – 60 % of the working population in Mexico – are possible causes for this behavior, in addition to an obvious lack of financial education.

Bruhn, Ibarra and McKenzie (2014) conclude after a study conducted in Mexico City, that the main reason why people do not attend financial education courses is that they do not understand the benefits and do not believe it necessary to acquire skills in the subject. With these arguments, we can say Financial Education is defined as the set of actions necessary for the population to acquire skills and knowledge that allow them to manage and plan their personal finances, as well as making optimal use of the products and services offered by the financial system for the benefit of their personal, family, professional and business interests. To do this, it must be ensured that population is able to plan and manage its finances in the short, medium and long term; it is also important that they know what each financial product and service is for, and to make sure they are able to identify which ones they need at each stage of their life according to their context. This knowledge will enable them to assess and compare the supply of existing financial products and services and to understand risks, benefits, rights and obligations associated with contracting these services, making financial decisions efficiently.

Based on this definition, the present study seeks to measure the level of financial education in the specific topics of saving and saving for retirement specifically in high school students and to identify the traits or characteristics that help to understand the saving habits of young people. Thus, we may ask:

1.1. Question research: What is the financial literacy level in topics such as saving for retirement and pensions in high school students? And if there are differences by gender? It's also important to know if there is a difference among genders about saving habits, retirement age, and institutions for retirement.

2. Literature review

In 1875, Japan established the postal savings system seeking to spread the benefits of saving among the population. From then until after World War II, work continued on the consolidation of the banking sector and savings systems (Yuji, 1989). In the years after the WWII, the world underwent a huge transformation in terms of disposable income and wealth. Financial products and services became more diverse, offering different alternatives to the public as well as more complex products and with this, access to mortgages and investments was generalized but at the same time, many social groups were excluded from access to the financial world; revolving credit appeared and instead of just keeping the money in the bank, people could invest in funds. Unfortunately, the financial skills and aptitudes of the consumer did not grow at the same pace (Ryan et al., 2011).

Modigliani and Brumberg (1954) and Friedman (1957) cited by Lusardi and Mitchell (2014) consider that the consumer organizes saving and spending patterns to generate a profit throughout life and such organization assumes that individuals have the ability to formulate and execute saving plans and possess the experience and knowledge about the environment in a financial market. Between 1957 and 1985, with the purpose of educating the population on general issues involving financial decision-making in the personal sphere, consumer education was established in 29 states in the United States and personal finance training in 40.

Something similar happened in Japan: they established the Central Council for Savings Promotion (1952), the Savings Promotion Department of Japan (1946) and the Savings Promotion Center of the Ministry of Finance (1957). As a result, the savings rate increased, being higher compared with international standards. This might be related to their working culture and the agricultural heritage of storing crops in anticipation of future times of crisis. Furthermore, evidence suggests that Japanese people reason for saving is the expectation of giving their children a better standard of living. In 1989, life expectancy in Japan was one of the longest in the world, which could also be an explanatory factor for the high savings rates in the country (Yuji, 1989).

In the 1990s, it was found that in the United States, the majority of the population saves very little compared to what they need to maintain their lifestyle at the time of retirement. In 1995, Douglas Bernheim, professor of economics at Stanford University -one of the pioneers on financial literacy studies-, noted that government policies and research had until then underestimated the importance of financial literacy in explaining savings and their behaviors and led, from the point of view of savings, a study assuming that increased financial literacy increases the likelihood of people generating savings.

Systematic evidence was found in regards to behavioral effects after including financial topics in the school curricula. At the same time, it was concluded that education can be a powerful tool to stimulate personal savings and that increased financial literacy is needed to raise the frequency and number of people who save and accumulate wealth during their adult lives.

The 401(k) retirement plan is very popular in the United States, however, many employees decide to contribute very little or nothing. A possible reason for this could be rooted in a lack of training and skills or guidance to make plans. Therefore, education could provide the right tools and train citizens on the importance of taking responsibility for financial safety for their retirement (Bernheim, 1998).

Since 1997, the Jump$tart Coalition, a non-profit organization in the United States, has conducted surveys on high school students, finding a significant lack of financial literacy among young people. Despite the fact that, over time, financial markets have become more accessible and offer more diversity of products, users need to be informed about their complexity and the risks associated with financial decision-making.

Chen and Volpe (1998) evaluated personal financial education in students. Based on previous studies that had determined that Americans have low levels of knowledge of personal finance, the authors explore the evidence on student literacy and analyze why some have more knowledge than others and what level of competence they have. Evidence was found that participants with less knowledge tend to make the wrong decisions about savings, lending and investment. They concluded that when individuals are not able to manage their finances, this becomes a major problem for the society and the highlight the importance of providing more education in this field so people can make more informed decisions.

Unlike literacy in general, the concept of financial literacy does not have a single definition but covers different perspectives. To measure it, most researchers and academics have used surveys applied to different groups. The most widely used tool is known as The Big Three, developed by Lusardi & Mitchell in 2005. Academic work has concluded that financial literacy precedes healthy financial behavior. Adams and Rau in 2011, cited by Fernandez and Netmeyer (2014) conclude that "Possibly, one of the most robust findings in the literature is that financial literacy plays a fundamental role in retirement planning".

Recent analysis about financial literacy on the last years show evidence between lower financial literacy and the lower to own a bank account or maintain a retirement plan. At the same time, these individuals tend to have higher levels of indebtedness and chose high-cost financing. The behaviors presented by individuals regarding their level of literacy impact on the quality and quantity of financial products in the market (Gale et al., 2012). It is important to consider that in developing countries there is a consumption trend that seeks to mimic the way that populations in developed countries do and this generates an increase in their propensity to spend rather than save.

Thus, in various contemporary empirical studies, the topic of financial education is analyzed and discussed, since it can become a fundamental factor in the performance of economies worldwide. Lusardi and Mitchell (2014) conducted a study about previous research on financial knowledge as a part of human capital and its implications for well-being. They also had the objective of analyzing how well households are prepared to make complex financial decisions, concluding that it is necessary to encourage the acquisition of basic financial skills such as maintaining a budget, understanding credit and investment and the advantages of the banking system, given that well-informed consumers will have a better defense against the purchase of unnecessary and costly products and services.

In 2015, Fedorova, Nekhaenko and Dovzhenko conducted an analysis of the Russian population and diagnosed that a higher level of financial literacy contributes to more active participation in financial markets, the individual improvement and prosperity of the economy and society as a whole. At the same time, Totenhagen, Casper, Faber et al. (2015) through an extensive documentary review conclude on the urgent need to identify best practices and methods of effective financial education through the establishment of standards, the knowledge of specialist instructors, parental involvement, early education and the inclusion of financial education in basic education.

From the same perspective, Lusardi (2015) analyzed the results of the PISA test and states that financial literacy can play an important role in explaining inequality in wealth. Furthermore, she argues that financial education from high school is a factor that can increase financial security at the time of retirement, since, by having greater knowledge, individuals will tend to invest in assets and plan for the future, thus becoming an essential skill for the 21st century.

Breitbach and Walstad (2016) proposed that understanding the characteristics of individuals regarding their financial decisions and determining their level of literacy in the field, should be a matter of interest for researchers and governments aiming to develop education programs that improve conditions for young adults, resulting in more informed decision-making, less costly and with less adverse consequences for their long-term well-being.

Berman, Tran, Lynch and Zauberman (2016) analyze how consumers budget their financial future and the possibilities for financial slack from the point of view of the expense neglect and also considering the problem of estimating expenditure based on the possibility of income increase rather than consumption decrease.

Kadoya, Khan, Hamada, et al. (2018) suggest that financial literacy can reduce levels of anxiety in adulthood (40 years – old age) under the assumption that people with greater knowledge in the field can make better decisions, have a better income and thus achieve a greater accumulation of assets that allow them to have greater financial tranquility in old age.

From another perspective, Brown, Henchoz and Spycher, (2018) relate the magnitude and effect that culture has on financial literacy among young people and describe the systematic variations in different dimensions of culture towards financial management, such as financial socialization, rules and attitudes about money in French and German speaking students on the border with Switzerland.

Cruz-Barba (2018) analyzes in a Mexican population the empirical evidence of financial literacy in children of basic education and raises the need to implement a formal financial education through a teaching-learning process in order to achieve economic understanding. Also, the investigation points out the possible negative impact of the financial performance of children as a consequence of their parent's little or no economic-financial training.

According to Amagir, Groot, Maasen and Wilschut (2018), the evidence has shown that the financial education programs included in the school curricula become a key factor to improve the knowledge and attitude towards finance in children and young people, mainly when they are designed as experiential learning. As part of a comprehensive education, they adopt the term "economic citizenship" by referring to people who achieve greater potential within society by having financial skills and better decision-making power. Unfortunately, it was found that the measurement of the effects on the implementation of the above-mentioned programs goes back only 10 years.

Recently, Rudeloff (2019) based on young people's current early access to financial products and services, investigates how informal sources influence adolescent financial literacy and states that parental learning has a direct influence on student scores in knowledge assessments and suggests greater research into what strategies parents use best to teach finances to their children.

In Italy, Cucinelli, Trivellato and Zenga (2019) describe the role of local factors associated with financial literacy among Italian adults and state that not only socio-economic and socio-demographic conditions have an impact on financial literacy but also the specific characteristics of the regional context have important implications. They also stress the need to incorporate finance into educational programs.

Warmath and Zimmerman (2019) express the need to amplify financial literacy studies to the dimensions of three domains of knowledge: financial skills, self-efficacy and explicit knowledge. Through the study of the variables, the valid ratio of the combination of the three indicators as formative of the financial literacy scale was verified. The research concludes on the need to explore existing opportunities in research, policy modification and programs to create the literacy required for better financial well-being.

Muñoz-Murillo, Álvarez-Franco and Restrepo-Tobón (2020) showed that individuals with greater cognitive abilities also have better financial skills. In another perspective, Panos and Wilson (2020) through a documentary review verified that financial technology or FinTech has the potential to improve financial capabilities, simplify personal finance and streamline planning processes. They also noted the need to visualize and generalize access for the financial inclusion of society.

So, the OECD has taken up financial literacy as a life skill, defining it as an aptitude that should be introduced into the everyday life of young people at an early age, as they will find in their path more complex financial products and services and perhaps greater risks than those that their parents faced at the time (Villagómez, 2016).

In studies applied to the Mexican context, in 2013 Bruhn, Lara-Ibarra & McKenzie conducted a study on the behavior of the population in Mexico City regarding the financial literacy courses given by a prestigious institution on savings issues, withdrawal and use of credit and detected that there is little or no interest among the public as they apparently do not receive the benefits of receiving such training. They add that the only way for people to decide to attend such courses was through monetary incentives given in exchange for their participation. At the same time, they highlight that after having taken the courses, it was shown that financial knowledge increased by 9 %.

According to the OECD/INFE survey conducted by Banco de México in 2017, 92 % of Mexican adults were able to answer a question that measures understanding of simple interest, however, only 3 % were able to answer a question about compound interest. It was also observed that the percentage of correct responses from Mexican adults is below the average of the other G20 countries participating in the OECD measurement exercises. According to the OECD/INFE measurement, there are lags in the attitudes of Mexican adults towards savings compared to other countries (SHCP, 2017).

The results show that about 36 % of the adult population in Mexico "prefers to live to the day and does not care about tomorrow"; 48 % consider that "they prefer to save for the future instead of spending today" and only 32 % consider that "the money is not to be spent". Regarding the measurement of financial behavior, Mexico ranked 13 out of 17 economies involved in the analysis. Regarding the use of savings, 41 % of the surveyed population wants to use their savings in current expenditure. 38 % want to allocate part of the resources for their old age and 39 % for emergencies (SHCP, 2017).

3. Design and Methodology

The objective of the work focuses to assess the level of financial literacy in high school students in relation to their retirement savings habits, in addition, to verify if there are differences by gender. The research has a non-experimental design that is approached from the hypothetical-deductive paradigm, which does not seek to manipulate independent variables (*X*) to modify the results of dependent variables (*Y*). The study is cross-sectional, of descriptive type and of difference of means. At first, the characteristics associated with the demographic profile of the surveyed population are described and then the statistical analysis is developed for the comparison of the hypothesis of gender difference, based on the information obtained.

3.1. Population and sample: The population for this study was 343 high school students enrolled in a public sector institution in the city of Veracruz corresponding to the Mexican southeast. The sample was not probabilistic by self-determination since only students who agreed to participate were allowed to be surveyed. The anonymity and confidentiality of the participants and the data obtained were guaranteed, as they are for the purpose of academic research.

3.2. Instrument: To obtain the information, we used the test developed by BANAMEX-UNAM (2008), referenced in the work of Moreno-García, et al. (2017), (see annex 1). Additionally, the savings and budget variables were adapted to the language of the students. For the pension variable, four indicators were designed for its measurement.

3.3. Measurement procedure: The database is processed using IBM SPSS Statistics v23 software. To describe the characteristics of the sociodemographic profile, the frequencies obtained for each item are analyzed and for the hypothesis contrast is performed using the non-parametric procedure of contingency tables and the Chi^2 statistic.

3.4. Analysis and interpretation of information

In relation to the socio-demographic profile of students, 51 % (175 cases) are men and 49 % are women (168 cases). About the age, 32.4 % (111 cases) are 14 years old, 28.9 % (99 cases) are 13 years old and 26.8 % (92 cases) are 12 years old. In addition, it was reported that 83.7 % (287 cases) of the participants still live with their parents and 72.3 % (247 cases) receive financial support from them, while only 7.9 % (27 cases) get additional resources derived from a job. About the work they do, 73.8 % (253 cases) do not work, 8.2 % (28 cases) are employed as family helpers and only 5 % (17 cases) are self-employed. Regarding the saving habits of students, table 1 shows the following results:

Table 1. Savings indicators

What does saving mean?			
Indicator	Frecuency	Percentaje	% ∑
Saving Money	188	54.8	54.8
Have money for emergencies	78	22.7	77.6
Something for the future	28	8.2	85.7
Not spending	6	1.7	87.5
Having money available	42	12.2	99.7
I do not know	1	.3	100.0
Total	343	100.0	
Savings habit			
YES	269	78.4	78.4
NO	74	21.6	100.0
Total	343	100.0	
Savings Frequecy			
Indicator	Frecuency	Percentaje	% ∑
Daily	117	34.1	34.1
Once a week	54	15.7	49.9
Sometimes	98	28.6	78.4
N/A	74	21.6	100.0
Total	343	100.0	

Source: own elaboration

As we can see, in Table 1, 54.8 % of respondents understand the concept of saving as "saving money", 22.7 % consider that saving means having money for emergencies however, highlights that only 8.2 % are aware that saving means securing something for the future. 21.6 % of respondents do not have the habit of saving, 28.6 % save occasionally and 15.7 % do it once a week.

Table 2. Reasons for saving

Why do you save money?			
Indicator	Frequency	Percentage	% ∑
Savings	57	16.6	16.6
Entertainment	37	10.8	27.4
School expenses	45	13.1	40.5
To buy something you like	107	31.2	71.7
Other	23	6.7	78.4
N/A	74	21.6	100.0
Total	343	100.0	
Decides to save			
Indicator	Frequency	Percentage	%cumm
You save what is left of your budget	148	43.1	43.1
You save when you wish to buy something	67	19.5	62.7
You spare a certain amount	54	15.7	78.4
N/A	74	21.6	100.0
Total	343	100.0	
Reason why you would save			
Indicator	Frecuency	Percentage	% ∑
Emergencies	26	7.6	7.6
Education	11	3.2	10.8
Pesonal expenses	27	7.9	18.7
Savings	3	.9	19.5
To go out with friends	4	1.2	20.7
Vacations	3	.9	21.6
N/A	269	78.4	100.0
Total	343	100.0	

Source: own elaboration

The main results on the reason *why you save* refer to 31.2 % that is to buy something you like and only 16.6 % is to save it. On the question of whether you decide to save, 43.1 % say that they keep something only if they have enough, in addition 19.5 % says that they save when they want to buy or do something and 15.7 % says that they save and for this they dedicate an amount.

In the question that is reconsidered on the reasons why it would save the large percentage (78.4 %) points out the option of does not apply, only 7.9 % for personal expenses and 7.6 % for emergencies, which suggests that there is no clear provision for a reason to save them in the short term.

Table 3. Knowledge about money and budget

What do you use your money for?			
Valid	Frequency	Percentage	% ∑
You do not have extra money	26	7.6	7.6
You save it	213	62.1	69.7

You buy things you like	104	30.3	100.0
Total	343	100.0	
What is a Budget?			
Valid	Frequency	Percentage	% ∑
To plan how to distribute money	134	39.1	39.1
Organize the money you have	143	41.7	80.8
I do not know	66	19.2	100.0
Total	343	100.0	
Do you organize your money?			
Valid	Frequency	Percentage	% ∑
YES	132	38.5	38.5
NO	211	61.5	100.0
Total	343	100.0	

Source: own elaboration

The results in Table 3 show that 62.1 % say they are saving, followed by 30.3 % say they are going to buy things they like. However, when asked specifically about whether they organize the money, 61.5 % say no. Apparently these results contradict the percentage of people who said they save it, which evidently brings with it a decision to do something, and that should definitely start from an organization or administration of your personal finances.

About the knowledge and understanding about budgets, 41.7 % say that it serves to organize what to spend the money you have, followed by 39.1 % that defines it as to plan how to distribute the money and finally 19.2 % say they have no idea what a budget is.

Table 4 shows the issue of pensions, whether they have heard of this term, if they understand what a pension is and if they know the institutions for retirement and the age for doing so.

Table 4. Knowledge about pensions

Have you Heard about pensions?			
Valid	Frequency	Percentage	% ∑
YES	245	71.4	71.4
NO	98	28.6	100.0
Total	343	100.0	
Do you understand pension?			
Valid	Frequency	Percentage	% ∑
YES	229	66.8	66.8
NO	114	33.2	100.0
Total	343	100.0	
Do you know the institutions to pension?			
Valid	Frequency	Percentage	% ∑
IMSS	46	13.4	13.4
SEP	65	19.0	32.4
INFONAVIT	45	13.1	45.5
ISSSTE	33	9.6	55.1
I do not know the institution	154	44.9	100.0
Total	343	100.0	
Age for retirement			
Válido	Frequency	Percentage	% ∑
65 years	134	39.1	39.1
50 years	38	11.1	50.1

80 years	26	7.6	57.7
I do not know the age	145	42.3	100.0
Total	343	100.0	

Source: Own elaboration

The data shown in Table 4 indicates that 71.4 % of respondents have heard about retirement pensions, but only 66.8 % understand the concept and 42.3 % do not know the age at which they can retire. These data provide an opportunity to promote greater dissemination of the topic among university students.

Up to this point, the descriptive results, which have allowed us to visualize the opinion expressed by the students surveyed. Below the tests for the contrasting hypotheses that are sought to contrast.

Non-parametric evidence for the research hypothesis that states that: Hi: There is a dependence between information related to occupational pensions and gender. For this directional hypothesis are broken down into the different variables; a) If they have heard of pensions, b) if they understand about pensions, c) the type of institution to be pensioned and d) the retirement age to be pensioned.

Hence the test for contrast is performed below: Ho_1: There is no dependency between information about having heard about pensions and gender. Ha_1: There is a dependency between information about having heard about pensions and gender

Table 5. Contingency table and chi-squared (χ^2) test gender and having heard about pensions

Heard about pensions	**Male**	**Female**	**Total**
Yes	36.7	34.7	71.4
NO	14.3	14.3	28.6
Total	51.0	49.0	100.0
Chi² Pearson (*1 gl*)	0.057		.
Significance	0.811		

Source: own elaboration

Table 5 shows that 71.4 % of respondents have heard about pensions, this percentage is higher in men than in women. In relation to those who responded that NO, the percentage of men and women is similar. The value in tables of *chi-squared (χ^2) test* with *df*=1 and an alpha of =0.05 is equal to 3.8415. Since the calculated value of *chi-squared (χ^2) test* is 0.057 is less than the critical point (3.8415) it can be stated that the test value is within the Ho_1 acceptance zone.

With these data we have enough evidence to accept Ho_1, that is there is no dependency between gender and information related to occupational pensions as far as listening about pensions. In addition, the significance value is greater than the level of significance established for this research 0.05.

Regarding to the association between gender and related information in terms of understanding what a pension is, it is established that: Ho_2: There is no gender dependency and information related to occupational pensions in terms of understanding what a pension is, and Hi_2: There is a dependency between gender and information related to occupational pensions in terms of understanding what a pension is.

Table 6. Contingency table and chi-squared (χ^2) test for gender about understanding pensions (%)

Do you understand pensions?	**Yes**	**No**	**Total**
Male	34.4	16.6	51.0
Female	32.4	16.6	49.0
Total	66.8	33.2	100.0
Pearson *Chi²* (*1 gl*)	.071		
Significance	.790		

Source: Own elaboration

Table 6 shows that 51.0 % of those surveyed understand that they are pensions, this percentage is higher in men (34.4 %) than in women (32.4 %) and those who did not understand the term "pensions" in both cases is very similar (16.6 %). The value in tables of chi-squared (χ^2) test with *df* = 1 and an alpha of = 0.05 is equal to 3.8415 and as the calculated value of χ^2 is 0.071 is less than the critical point (3.8415), then it can be stated that the test value is within the Ho acceptance zone.

Therefore, there is enough evidence to accept Ho, that is there is no dependency between gender and information related to occupational pensions in terms of understanding what pensions are. In addition, the significance value is greater than the level of significance established for this research (0.05). About the association between gender and related information regarding the institutions in which you can retire, it is stated that:

Ho_3: There is no gender dependency and information related to occupational pensions in terms of knowing the institution for retirement, and Hi_3: There is a dependency between gender and information related to occupational pensions in terms of knowing the institution for retirement.

Table 7. Contingency table and chi-squared (χ^2) test gender and institutions for retirement (%)

Gender	IMSS	SEP	INFONAVIT	ISSSTE	I don't know	Total
Male	8.7	10.5	7.0	5.2	19.5	51.0
Female	4.7	8.5	6.1	4.4	25.4	49.0
Total	13.4	19.0	13.1	9.6	44.9	100.0
Pearson *Chi²* (*4 gl*)		7.945				
Significance	0.094					

Source: Own elaboration

Table 7 shows that 44.9 % of the respondents do not know the Official Institutions by which a person can retire. This percentage is lower in men (19.5 %) than in women (25.4 %). The value in *Chi²* tables with *df* = 4 and an alpha of = 0.05 is equal to 9.4877. As the calculated value of *Chi²* is 7,945 is less than the critical value (9.4877) so it can be said that the test value is within the Ho_3 acceptance zone. With this data we have enough evidence to accept Ho_3, that is, there is no dependency between gender and information related to occupational pensions in terms of knowing the Official Institutions by which a person can be pensioned. In addition, the significance value is greater than the level of significance established for this research (0.05).

In relation to the association between gender and related information on retirement age the hypothesis states: Ho_4: There is no dependency between gender and information related to occupational pensions in terms of knowing the age of retirement. Hi 4: There is a gender dependency and information related to occupational pensions in terms of knowing the age of retirement.

Table 8. Contingency table and chi-squared (χ^2) test gender and retirement age (%)

	Retirement age (%)				
Gender	65 years	50 years	80 years	I don't know	Total
Male	18.7	6.4	3.2	22.7	51.0
Female	20.4	4.7	4.4	19.5	49.0
Total	39.1	11.1	7.6	42.3	100.0
Pearson *Chi²* (*3 gl*)		2.524			
Significance	0. 471				

Source: Own elaboration

Table 8 shows that 22.7 % of respondents do not know the age at which a person can retire, this percentage is higher in men (22.7 %) than in women (19.5 %), it is also higher than the percentage of men who have not heard of pensions. The value in *chi-squared (χ^2) test* of tables with values of *df* = 3 and α = 0.05 the value is equal to 7.8147. Since the calculated value of *chi-squared*

(χ^2) test is 2,524 is less than the critical value (7.8147) it can be stated that the test value is within the Ho acceptance zone, hence there is enough evidence to accept Ho, that is there is no dependency between gender and information of occupational pensions in terms of knowing the Official Institutions by which a person can be pensioned, in addition the significance is > that the significance established for this research (0.05).

4. Discussion

Based on the results obtained, the study questions are answered in the following terms. Regarding the level of financial literacy in retirement savings and pensions, which is observed in middle school students we can say that there is a good percentage of them who understand that saving (54.8 %) is saving money, and that this will help them buy something they like (31.2 %), however, only 43.1 % saves if they have money left over.

The worrying thing about the case is the high percentage that answered the question about what would be the main reason *why I would save*, being 78.4 % who answered the option of NOT APPLIES, understanding this, as there is no definite reason to carry out the saving. Apparently, these habits do not pay for the future retirement, that is, although they understand the concept of saving money, they only do it when they have money left over, but not for a specific purpose as would be savings for retirement.

This leads us to think that they have not been educated from within the family, since according to Totenhagen et al. (2015), financial knowledge must be introduced within the family, before secondary education in concepts such as saving and money, which would help them contextualize the real life in which they live. It is important to consider that good habits are reinforced from an early age, as referred by Whitebread and Bingham (2013).

Regarding the variables of money and budget, 62.1 % said that the money they receive serves to save, although they do not have a defined plan, since 61.5 % responded that they do not organize their money. 41.7 % seem to use the budget and use it to organize what they will spend their money on, and very specifically 39.1 % say they use it to plan the distribution of their money. On the other hand, 71.4% of students have heard about retirement pensions, 66.8 % understand the concept and 42.3 % do not know the age at which they can retire. It is clear that there is contradiction in some answers, which leads us to think that it is the confusion that prevails in them over these concepts.

The lack of financial literacy at an early age from within the home may be what makes the difference, as the curricula at the basic levels have not formally instituted the topics of financial literacy, which could contribute to the literacy of children. This supports what Warmath and Zimmerman (2019) say about the need to modify policies and programs that help improve literacy for better financial well-being.

Similarly, this study seeks to answer whether there is gender difference in the habits of saving, the age of retirement and the type of institution to be pensioned. For this, a guiding hypothesis is proposed that states: Hi: There is a dependency between information related to occupational pensions and gender, otherwise (HO) there is no dependency. For this hypothesis it is broken down into the different variables; if you have heard about pensions, if you understand about pensions, if you know the type of institution to be pensioned and the retirement age to be pensioned.

Similarly, this study seeks to answer whether there is a gender difference in the habits of saving, the age of retirement and the type of institution to be pensioned. For this, a guiding hypothesis is proposed that states: Hi: There is dependence between information related to occupational pensions and gender, otherwise (HO) there is no dependency.

For this, hypothesis it is broken down into the different variables; if you have heard about pensions, if you understand about pensions, if you know the type of institution to be pensioned and the retirement age to be pensioned.

The results provided evidence to support that there is no dependency between gender and information related to occupational pensions in terms of hearing about pensions, to understand that they are pensions, to know the institution for pensioning and the retirement age.

It is clear that the students (men and women) have shown some deficiencies in the financial knowledge, specifically in the topics that were addressed in this work as they are: savings and pensions for retirement. That is why the involvement of parents is of particular importance, since the transmission of financial knowledge derived from them becomes a key factor children education at an early age and helps them to develop skills that favor their level of financial literacy, as has been pointed out by the studies of Whitebread and Bingham, (2013), Totenhagen et al. (2015) and Rudeloff (2019).

5. Conclusion

In the studies on education and financial literacy we seek to know among other topics, the knowledge that prevails in the different populations that are analyzed in the topics such as: savings, pensions, insurance, credit cards, credit to name a few. It has also sought to assess the skills and attitudes prevailing in young populations, since it has been a priority on the agendas of countries in the world to set up programs to promote financial literacy.

Some studies, such as those by Amagir, Groot, Maasen and Wilschut (2018), have shown the importance of including in the contents of the curricula, financial education programs, as they have been seen as a key factor in helping to strengthen financial literacy among young people.

The financial institutions and all those organizations that are directly or indirectly involved with this issue are making significant efforts to ensure that as many people as possible worldwide are financially included, having as objective that population can reach the greatest potential that allows them to have better reasoned financial decisions.

6. Future research

Derived from the research, it is relevant to point out as a future line of research in follow-up to the work carried out, the comparison of the level of financial literacy among Mexican youth in relation to parental banking in the southeast and other regions of Mexico.

Preschool children's textbooks currently include exercises about understanding the value of money and its equivalents so, in the future, it will be possible to analyze whether this introduction has had a positive impact on the new generations in terms of their level of financial literacy.

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