Research on Humanities and Social Sciences
ISSN 2224-5766 (Paper) ISSN 2225-0484 (Online)
Vol.13, No.2, 2023

Perception of Financial Well-Being of the Elderly and the Role of Propensity to Indebtedness and Financial Preparation for Retirement

Kelmara Mendes Vieira[1*] Tamara Otilia Amaral Rosenblum[1] Taiane Keila Matheis[1]
Leander Luiz Klein[1] Aureliano Angel Bressan[2]
1. Federal University of Santa Maria, Santa Maria, Rio Grande do Sul, Brazil
2. Federal University of Minas Gerais, Belo Horizonte, Minas Gerais, Brazil
* E-mail of the corresponding author: kelmara.vieira@ufsm.br

Abstract
This study aimed to check the impact of financial preparation for retirement and the propensity to indebtedness on the perception of financial well-being in the elderly. A survey-type research was carried out with 885 individuals aged 60 years or older, living in Brazil, regardless of whether they are retired or not. Confirmatory factor analysis and structural equation modelling were used. The results indicated that the construct propensity to indebtedness has a negative impact on financial preparation for retirement and on the perception of financial well-being. The elderly are approaching retirement with a savings deficit and are heavily dependent on income from social security programs to support their families. Furthermore, the positive impact of financial preparation for retirement on the perceived financial well-being was found. Such findings highlight the importance of regulations that deal with the limit of credit supply and that prioritize the requirement of transparency of financial institutions in the disclosure to the less enlightened public. Therefore, it is essential to develop public policies to control indebtedness and incentives for financial preparation for retirement for the elderly in order to achieve better levels of Financial Well-being.
Keywords: perception of financial well-being, financial preparation for retirement, propensity to indebtedness, elderly, personal finance
DOI: 10.7176/RHSS/13-2-04
Publication date: January 31st 2023

1. Introduction

According to the United Nations (UN, 2019), the age that defines a person as elderly is different in developed and developing countries, being 65 and 60 years old, respectively. Also, according to UN data (2019), population ageing will become the most significant social transformation of the century, as the number of people aged 60 and over, on a global scale, is expected to double by 2050 and then for the first time in history, there will be more elderly people than those under 15 years of age (UN, 2002). In this scenario, the elderly have been the subject of public policies not only for their significant proportion (Barbarella et al., 2022; Issac et al., 2021), but also for the economic change caused by the advent of retirement in the household finance (Tambellini, 2021).

The elderly, who used to be passive in the economy, have become the target audience of credit policies, often carried out irresponsibly (Teaster et al., 2020). Corroborating this perspective, Phelan et al. (2021) argues that studies dealing with financial abuse and the elderly public are still scarce. The offer of new financial products and services has been increasing since the 2000s, however, the appropriate level of propensity to indebtedness is no longer an issue only for the regulatory financial agencies, but also for the borrower (Collins & Urban, 2020; Organization for Economic Cooperation and Development [OECD], 2016).

The lack of control in the use of credit and the inability to save can also impact the preparation for retirement (Lusardi & Tufano, 2009, 2014). Preparation for Retirement (PR) is influenced by factors such as: health (James et al., 2012), where higher levels of health are related to better decision-making in the reserve of long-term investments; marital status (Jung & Shin, 2018) where couples, after raising children, are more focused on marriage and both positively influence each other to plan for the future; financial education (Lusardi & Mitchell, 2007), since knowledge of financial concepts supports the most appropriate investment decision, positively impacting PR; income (Hansson et al., 2019; Kim, 2020), as it tends to provide economic independence in old age; household composition (Lusardi et al., 2020), where the more children the family has the greater difficulties in saving for the future; and savings (Lee et al., 2018), since the amount of accumulated wealth positively reflects on PR.

There is also evidence that older people do not have enough savings to live well (Chan et al., 2021; Lusardi et al., 2020). Debts accumulated during the earlier stages of the life cycle and the financial resources obtained throughout a person's life define their conditions for retirement (Hansson et al., 2019) and can affect their overall quality of life and mental health. Financial stress situations, whether caused by inadequate management of financial resources or by government measures, worsens the perception of mental health, quality of life (Hansson et al., 2019; Kim, 2020) and impacts financial well-being (FWB) (De Bruijn & Antonides, 2020; Hansson et al., 2019).

The Consumer Financial Protection Bureau (CFPB) defines FWB as a state in which an individual can meet current and ongoing financial obligations, confident in their future and capable of making choices that allow them to enjoy life (CFPB, 2015).

However, studies indicate that individuals are reaching the retirement stage with little or no money, due to the accumulation of debts related to the financial exploitation of family members (Phelan et al., 2021) or inadequate investments made during adulthood (Alexandrova & Markov, 2020; Lusardi & Mitchell, 2007; Sheppard & Stanford, 2019). In this context, a large part of the income that will be available in retirement is related to social security, especially in developing countries, where the family budget depends, for several families, on the benefit received by this elderly person (Lusardi & Mitchell, 2007; Melo et al., 2017). Thus, social security becomes the only financial protection of the individual and is responsible for supporting them in old age, illness and unemployment (Tambellini, 2021).

Considering the consequences that indebtedness and preparation for retirement bring to a country's economy (Collins & Urban, 2020; De Bruijn & Antonides, 2020) and at the level of FWB (Danisman et al., 2020; De Bruijn & Antonides, 2020), the objective of the present study was to develop a model for analysing the role of financial preparation for retirement and the propensity to indebtedness on the level of financial well-being of elderly individuals.

Understanding the role of indebtedness and financial preparation for retirement on the perception of financial well-being from the perspective of the elderly, whether retired or not, is an opportunity to contribute to the debate and theoretical progress on the three pillars of this study (FWB, PI and PR). Measuring the role of the indebtedness and financial preparation for retirement constructs can be useful in several aspects, such as, for example, supporting the formulation of public policies aimed at the elderly, in addition to providing relevant information for comparison between policies already adopted.

In this context, this study innovates in at least four aspects. First, because the target audience is on the elderly in a developing country. Second, for assessing the perception of financial well-being in this public. Third, for being a pioneer study in associating the perceived financial well-being with the financial preparation for retirement and propensity to indebtedness constructs, highlighting the mediating role of the former. And fourth, by proposing a scale of financial preparation for retirement in developing countries.

2. Theoretical Model Development

In this study a central theme is the perception of Financial Well-Being (FWB) along with two other behavioural factors: propensity to indebtedness and financial preparation for retirement.

The level of propensity to indebtedness has become a emerging issue around the world among public policy makers (Foster et al., 2019), Azma et al. (2019) identified that propensity to indebtedness is related to the consumption habits of individuals, and when in an inappropriate proportion to income, becomes harmful to well-being.

In light of this conception, where indebtedness is defined by taking credit in a proportion that is greater than the ability to pay (Lusardi & Tufano, 2009), understanding the factors influencing attitude and propensity to indebtedness gains importance. Additionally, behavioural factors and the subject's own characteristics influence the management of personal finances (Flores & Vieira, 2014; Kahneman & Tversky, 1984; Vitt, 2004). And research findings on consumption behaviour conclude that impulsiveness alone does not generate a low FWB. Instead, this behaviour needs to be repetitive, generating then overindebtness (Abrantes Braga & Veludo de Oliveira, 2020).

Huang et al. (2022) emphasize that in many situations the individual is not concerned about the item they will acquire, but rather, in the instant satisfaction linked to compulsive purchase. This behaviour strengthens the feeling of self-fulfilment through the items that the buyer acquires without need. In this sense, in a scenario of high credit supply, consumers who already tend to consume more than they need, can perceive the credit limits as additional income to their budget. Norvilitis et al. (2006) concluded that the number of credit cards contributes to this illusion of income and debt accumulation, leading to a loss of financial well-being.

Based on these studies, there is evidence that the higher the level of propensity to indebtedness, the lower the level of financial well-being. Therefore, the first hypothesis of the study is:

H1: The propensity to indebtedness has a negative impact on the perception of financial well-being.

The concept of retirement is based on the concept that every citizen, regardless of their professional life, has the acquired right to a substitute income when their workforce decreases (Marques & Euzéby, 2005). However, according to Foster, Tomlinson and Walker (2019), the provision for retirement is a reflection of the individual's employment and remuneration history. Thus, low income among retirees is the result of poorly paid jobs that continue to contribute to income inequality.

Han et al. (2019) defines preparation for retirement as a life project that aims to maintain the individual's consumption style at a level similar to that before retirement. Corroborating the definition of PR, Noone et al., (2009) use in their research the term pre-retirement as a synonym for PR where they assume that individuals who have prepared for retirement have a higher level of well-being. Corroborating this definition, Tambellini (2021) identified that the economic situation is a predictor of general well-being after retirement. In this sense, preparation for retirement can be defined as the development of expectations and plans made by workers in order to organize their lives with purposes for future retirement (Zaniboni et al., 2010). Niu et al. (2020) highlight that individuals in developing countries are inadequately financially prepared for retirement. This behaviour is based on the lack of financial education to choose products, negatively impacting financial well-being in retirement.

Flores and Vieira (2014) warn that all relationships related to life satisfaction need to be included in the measurement of FWB. It is extremely important for a congruent analysis not to delimit the level of FWB only by the income factor, whether this income comes from retirement or not, since the monetary measure of income is not used to distinguish whether there is a fit between obligations and rights.

Financial well-being not only encompasses the proper management of resources, but also the fact that FWB definitions involve concepts such as the perception of being able to maintain the desired living standard with financial freedom (Brüggen et al., 2017; Drever et al., 2015) related to social and personal well-being (Xue et al., 2020). Nevertheless, the CFPB carried out a survey of these definitions and constructed the four behaviours that the individual must have to achieve financial well-being, namely: control over day-to-day finances, ability to absorb financial instabilities, be on the right path to achieve their financial goals and have financial freedom to make choices that allow them to enjoy life (CFPB, 2015). In contrast, the Center for Financial Services Innovation (CFSI, 2018) has defined three behaviours that are likely to ensure the individual's current and future financial security, namely: adequate and effective management of financial resources in everyday life, resilience to the ups and downs of life, and the ability to appreciate opportunities that lead the individual to future and current financial security. Thus, the higher the level of financial preparation for retirement, the higher the level of financial well-being. The second hypothesis is then established:

H2: Financial preparation for retirement positively impacts the perception of financial well-being.

The well-being of retirees have become a major concern for societies, and policy makers (Zaniboni et al., 2021). The reason why the topic has gained relevance is due to the increase in life expectancy and the impacts on the actuarial balance in social security, that culminated in a social trend of the need to prepare for retirement for a substantial period of the life cycle (Sharpe, 2021).

Vitt (2004) when relating personal finances with planning for retirement, addresses the proper management of financial resources and debts assumed, since both, when not carried out properly, have a negative impact on retirement planning. In other words, it is necessary to save money to meet the individual's consumption demand during retirement, in addition to making proper investment choices, avoiding to be excessively indebted.

Still, Fan et al. (2021) came to the conclusion that the higher the level of indebtedness, or financial fragility, the lower the probability of the individual correctly equating the financial needs for retirement. In this context, the third hypothesis of this study is:

H3: The propensity to indebtedness negatively impacts financial preparation for retirement.

The union of the previously mentioned hypotheses with the corresponding constructs for measuring each dimension results in the construction of the proposed model, in Figure 1.

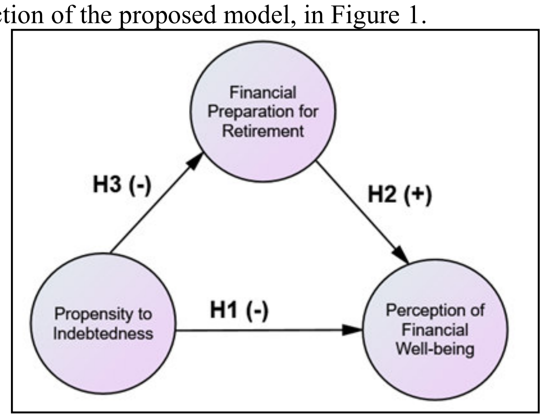

Figure 1. Proposed theoretical model and respective hypotheses.
Source: Prepared by the authors, 2022.

Thus, the theoretical model, represented in Figure 1, establishes three hypotheses. Hypothesis "H1" and "H3" are related to the negative impact of propensity to indebtedness (PI) on the perception of financial well-being (FWBP) and financial preparation for retirement. H2, on the other hand, indicates that financial preparation for retirement positively impacts the level of perceived financial well-being, and is a mediator between PI and FWB.

3. Method

This was a survey research. The target population of the study were citizens aged 60 years or older, living in Brazil, and a sample of 885 elderly people was obtained. The survey was applied in person and in compliance with ethical precepts, the respondents filled out the Informed Consent.

The instrument for carrying out the research was composed of four main sections, with multiple choice questions that aimed to map the individuals' profile, in addition to Likert-type questions to measure the three constructs: financial preparation for retirement, perception of financial well-being and propensity to indebtedness (which are available in supplementary material).

The perception of financial well-being was measured using the Financial Well-Being Perception Scale (FWBPS), which is formed by four dimensions: satisfaction with financial management, financial freedom, financial tranquillity and future financial security. The dimensions present statements about each of the themes, with five-point Likert-type questions: 1 - Never, 2 - Rarely, 3 - Sometimes, 4 - Often and 5 - Always. Thus, the higher the selected score, the higher their level of perception of financial well-being. The FWBP aims to capture the state in which the individual is secure, calm and fulfilled with his current and ongoing finances, with financial freedom to enjoy life.

To measure financial preparation for retirement, we propose nine Likert-type questions, distinguishing the verb tense for subjects already retired and not retired. The alternatives were constructed on a five-point scale, ranging from "1" (Never) to "5" (Always). The higher the score, the greater their financial preparation for retirement.

For the propensity to indebtedness, the Risk Indebtedness Behaviour scale, by Abrantes Braga and Veludo de Oliveira (2019, 2020) was used. A Likert-type scale was also used for this construct, where "1" corresponds to Completely Disagree, "2" to Disagree, "3" to Indifferent, "4" to Agree and "5" to Completely Agree. Respondents were instructed to mark how much the statement presented was adequate to their reality. The higher the score, the greater the propensity to indebtedness.

The last section deals with the respondents' profile and income questions. The instrument underwent content validation by six leading professionals in the area, in addition to a pre-test with ten individuals from different educational levels.

To estimate the theoretical model, Structural Equation Modelling (SEM) was used. Initially, Confirmatory Factor Analysis (CFA) was used in order to validate the constructs. The convergent validity, was measured using the classical goodness-of-fit statistics: chi-square (χ^2), Root Mean Square Error of Approximation (RMSEA), along with comparative fit measures: Comparative Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI). For the chi-square/degrees of freedom analysis, values below five were considered. For the other indices: CFI, NFI, TLI, the recommendations are for values greater than 0.950, however, in the literature there is no consensus between acceptable values, since some authors mention that results equal to or greater than 0.900 are admissible; for RMSEA values, values below 0.060 are recommended (Hair et al., 2014; Hooper et al., 2008; Kline, 2015). Discriminant validity must meet the criterion suggested by Kline (2015), which is when the correlation between the constructs is less than 0.850.

In order to test unidimensionality, standardized residuals were analyzed. Constructs with standardized residuals below 2.580 were considered one-dimensional (Hair et al., 2014). After performing the procedures to fit the model, the Composite Reliability and Cronbach's Alpha of the constructs were measured to assess reliability. According to Hair et al. (2014), for these indices, results equal to or greater than 0.700 are considered satisfactory.

The modelling was carried out in three stages. First, the validation of the first-order constructs, preparation for retirement and indebtedness, and of the four constructs that form the second-order construct of the FWB (future financial security – "security", financial tranquillity – "tranquillity", financial freedom – "freedom", and satisfaction with financial management – "satisfaction"). Next, the FWB construct was built and validated and, finally, the integrated model was constructed. As suggested by Kline (2015), the statistical significance of the estimated coefficients was verified, in order to validate the hypothesized theoretical model represented in Figure 1.

4. Results

The study sample consisted of 885 individuals aged 60 or over, of which 706 are already retired. Table 1 lists the profile of these respondents.

Table 1.Profile of respondents according to profile variables

Variable	Category	Frequency	Percentage
Age	From 60 to 63 years	245	28.39
	From 64 to 67 years	199	23.06
	From 68 to 73 years	208	24.10
	From 74 to 99 years	211	24.45
Retired	Yes	706	79.77
	No	179	20.23
Gender	Male	422	48.28
	Female	452	51.72
Marital status	Single	132	15.00
	Married/Stable union	450	51.14
	Separated	109	12.38
	Widow(er)	187	21.25
	Other	2	0.23
Race/ethnicity	White	720	81.82
	Black	69	7.84
	Brown	79	8.98
	Yellow	6	0.68
	Indigenous	6	0.68
Education level	Incomplete Elementary School	359	41.03
	Elementary School	75	8.57
	Technical Course	32	3.66
	High school	153	17.49
	Higher education	138	15.77
	Specialization or MBA	47	5.37
	Master's or PhD degree	71	8.11
Type of housing	Own	706	80.50
	Rented	82	9.35
	Borrowed	55	6.27
	Financed	20	2.28
Gross Monthly Income	Up to $220.00	128	14.75
	Between $220.00 and $440.00	209	24.08
	Between $440.01 and $660.00	174	20.05
	Between $660.01 and $880.00	87	10.02
	Between $880.01 and $1,100.00	74	8.53
	Between $1,100.01 and $1,760.00	64	7.37
	Between $1,7600.01 and $2,200.00	52	5.98
	Between $2,200.01 and $4,400.00	59	6.80
	Above $4,400.00	21	2.42
Gross Family Monthly Income	Up to $220.00	48	5.63
	Between $220.00 and $440.00	157	18.43
	Between $440.01 and $660.00	162	19.01
	Between $660.01 and $880.00	107	12.56
	Between $880.01 and $1,100.00	108	12.68
	Between $1,100.01 and $1,760.00	77	9.05
	Between $1,7600.01 and $2,200.00	67	7.86
	Between $2,200.01 and $4,400.00	86	10.09
	Above $4,400.00	40	4.69
Payroll loan	No	645	73.80
	Yes	229	26.20
Regarding your expenses, would you say that:	Spend more than you earn	149	16.95
	Spend as much as you earn	263	29.92
	Spend less than you earn	467	53.13
What was/is your occupation?	Public servant	232	26.58
	Salaried employee	222	25.42

	Liberal Professional	15	1.72
	Self-employed	145	16.61
	Company owner	57	6.53
	Other	130	14.89
	Did not work	72	8.25
Do you have people who depend on your money?	No	408	46.63
	Yes	467	53.37

Note: The percentages considered correspond to the valid percentage of respondents.
Source: Research data, 2022.

When analysing the profile of respondents, 444 individuals belonged to the age group from 60 to 67 years, corresponding to 51.45% of all valid answers, most of which are retired (79.77%), female (51.72%), white race/ethnicity (81.82%), with complete or incomplete elementary education (53.26%), own housing (80.50%) and monthly income between US$ 220 and US$ 880. 55.63% of the respondents don't use payroll loans (73.80%), spends less than earns (53.13%), was or is a public servant (26.58%) or salaried employee (25.43%) and have people who depend on their income (53.37%).

In the next step, validation of the constructs was carried out through confirmatory factor analysis (CFA). The results of the initial model (IM) and with the adjustments (FM) for the constructs financial preparation for retirement and propensity to indebtedness are listed in Table 2.

Table 2. Fit statistics for the constructs financial preparation for retirement and propensity to indebtedness.

Index	**Limit**	**Retirement**		**Indebtedness**	
		I.M.	F.M.	I.M.	F.M.
x^2 (value)	-	706.583	0.423	54.931	14.764
x^2 (probability)	>0.05	0.000	0.515	0.000	0.002
x^2/degrees of freedom	< 5	26.170	0.423	10.986	4.921
CFI - Comparative Fit Index	> 0.95	0.747	1.000	0.985	0.997
NFI - Normed Fit Index	> 0.95	0.740	1.000	0.984	0.996
TLI - Tucker-Lewis Index	> 0.95	0.662	1.002	0.971	0.989
RMSEA - R. M. S Error of Approximation	< 0.06	0.169	0.000	0.106	0.067
Composite reliability	> 0.700	0.866		0.924	

Adequate levels for fit statistics based on Hooper et al. (2008) and Hu and Bentler (1999).
Note: I.M. = Initial Model. F.M.= Final Model
Source: Research data, 2022.

To reach the most adequate model, two main measures were adopted: removal of variables with low factor loading and insertion of correlations between errors. Thus, questions Q7, Q8, Q9, Q10 and Q16 were excluded by the criterion of low factor loading in the individual validation of the Retirement construct - and correlations were inserted for Retirement (e12 – e11) and Indebtedness (e58 - e57 and e59 - e58). Then the constructs of the financial well-being scale were adjusted (Table 3).

The results of the initial model indicated its inadequacy, since it does not reach the suggested limits. Using the same criterion presented in Table 2, variables with low factor loading were removed; in FWB Security – Q18 and Q21. FWB Tranquillity – Q24, Q25, Q26, Q27 and Q28. FWB Satisfaction – Q44, Q46 and Q47. FWB Security – Q18 and Q21. Subsequently, correlations were inserted between the errors, as follows: for the FWB Security construct (e23 – e19 and e20 – e19); FWB Freedom (e36 - e35 and e40 – e39) and finally, FWB Satisfaction (e50 – e49, and e49 – e45). Composite reliability and Cronbach's Alpha presented limits above the required minimum of 0.7. The standardized residuals were below the limit of 2.580, confirming the unidimensionality of the constructs.

Then, the discriminant validity was calculated. According to Kline (2015), if the correlations between the constructs are less than 0.85, there is discriminant validity. In this sense, all constructs passed the discriminant validity test.

Also, as the measurement of FWB is based on the constructs future financial security, financial tranquillity, financial freedom and satisfaction with financial management, a confirmatory factor analysis was performed with these constructs, forming the second-order construct. Thus, Table 3 lists the results for estimating the FWB construct.

Table 3. Fit statistics for the second-order model of Perceived FWB

Index	**Limit**	**Perceived FWB**	
		I.M.	F.M.
x^2 (value)	-	1192.523	666.882
x^2 (probability)	>0.05	0.000	0.0000
x^2/degrees of freedom	< 5	5.445	3.285
CFI - Comparative Fit Index	> 0.95	0.925	0.964
NFI - Normed Fit Index	> 0.95	0.910	0.950
TLI - Tucker-Lewis Index	> 0.95	0.913	0.955
RMSEA - R. M. S Error of Approximation	< 0.06	0.071	0.051
Composite reliability	> 0.700	0.971	

Adequate levels for fit statistics based on Hooper et al. (2008) and Hu and Bentler (1999).
Note: I.M. = Initial Model. F.M.= Final Model.
Source: Research data, 2022.

For the second-order model of Perceived FWB to reach the desired limits, correlations were inserted between the errors of variables with theoretical meaning. The final model (F.M.) reached the appropriate indices, indicating the validity of the second-order construct.

Finally, the estimation of the theoretical model was carried out. Again, correlations were inserted between the errors of variables, in order to improve adjustment. Table 4 lists the results of the maximum likelihood estimation.

Table 4. Theoretical Model Fit Indices

Index	**Limit**	**MEE**	
		I.M.	F.M.
x^2 (value)	-	1320.323	1233.095
x^2 (probability)	>0.05	0.000	0.000
x^2/degrees of freedom	< 5	3.063	2.908
CFI - Comparative Fit Index	> 0.950	0.953	0.957
NFI - Normed Fit Index	> 0.950	0.932	0.936
TLI - Tucker-Lewis Index	> 0.950	0.946	0.950
RMSEA - R. M. S Error of Approximation	< 0.060	0.0480	0.0460
Composite reliability	> 0.700	0.976	

Adequate levels for fit statistics based on Hooper et al. (2008) and Hu and Bentler (1999).
Note: I.M. = Initial Model. F.M.= Final Model
Source: Research data, 2022

It can be seen in Table 4 that after inserting the correlations between the errors of variables an adequate model was obtained. Figure 2 shows the final model.

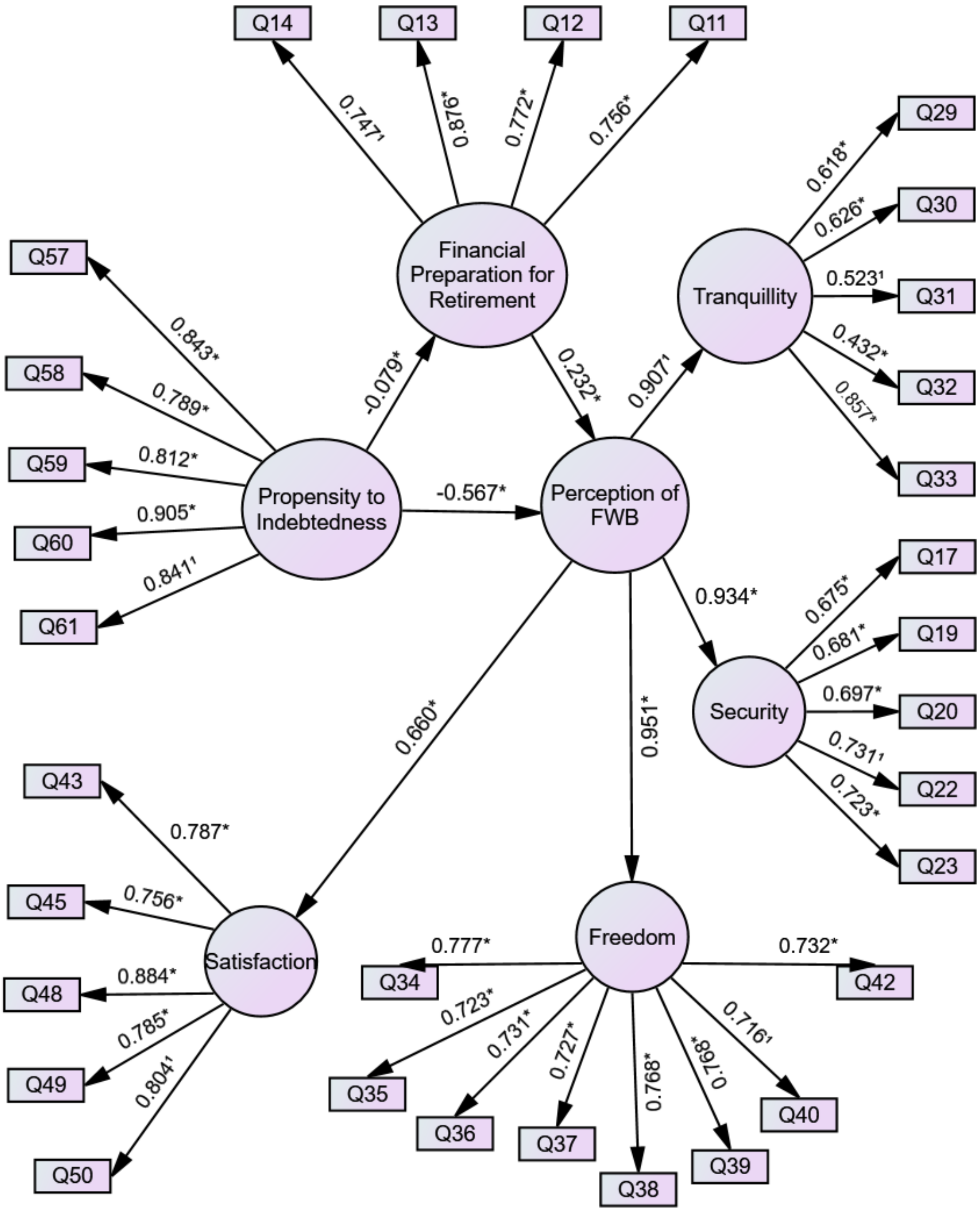

Figure 2. Final model with standardized coefficients and significance of relationships
*p<0.01; ¹ z-value not calculated, as the parameter was set at 1, due to model requirements.
For simplicity, the errors and their correlations were not shown in the figure. The table with the correlations between the errors are in the supplementary material.

5. Discussion

In Figure 2, it can be seen that all hypotheses were confirmed in the development of this study. The first hypothesis (H1) shows that propensity to indebtedness has a negative impact (-0.567) on the perception of well-being. This finding corroborates the theory of over-indebtedness treated by Abrantes Braga and Veludo de Oliveira (2020), where improper accumulation of debts can negatively affect financial well-being, leading families to overindebtness (Abrantes Braga & Veludo de Oliveira, 2020).

Among the findings of Xiao and Kim (2022) is the association between the ability to apply financial knowledge and the reduction of financial difficulties when there is an agent to instruct and explain the implications of making the minimum payment of the credit card bill, there is a reduction of financial difficulties. Through this scenario, one can see the importance of offering credit cards with clear usage instructions and caveats. Nevertheless, the concept of compound interest and other financial terms are generally not easy to understand for this age group (Lusardi et al., 2020), which can lead them to assume debts without proper knowledge. It is also noteworthy that the profile of the survey respondents is elderly with complete or incomplete elementary education, and this is another factor that increases the possibility of inadequate understanding of the costs and characteristics of the debts assumed (Gathergood, 2011).

Another relevant issue is the payroll loan policy, that is a loan automatically deducted from the paycheck with fixed payments. Such credit represents a low risk for financial institutions and, consequently, is widely offered to elderly people. Thus, the wide offer and the ease of obtaining credit are factors encouraging the excessive and often its inappropriate use. Public policymakers then need to have special attention to the development of laws and regulations such that companies offer credit only after a rigorous analysis of the borrower's profile. As a credit of high interest to the financial system, the responsibility for defining the maximum limits allowed for this type of loan must be systematically analysed by regulatory bodies, since the commitment of a large part of the income of the elderly in the long term can lead to significant loss of financial well-being.

Regarding the second hypothesis, the result confirms that the higher the level of financial preparation for retirement, the higher the level of perceived financial well-being. The results obtained collaborate the findings of Gruptan et al. (2021), who indicate that individuals who have made financial investments for the future, have a higher level of perceived well-being.

The lack of savings for retirement has important social implications, as the State becomes the main provider of well-being, especially in lower income classes, where social security programs become the only source of income (Comelli, 2021).

In a scenario with little or no financial preparation for retirement, incentives through advertising campaigns to workers sign up for free retirement preparation programs (Lusardi & Mitchell, 2011) would be important to prepare the individual to manage their financial resources in order to achieve financial well-being.

The last hypothesis (H3), confirmations of the negative relationship between propensity to indebtedness and financial preparation for retirement. In this sense, research with American elderly has identified an increase in financial vulnerability of those who are closer to retirement, and among the causes, there is the increase in the supply of easy credit that made the future elderly on the verge of retirement indebted (Lusardi et al., 2020). Thus, unless governments and the financial system are able to help the elderly to control and maintain adequate levels of indebtedness, it is unlikely that they will be able to reach retirement with a financial situation that allows them to enjoy life. The lack of financial well-being in old age can bring to the elderly a series of consequences such as depression (Negash et al., 2021; Su et al., 2020), anxiety (Strömbäck et al., 2020), low self-esteem (Belbase et al., 2020; Hashmi et al., 2021), an increase in the number of suicides (Adinkrah & Mensah, 2020), among other ailments related to low FWB levels.

6. Final Considerations

As a result of the study, the negative impact of propensity to indebtedness on the perception of financial well-being and on financial preparation for retirement was confirmed. In this sense, the higher the level of a citizen's propensity to indebtedness, the lower their perception of financial well-being. And the higher their level of indebtedness, the lower their financial preparation for retirement.

When comparing the changes from the 2007/2008 global financial crisis to the Covid-19 Global Pandemic, it is noted that much progress has been made in the discussion of what would be the appropriate levels of indebtedness and borrowing. Topics such as the economic impact of credit supply without prior analysis, bank failure, rising unemployment, GDP contraction, and inadequate resource allocation are among the consequences of excessive indebtedness (Chopra & Mehta, 2022). However, the current analysis for granting credit still seems to have not evolved enough, since it is based mainly on individual income and the individual's credit history, not being sufficiently considered the expenses that the applicant already has to maintain their survival (Ganbat et al., 2021).

The results obtained indicate that it is important that public policy makers develop social programs targeted to support the elderly in the proper management of their income and debts, which can positively impact public health as a whole (Adinkrah & Mensah, 2020; Gao et al., 2022).

The fact that income from retirement contributes to the support of the family group of the elderly , especially in developing countries, where the only guaranteed monthly income for many families is commonly that of the elderly, since the other family members tend not to have fixed jobs, working informally and in sporadic services. In this sense, this study innovated by pointing out the impact of the propensity to indebtedness on the financial preparation for retirement and the perceived financial well-being of the elderly. Such conclusions are essential to broaden the understanding of the importance of specific programs addressing financial well-being in this group. In this way, we highlight the relevance of public policies that act in the regulation of the offer of credit and transparency of the terms used by financial institutions towards the lay public.

One of the limitations of this study is the fact that it was carried out in only one country. Future studies may expand the sample. Still, it is suggested to analyze elderly people considered vulnerable in relation to the expenses for their survival and how to help and encourage them in the financial management in retirement. In order to analyze the spheres of perceived financial well-being, financial preparation for retirement and propensity to indebtedness, another promising path is to identify the role of financial literacy as an antecedent of these dimensions.

Finally, proposals for measuring preparation for retirement are still incipient in terms of the financial dimension (Gruptan et al., 2021; Lusardi & Tufano, 2009). Thus, the Financial Preparation for Retirement Scale was developed. New tests can be applied with the scale proposed here, with, validation in other countries and/or for other audiences.

Acknowledgements

The authors thank the National Council for Scientific and Technological Development (CNPq - grant number 303731/2018-4) and the Research Support Foundation of the State of Rio Grande do Sul (FAPERGS – grant number 21/2551-0002134-9) for the financial support.

References

Abrantes-Braga, F. D. M. A., & Veludo-de-Oliveira, T. (2020), "Help me, I can't afford it! Antecedents and consequence of risky indebtedness behavior", European Journal of Marketing 54(9), 2223–2244.

Adinkrah, M. (2020), "Characteristics of elderly suicides in Ghana", Omega 82(1), 3–24.

Alexandrova, O. A., & Markov, D. I. (2020), "Wealthy or poor: What does Russia's young people think about future old age, and what do they intend to do?" The Monitoring of Public Opinion Economic & social Changes, 3.

Azma, N., Rahman, M., Adeyemi, A. A., & Rahman, M. K. (2019), "Propensity toward indebtedness: evidence from Malaysia. Review of Behavioral Finance" 11(2), 188–200.

Barbabella, F., Cela, E., Socci, M., Lucantoni, D., Zannella, M., & Principi, A. (2022), "Active ageing in Italy: A systematic review of national and regional policies", International Journal of Environmental Research and Public Health 19(1), 600.

Belbase, A., & Sanzenbacher, G. (2020), "Dementia, help with financial management, and well-being", SSRN Electronic Journal.

Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017), "Financial well-being: A conceptualization and research agenda", Journal of Business Research 79, 228–237.

CFPB, Consumer Financial Protection Bureau (2015), Financial well-being: The goal of financial education. Consumer Financial Protection Bureau. https://www.consumerfinance.gov/data-research/research-reports/financial-well-being/

CFSI, Center for Financial Services Innovation (2018), Preparing for tomorrow by fixing today - Helping Low-and Moderate-Income Americans Thrive in Retirement. Financial Health Network. https://finhealthnetwork.org/research/preparing-for-tomorrow-by-fixing-today/

Chan, M. C. H., Chung, E. K. H., & Yeung, D. Y. (2021), "Attitudes toward retirement drive the effects of retirement preparation on psychological and physical well-being of Hong Kong Chinese retirees over time", International Journal of Aging & Human Development 93(1), 584–600.

Chopra, M., & Mehta, C. (2022), "Is the COVID-19 pandemic more contagious for the Asian stock markets? A comparison with the Asian financial, the US subprime and the Eurozone debt crisis", Journal of Asian Economics 79, 101450.

Collins, M. J., Urban, C. (2020), "Measuring financial well-being over the lifecourse", European Journal of Finance 26, 341–359.

Comelli, M. (2021), "The impact of welfare on household debt." Sociological Spectrum: The Official Journal of the Mid-South Sociological Association 41(2), 154–176.

Danisman, G. O., Ersan, O., & Demir, E. (2020), "Economic policy uncertainty and bank credit growth: Evidence from European banks", Journal of Multinational Financial Management, 57–58, 100653.

De Bruijn, E.-J., & Antonides, G. (2020), "Determinants of financial worry and rumination", Journal Of Economic Psychology 76, 102233.

Fan, L., Stebbins, R., & Kim, K. T. (2021), "Skint: Retirement? Financial hardship and retirement planning behaviors", Journal of Family and Economic Issues, 1–14.

Flores, S. A. M., & Vieira, K. M. (2014), "Propensity toward indebtedness: An analysis using behavioral factors", Journal of Behavioral and Experimental Finance 3, 1–10.

Foster, L., Tomlinson, M., & Walker, A. (2019), "Older people and Social Quality – what difference does income make?", Ageing and Society 39(11), 2351–2376.

Ganbat, M., Batbaatar, E., Bazarragchaa, G., Ider, T., Gantumur, E., Dashkhorol, L., Altantsatsralt, K., Nemekh, M., Dashdondog, E., & Namsrai, O.-E. (2021), "Effect of psychological factors on credit risk: A case study of the microlending service in Mongolia", Behavioral Sciences 11(4), 47.
Gao, J., Hu, H., & He, H. (2022), "Household indebtedness and depressive symptoms among older adults in China: The moderating role of social network and anticipated support", Journal of Affective Disorders 298(Pt A), 173–181.
Gathergood, J. (2011), "Self-control, financial literacy and consumer over-indebtedness", SSRN Electronic Journal.
Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2014), "Multivariate data analysis", Seventh Edition. Pearson Education Limited Harlow, Essex.
Han, J., Ko, D., & Choe, H. (2019), "Classifying retirement preparation planners and doers: A multi-country study", Sustainability 11(10), 2815.
Hansson, I., Buratti, S., Johansson, B., & Berg, A. I. (2019), "Beyond health and economy: resource interactions in retirement adjustment", Aging & Mental Health 23(11), 1546–1554.
Hashmi, F., Aftab, H., Martins, J. M., Nuno Mata, M., Qureshi, H. A., Abreu, A., & Mata, P. N. (2021), "The role of self-esteem, optimism, deliberative thinking and self-control in shaping the financial behavior and financial well-being of young adults", PloS One 16(9), e0256649.
Hooper, D., Coughlan, J., & Mullen, M. R. (2008), "Structural equation modeling: Guidelines for determining model fit", Electronic Journal of Business Research Methods 6(1), 53-60.
Huang, H.-L., Chen, Y.-Y., & Sun, S.C. (2022), "Conceptualizing the Internet compulsive-buying tendency: What we know and need to know in the context of the COVID-19 pandemic", Sustainability 14(3), 1549.
Issac, T. G., Ramesh, A., Reddy, S. S., Sivakumar, P. T., Kumar, C. N., & Math, S. B. (2021), "Maintenance and welfare of Parents and Senior Citizens act 2007: A critical appraisal", Indian Journal of Psychological Medicine 43, 107–112.
James, B. D., Boyle, P. A., Bennett, J. S., & Bennett, D. A. (2012), "The impact of health and financial literacy on decision making in community-based older adults", Gerontology 58(6), 531–539.
Jung, E. H., & Shin, S. H. (2018), "Actor and partner effects of health status, marital satisfaction and self efficacy on retirement preparation of middle aged couples: Actor-Partner Interdependence Model analysis", Journal of Korean academy of nursing 48(2), 154–166.
Kahneman, D., & Tversky, A. (Eds.). (1984), Choices, Values, and Frames. Cambridge University Press (Virtual Publishing).
Kim, J.-J. (2020), "A study on influence of economic preparation for later life after retirement", Journal of Asian Finance Economics and Business 7(5), 279–290.
Kline, R. B. (2015), "Principles and practice of structural equation modeling", Third edition (3rd ed.). Guilford Publications.
Lee, Y. D., Hassan, M. K., & Lawrence, S. (2018), "Retirement preparation of men and women in their positive savings periods", Journal of Economic Studies 45(3), 543–564.
Lusardi, A., & Mitchell, O. S. (2007), "Financial literacy and retirement preparedness: Evidence and implications for financial education", Business Economics 42(1), 35–44.
Lusardi, A., & Tufano, P. (2009), "Debt literacy, financial experiences, and overindebtedness", Journal of Pension Economics & Finance 14(4), 332–368.
Lusardi, A., & Mitchell, O. S. (2011), "Implications for retirement wellbeing of financial literacy and planning", SSRN Electronic Journal.
Lusardi, A., & Mitchell, O. S. (2014), "The economic importance of financial literacy: Theory and evidence" Journal of Economic Literature 52(1), 5–44.
Lusardi, A., Mitchell, O. S., & Oggero, N. (2020), "Debt and financial vulnerability on the verge of retirement", Journal of Money, Credit, and Banking 52(5), 1005–1034.
Marques, R. M., & Euzéby, A. (2005), "A single retirement regime in Brazil: points for reflection", New Economy (Belo Horizonte, Brazil) 15(3), 11–29.
Melo, N. C. V. de, Teixeira, K. M. D., & Silveira, M. B. (2017), "Consumption and social and demographic profile of the different household arrangements of the elderly in Brazil: analysis from the Study on Family Budgets", Brazilian Journal of geriatrics and gerontology 20(5), 607–617.
Negash, S., et al. (2021), "Worsened financial situation during the COVID-19 pandemic was associated with depressive symptomatology among university students in Germany: Results of the COVID-19 international student well-being study" Frontiers in Psychiatry 12, 743158.
Niu, G., Zhou, Y., & Gan, H. (2020), "Financial literacy and retirement preparation in China", Pacific-Basin Finance Journal 59(101262), 101262.
Noone, J. H., Stephens, C., & Alpass, F. M. (2009), "Preretirement planning and well-being in later life: A prospective study", Research on Aging 31(3), 295–317.

Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M. (2006), "Personality factors, money attitudes, financial knowledge, and credit-card debt in college Students", Journal of Applied Social Psychology 36(6), 1395–1413.

OECD, Organization for Economic Co-operation and Development. (2016). Household accounts - Household savings forecast - OECD Data. https://data.oecd.org/hha/household-savings-forecast.htm

Phelan, A., O'Donnell, D., & McCarthy, S. (2021), "Financial abuse of older people by third parties in banking institutions: a qualitative exploration", Ageing and Society, 1–22.

Sharpe, D. L. (2021), "Reinventing retirement", Journal of Family and Economic Issues 42(S1), 11–19.

Sheppard, F. H., & Stanford, D. (2019), "Women's perceptions of retirement", Journal of Gerontological Nursing 45(4), 31–39.

Strömbäck, C., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2020), "Subjective self-control but not objective measures of executive functions predicts financial behavior and well-being", Journal of Behavioral and Experimental Finance 27(100339), 100339.

Su, D., Chen, Z., Chang, J., Gong, G., Guo, D., Tan, M., Zhang, Y., Liu, Y., Chen, X., Chen, X., & Chen, Y. (2020), "Effect of social participation on the physical functioning and depression of empty-nest elderly in China: Evidence from the China Health and Retirement Longitudinal Survey (CHARLS)", International Journal of Environmental Research and Public Health 17(24), 9438.

Tambellini, E. (2021), "Exploring the relationship between working history, retirement transition and women's life satisfaction", Ageing and Society, 1–30.

Teaster, P. B., Lindberg, B. W., & Zhao, Y. (2020), "Elder Abuse Policy, Past, Present, and Future Trends". In Advances in Elder Abuse Research ,53-71.

UN, United Nations. (2002). International plan of action against aging, United Nations Organization, translated by Arlene Santos. Brasília: Special Secretariat for Rights Humans, 2003, 49 p. http://www.observatorionacionaldoidoso.fiocruz.br/biblioteca/_manual/5.pdf

UN, United Nations. (2019). World Population Ageing 2019. New York. https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Highlights.pdf

Vitt, L. A. (2004), "Consumers' financial decisions and the psychology of values", SSRN Electronic Journal.

Xue, R., Gepp, A., O'Neill, T. J., Stern, S., & Vanstone, B. J. (2020), "Financial well-being amongst elderly Australians: the role of consumption patterns and financial literacy: Accounting and Finance", Accounting and Finance 60(4), 4361–4386.

Zaniboni, S., Topa, G., & Balducci, C. (2020), "Core self-evaluations affecting retirement-related outcomes", International Journal of Environmental Research and Public Health 18(1), 174.