

## Repositório ISCTE-IUL

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Deposited in *Repositório ISCTE-IUL*:

2024-04-09

Deposited version:

Accepted Version

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Junça Silva, A. & Dias, R. (2023). The role of financial status, attitudes, behaviours and knowledge for overall well-being in Portugal: The mediating role of financial well-being. *International Journal of Organizational Analysis*. 31 (7), 3668-3685

Further information on publisher's website:

10.1108/IJOA-08-2022-3385

Publisher's copyright statement:

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**The role of financial status, attitudes, behaviours, and knowledge for overall well-being in Portugal: the mediating role of financial well-being**

**Abstract**

*Purpose:* Although overall well-being is a well-studied phenomenon, financial well-being only recently has attracted scholars' attention. Accordingly, this study aimed to understand the relationship between financial well-being, its predictors (financial status, financial behavior, financial knowledge, and financial attitudes), and overall well-being.

*Design/Methodology/Approach:* We collected data from 262 working adults.

*Findings:* The results showed that only financial status was positively related to financial well-being and the latter was positively related to overall well-being. It was also found that financial well-being mediated the relationship between financial status and overall well-being. In sum, these results showed a multidisciplinary concept of overall well-being and that individuals tend to prioritize financial security over the other components.

*Practical implications:* Practically speaking, this research is relevant because it highlights the evidence of financial status as an important influence on financial well-being, as well as the role of household income in individuals' financial satisfaction.

*Limitations:* The cross-sectional nature of the data is a limitation.

*Originality/Value:* The study addresses a call for research on the relationship between financial well-being, its main predictors, and how these contribute to explain overall well-being.

**Keywords:** financial well-being; financial status; financial attitudes; financial knowledge; well-being.

## Introduction

In the last few years, the topic of well-being has been widely discussed in the literature (e.g., Diener *et al.*, 2020). As a result, it generated diverse debates regarding potential conceptual frameworks that may be adjusted to all types of persons and societies (e.g., Delle-Fave *et al.*, 2011; Tomer, 2011). For instance, Gerrans *et al.* (2014) adapted the model of well-being previously developed by Joo (2008) regarding well-being. Accordingly, the model identified four components (financial knowledge, financial status, financial behaviour, and financial attitudes) that predict financial and overall well-being. The first argument of the model is that money is essential for individuals because they spend, most of their life, earning and spending money to satisfy their needs (Diener & Biswas-Diener, 2002). Furthermore, “the field is increasingly recognizing the role that financial health plays in overall well-being” (Bailey, 2019, p. 147) because well-being is a multidimensional phenomenon and crosses over different domains. Praag *et al.* (2003) demonstrated that the well-being’ domain with more impact on general satisfaction was financial, health, and job satisfaction. Therefore, interventions could be designed if one could know to what extent financial well-being influences financial satisfaction, and in the long run, whether it enhances overall well-being and performance (Abdeldayem & Aldulaimi, 2022; Prawitz *et al.*, 2006).

OECD evaluated the Portuguese’s well-being and concluded that, in terms of income and wealth, Portugal was below the OECD average; that is, “there is a

considerable gap between the richest and poorest – the top 20% of the population earn nearly six times as much as the bottom 20%” (“OCDE - Better Life Index - Portugal,” n.d.). Moreover, the Portuguese appear to have lower levels of well-being and happiness when compared to other European countries, such as Finland or Denmark which are at the top of the happiest countries in the world (Junça-Silva & Coelho, 2022; OECD, 2021). For instance, Portuguese adults reported, on average, a 5.4 punctuation to rate their well-being, which was above the medium on a scale from 0 to 10 and is still one of the lowest scores in the OECD, where the average was 6.5. In this rank, Portugal appeared in 31<sup>st</sup> place (OECD, 2021). One reason might rely on the Portuguese’s lower rates of financial satisfaction and well-being (e.g., Lanz et al., 2018).

Despite this harsh scenario, the Portuguese’s financial well-being or financial satisfaction has been so far disregarded (Junça-Silva, 2022), as most studies that have explored their well-being have been focused on subjective or psychological well-being (e.g., Junça-Silva et al., 2022). One exception is the study conducted by Lanz et al. (2018) but this aimed to validate a measure of subjective financial well-being across countries and did not explore its predictors. Moreover, the studies focused on the Portuguese’s well-being have not considered financial predictors such as financial knowledge, attitudes, behaviours, or status, as proposed by Joo (2008). Thereby, in a context marked by a lower rate of well-being and happiness, and a significant disparity between poverty and wealth, it makes it even more relevant to understand what relies beneath on.

Therefore, the main goal was to test, for the Portuguese context, the overall model developed by Gerrans et al. (2014) to understand how the antecedents of financial well-being influence it, and how this, in turn, will affect the Portuguese’s overall well-being.

## Theoretical reasoning on well-being

Well-being is an important issue for individuals and organizations (Diener *et al.*, 2020) because if a person is happier, the likelihood of success and productivity will be higher (Cropanzano & Wright, 2001). The individuals' search for happiness is old. One of the main quotes of Aristotle was "happiness is the meaning and the purpose of life, the whole aim and the end of human existence" (Kesebir & Diener, 2008, p. 69). Therefore, happiness is and will be a preponderant factor in human life.

Well-being is a complex phenomenon and there is not one consensual definition; instead, there are different ways to understand and define it. In the economic field, for instance, a higher income maximizes the availability of certain things that may satisfy individuals' needs which, in turn, enhances well-being (Diener, & Seligman, 2004). Accordingly, income is synonymous with financial well-being (Sorgente & Lanz, 2017).

On the other hand, in the psychological field, there are two major approaches to understanding well-being: the eudaimonic and the hedonic (Ryan & Deci, 2001). In the eudaimonic perspective, well-being is more than pleasure or happiness, it is the fulfillment of one's true potential (Ryff, 1989); accordingly, a happy life is a meaningful life. In contrast, the hedonic perspective relies on happiness *per se*, that is, the pursuit of pleasurable moments and avoidance of painful ones (Ryan & Deci, 2001). In this perspective, a happy individual is satisfied with life, avoids pain, and frequently experiences pleasure (Kahneman *et al.*, 1999). Subjective well-being (SWB) is framed in the hedonic approach; it includes two components: cognitive (life satisfaction) and affective (frequent positive affect and relative absence of negative affect) and can be thereby defined as "people's affective responses, domain satisfactions, and a global

judgment of life satisfaction” (Patel & Wolfe, 2019, p. 2). In this study, we will focus on subjective well-being.

### **Financial Well-being**

Financial well-being is the main predictor of overall well-being (Van Praag *et al.*, 2003). Therefore, one can conclude that money is essential for humans because they spend their lives earning and spending it to satisfy their needs (Diener & Biswas-Diener, 2002). Hence, it is important to understand the relationship between financial well-being and SWB, because, in the framework of SWB, financial well-being has been disregarded.

Brüggen *et al.* (2017, p. 229) defined financial well-being as “the perception of being able to sustain current and anticipated desired living standard and financial freedom”. Moreover, financial well-being has a subjective and an objective dimension which are, respectively, financial satisfaction and economic well-being. The latter consists, mostly, of income (Sorgente & Lanz, 2017) and other financial indicators. In contrast, the subjective approach is a more comprehensive perspective because it addresses financial issues and financial well-being as a whole phenomenon.

Gerrans, *et al.* (2014) used a different concept to describe financial well-being - personal financial wellness - which Joo (2008) defined as “a comprehensive, multidimensional concept incorporating financial satisfaction, the objective status of financial situation, financial attitudes, and behavior that cannot be assessed through one measure” (p. 23). Indeed, Joo (2008) used a functional definition - “a state of being financially healthy, happy, and free from worry” (p. 23), to address the importance of a person’s financial health, which results in assessing the financial satisfaction, financial attitudes, and financial behaviors. Similarly, Rehman *et al.* (2014, p. 1) stated that financial wellness is “the knowledge and having control about personal finances that

make one feel satisfied in the existing situation and also means, one's ability to mobilize finances in a foreseeable future situation". Therefore, one can conclude that financial wellness is a sub-dimension of financial well-being, which can be used as a measure, such as financial satisfaction (Abdeldayem & Aldulaimi, 2022; Rutherford & Fox, 2010).

Concerning this, Gerrans et al., (2014) adapted the model of Joo's (2008) to explain the relationship between the antecedents of financial well-being and financial satisfaction. The antecedents of financial well-being included financial knowledge, financial status, financial behavior, and financial attitudes (Brüggen *et al.*, 2017; Gerrans *et al.*, 2014; Joo, 2008). However, each one impacts differently on perceived financial satisfaction. Accordingly, for a positive financial situation, which has effects on well-being, these components are crucial.

**Financial knowledge.** This was the most studied variable. Financial knowledge is defined by Sorgente and Lanz (2017, p. 30) as "the information and preparation on financial matters that an individual possesses" and is a component of cognitive psychology (Gerrans *et al.*, 2014). Specifically, Lusardi (2012, p. 26) defined it as "the knowledge of basic financial investment concepts such as inflation and risk diversification and the capacity to do calculations related to interest rates". Therefore, financial knowledge is the assimilation of all the available financial information which, in turn, facilitates the best financial decisions. This knowledge can be perceived by different channels such as family, friends, media, and the internet (Chan, *et al.*, 2012).

Financial markets are expanding and offer diverse products which are difficult to understand (Lusardi, 2012). Therefore, having the ability to understand it, will make an impact on making the best financial decisions. Recent studies, about financial well-being, showed that financial skills are critical for economic and social welfare (Bailey, 2019; Brüggen *et al.*, 2017; Netemeyer *et al.*, 2018; Norvilitis *et al.*, 2006; Patel & Wolfe, 2019;

Vlaev & Elliott, 2014), as well as a plan for retirement (Lusardi, 2012). Moreover, Netemeyer *et al.* (2018) showed that financial knowledge had a positive effect on increasing expected future financial security and decreasing the current money management stress. Furthermore, Joo's studies (2008; Joo & Grable, 2004) evidenced that financial literacy, not only had an impact on financial wellness but also on financial attitudes, which led to better financial behaviors and decreased materialism (Gutter & Copur, 2011). Therefore, the perceived knowledge influences individuals' attitudes and their actual behavior (Chan *et al.*, 2012; Shim, *et al.*, 2010) and, as a result, improves positive financial decision-making (Loibl & Hira, 2005; Shim *et al.*, 2010). For example, a less knowledgeable person will easily incur higher fees in borrowing money from a bank or is likely to have difficulties managing the debt. So, it is expected that:

**H1a:** Financial knowledge will be positively related to financial satisfaction.

**Financial status.** Financial status was defined by Joo (2008) as a desirable objective status composed of income, debt, net worth, and household wealth (Gerrans *et al.*, 2014); but the most common measure is income (Xiao, Tang, & Shim, 2009). Similarly, Rutherford and Fox (2010, p. 469) argued that an: "objective status refers to the unbiased and quantifiable aspects of a person's economic position". Moreover, some studies used financial ratios or financial solvency as items of financial status (Joo, 2008; Joo & Grable, 2004). Therefore, financial status includes all the economic possessions and financial responsibilities held by an individual. Additionally, the financial support received influences financial status (Chan *et al.*, 2012). This support can be provided by family, friends, and banks and can either help to maintain a healthy financial status or aggravate the financial situation.

In addition, financial status is related to financial satisfaction because individuals tend to compare their financial status with others which will, directly, affect their



financial satisfaction (Joo & Grable, 2004). Moreover, financial status satisfaction includes the absence of financial difficulties (Joo & Grable, 2004). For instance, Xiao et al. (2009) showed that subjective satisfaction with financial status increased overall life satisfaction, financial balance, and savings, and had a negative impact on debt and expenses. Thus, when individuals are financially secure, they tend to be happier (Gutter & Copur, 2011). Thus, we expect that:

**H1b:** The financial status will be positively related to financial satisfaction.

**Financial behavior.** This variable was defined as “the behavior of the individual in terms of managing his/her money” (Sorgente & Lanz, 2017, p. 30); and as “any human behavior that is relevant to money management” (Gutter & Copur, 2011, p. 704). Joo (2008) referred that financial management, financial adjustment, and financial empowerment are important for proper behaviors. These actions were defined by Serido et al. (2010; 2010) as financial coping behaviors. Indeed, individuals are more satisfied when they engage in adequate financial behaviors which, in turn, ameliorates their financial situation. Examples of financial behaviors are checking and controlling finances (e.g., budgeting and saving) and living within the financial possibilities (Sorgente & Lanz, 2017; Vlaev & Elliott, 2014). These financial behaviors can be risky or healthy, and therefore can impact negatively or positively the individuals’ financial satisfaction.

To become financially healthy, individuals should engage in correct behaviors because it impacts financial well-being (Brüggen *et al.*, 2017; Joo & Grable, 2004; Xiao *et al.*, 2009). So, the knowledge is irrelevant if individuals do not use it (Drever *et al.*, 2015). This impacts, not only the financial dimension of well-being but also other domains (Xiao *et al.*, 2009) such as health. It has been shown that positive financial behaviors are positively related to financial satisfaction (Gutter & Copur, 2011; Joo, 2008; Shim *et al.*, 2009; Xiao *et al.*, 2009), expected future financial security (Netemeyer

et al., 2018), and to decreases in financial stress (Gutter & Copur, 2011). For example, impulsivity is related to a higher likelihood of bad financial behaviors (Fernandes, *et al.*, 2014). Additionally, Joo and Grable (2004) evidenced that financial behavior was the main predictor of financial satisfaction. Therefore, it is expected that:

H1c: Financial behavior will be positively related to financial satisfaction.

**Financial attitudes.** Financial attitudes were defined as “a person’s subjective perception of personal finances that is used to measure financial well-being” (Joo, 2008, p. 26); it has a key role in financial satisfaction. Moreover, Sorgente and Lanz (2017, p. 284) used a broader definition: “financial attitudes indicate certain personal dispositions of the person concerning financial issues”. Financial attitudes can be either positive or negative depending on the expression of favor or disfavor of a financial matter, which leads have contrasting effects on behaviors, and financial satisfaction. For example, different levels of risk tolerance can have, positive or negative, effects on individuals (Brüggen *et al.*, 2017; Joo & Grable, 2004). An example of a negative financial attitude is the belief that “*It is better to live your life and enjoy it, rather than worry about money*” which promotes reckless financial behaviors in extreme cases (Vlaev & Elliott, 2014).

The attitudes that a child or young adult perceives, in their childhood, will influence the attitudes that they will make when growing up (Drever *et al.*, 2015). So, it is important to start educating earlier and have healthy financial communication in the household, never forgetting that the values acquired will significantly impact the subsequent attitudes (Shim *et al.*, 2009). Shim et al. (2009) also showed that, in young adults, self-actualizing values increased positive financial attitudes. Thus, financial attitudes are dependent on several factors such as education, knowledge, age, and gender (Falahati & Fazli Sabri, 2015).

Financial attitudes are important to predict financial satisfaction (Davis & Schumm, 2009; Joo, 2008; Joo & Grable, 2004). A person with stronger insights and proactive financial attitudes tends to be more financially satisfied (Joo & Grable, 2004). For instance, Gutter and Copur (2011) found that, when students had positive financial attitudes and behaviors, they tended to present higher levels of financial well-being. Moreover, people with positive attitudes toward credit improved, significantly, their financial well-being (Rutherford & Fox, 2010). Therefore, positive financial attitudes will impact, in a positive way, financial satisfaction. So, we expected that:

**H1d:** The financial attitudes will be positively related to financial satisfaction.

### **The mediating role of financial well-being**

Financial well-being is critical because it impacts overall well-being (Joo, 2008). Diverse studies found evidence of a positive relationship between financial satisfaction and well-being (e.g., Netemeyer *et al.*, 2018; Sorgente & Lanz, 2017; van Praag *et al.*, 2003). When individuals feel satisfied with their financial situation, they tend to be happier. On the opposite, when individuals are unsatisfied with their financial well-being, then their happiness tends to decrease (Lanz *et al.*, 2018). Thus, we expected that:

**H2:** Financial satisfaction will be positively related to overall well-being.

Moreover, financial satisfaction can also serve as a mechanism that explains how financial knowledge, financial status, financial behavior, and financial attitudes impacts on individual's well-being. Hence, financial satisfaction is likely to mediate the relationship between its antecedents and overall well-being (Joo, 2008). For instance, Archuleta *et al.* (2011) demonstrated that financial satisfaction explained why financial stressors were negatively related to marital satisfaction. More recently, Sha *et al.* (2019) evidenced that salary satisfaction was a mediator between commuting time and subjective

well-being. In summary, based on the literature and the model proposed by Gerrans et al. (2014), we defined the following hypotheses (figure 1):

**H3a:** Financial satisfaction will mediate the relationship between financial knowledge and overall well-being.

**H3b:** Financial satisfaction will mediate the relationship between financial status and overall well-being.

**H3c:** Financial satisfaction will mediate the relationship between financial behavior and overall well-being.

**H3d:** Financial satisfaction will mediate the relationship between financial attitudes and overall well-being.

## FIGURE 1

### Method

#### Participants and procedure

The overall sample included 262 participants, of which 50% were female. Most of them lived in metropolitan cities (e.g., Lisbon (30.9%), Coimbra (35.9%), and Porto (11.5%). The most representative age groups were from 18 to 25 years old and from 36 to 45 years old, both with 25.2%, followed by those who were aged between 26 to 35 years old (19.1%), and from who were aged between 46 to 55 years old (18.3%), and at last, from those with ages from 56 to 65 years old (11.5%). The income after taxes that participants reported more often ranged between 1.001€ to 1.500€ (33.2%) and, only, 2.7% reported receiving more than 3.001€. Finally, most of the participants reported a household composed of four members (31.3%) followed by three (25.2%).

Firstly, we collected data online and shared it among our personal and professional networks between January and March 2020. The anonymity and confidentiality of the

data were guaranteed to the participants and at the beginning of the questionnaire, there was an explanation of the study.

## **Measures**

The questionnaire was based on the Gerrans, Speelman, and Campitelli (2014) research. However, there were slight modifications to adapt it to the Portuguese financial context.

**Personal Well-being.** To measure overall well-being, we used the variable personal well-being. It was measured using the 9-item original scale of Gerrans et al. (2014) which evaluated how satisfied was the individual in several domains of life. Therefore, items included satisfaction with life in general, the standard of living, health, achievements, relationships, security, sense of community, future, and religion. An example of an item is “How satisfied are you with your standard of living?”. Participants answered on a 10-point Likert scale (0 – *completely dissatisfied* to 10 – *completely satisfied*). The measure presented a good internal consistency (Cronbach’s alpha = .81).

**Financial Satisfaction.** We used the original 6-item scale of Gerrans et al. (2014), which reflected how the person perceived their financial situation. Moreover, some examples of items are “On a scale of 1 to 10, where one is “*overwhelming stressed*” and ten is “*no stress at all*”, what do you feel is the level of financial stress today?” and “On a scale of 1 to 10, where one is “*completely dissatisfied*” and ten is “*completely satisfied*”, how satisfied are you with your present financial situation?”. This measure presented a Cronbach’s alpha of .82.

**Financial Knowledge.** This was the variable that we made some changes to. First, in the original survey, were included items related to financial general knowledge, knowledge of financial products, and superannuation general knowledge. However, in

this study, we eliminated the items related to the last measure (superannuation general knowledge) because it did not apply to the Portuguese population, as our national retirement income calculation is different from the Australian one. Second, there were changes in the second item of financial general knowledge, because the Portuguese Goods and Services Tax (IVA) was different compared to the Australian Tax (GST). At last, in the knowledge of financial products dimension, the fourth item was adapted to the Portuguese context, because it was different from the Australian Securities and Investment Commission. So, in this study, this variable presented two dimensions, financial general knowledge, and knowledge of financial products which were measured by the original scale of Gerrans, et al. (2014). The first one included six items evaluating the individual's knowledge about broad financial issues (e.g., "If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have at least as much buying power in a year?"). The scale was nominal and verified whether the individuals answered correctly the question about financial knowledge (Cronbach' alpha = .51). Regarding the knowledge of financial products, it referred to a specific knowledge acquired by individuals' life experiences. It had five items regarding knowledge of loans, bank procedures, and actions (e.g., "If someone is not able to make the repayments on a secured loan, is it the organization that lent them money allowed to sell the assets that were used as security for the loan?") answered in a nominal scale (Cronbach alpha of .62).

**Financial Behaviour.** We used two items (Gerrans *et al.*, 2014) to evaluate if a person has had any contact with some finance professionals ("Have you consulted any of the following people regarding your finances over the last 5 years?") and if s/he has calculated the amount for the retirement ("Have you identified a figure for how much per year you will need to live on when you retire?"). These two items used a nominal

scale. Because the items were different between them, the correlation was .009 meaning that they were not significantly related between them.

**Financial Attitudes.** We used two items (Gerrans *et al.*, 2014) that analyzed the degree of importance that financial information had for participants (“In your opinion, how important is it for people like you, to keep up to date with what is happening with financial matters generally, such as the economy and the financial services sector?”), and what was their attitude about retirement (“I don’t think it matters much about superannuation or planning and saving for retirement because the government will make up the gap”). The latter was answered on a 5-point Likert scale (1- *strongly disagree* to 5 – *strongly agree*). The correlation between the items was .19 ( $p < .01$ ) suggesting that both items were closely related to each other.

**Financial Status.** We used the 3-items from Gerrans *et al.* (2014) which included household income, assets, and debts. However, the options were adjusted to the Portuguese context, in terms of values. The values were chosen considering the annual average household income reported in *Pordata* (in 2018 was 33.205,1€) (e.g., “Which of the following, best describes your total annual household income from all sources, including returns from investments, before tax?”). These items were answered using an intervals scale (1 – 8.000€ or less; 2 – between 8.001€ and 20.000€; 3 – between 20.001€ and 40.000€; 4 – between 40.001€ and 60.000€; 5 – more of 60.001€). However, in the household debts item, we added more intervals (Cronbach’s alpha = .60).

### **Data analyses**

To test for common method bias we used the structural equation modeling (SEM) procedure as recommended by Spector (2019). As such, we conducted a Harman one-factor test to estimate the extent of the bias. First, we conducted an exploratory

factor analysis that resulted in six components explaining 62.15% of the total variance. Second, we performed Harman's one-factor test and it was observed that the single factor accounted for only 17.89% variance, which was much below the standard value of 50% proposed by Podsakoff et al. (2012), thus the common method variance issue was not severe for this study. At last, we performed four confirmatory factor analyses (CFA) on the main variables of the study to test for their independence by using the software JASP version 0.14.1. In line with convention, we used a combination of fit indices – comparative fit index (CFI), Tucker–Lewis Index (TLI), standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA) – to analyse the adequacy of the model and compared the hypothesized model with several reasonable alternative measurement models (Bentler & Bonett, 1980). The CFI and TLI scores above 0.88 and the SRMR and RMSEA scores below 0.07 were assumed as a model with a good fit to the data (Hair et al., 2010). We tested five alternative models. Model 1 was the hypothesized six-factor model comprising separate indicators. Model 2 was a five-factor model where financial satisfaction and overall well-being were combined into a single factor. Model 3 was a three-factor model where all the antecedents were combined into a unique factor. Model 4 was a two-factor solution in which all antecedents of financial satisfaction were loaded onto a single factor, as well as financial satisfaction and overall well-being. At last, Model 5 tested a unifactorial solution where all the variables were loaded onto a single factor. Table 1 shows that our hypothesized model (Model 1) provided a good fit for the data (CFI = 0.92, TLI = 0.90, SRMR = 0.07 and RMSEA = 0.05), and all other alternative models evidenced a poorer fit. These results together with the Cronbach alpha reliability scores across all the measurement scales evidenced the discriminant and convergent validity of the study; hence, we proceeded with the test of hypotheses.



--TABLE 1 ABOUT HERE--

To test hypotheses 1 and 2, we performed diverse linear regression analyses. To test the overall mediation model, we followed the recommendations of McDonald (2010). Hence, we tested the mediation model through a structural equation model (SEM) using JASP software. JASP was considered suitable for the analyses as we included four independent variables (financial status, financial knowledge, financial attitudes, and financial behaviour) in the model tested and we had a sufficiently large sample size to allow for latent SEM. We ran bootstrap analyses (500 iterations) to get stable regression coefficients for all models. We report unstandardized regression coefficients with bias-corrected lower-bound and upper-bound confidence intervals.

## Results

Table 2 presents the descriptive statistics and the correlations between the variables.

### Hypotheses testing

**The path from financial predictors to financial satisfaction.** Hypothesis 1 stated that all the antecedents (financial knowledge, financial status, financial behavior, and financial attitudes) were positively related to financial satisfaction. As recommended by Joo (2008), we subdivided this hypothesis for each predictor as follows: hypothesis 1a (financial knowledge: FK), hypothesis 1b (financial status: FS), hypothesis 1c (financial behavior: FB), and hypothesis 1d (financial attitudes: FA). Therefore, to test these hypotheses, we performed a multiple linear regression analysis ( $FW = \alpha + \beta_1 * FK + \beta_2 * FS + \beta_3 * FB + \beta_4 * FA + \epsilon$ ). In the equation, each  $\beta$  coefficient represents the unique contribution of each financial predictor for financial satisfaction.

The results showed that 3% of the variation of financial well-being was explained by the independent variables introduced in the model ( $F_{(4,257)} = 3.12, p = .016$  and  $\bar{R}^2 = .03$ ). The model was represented by the following equation:  $FW = 4.521 + .022*FK + .301*FS + .060*FB + .170*FA + \varepsilon$ . If the value of each independent variable was equal to zero, the estimated value for financial satisfaction would be 4.521. However, the results were different between the antecedents.

***The relationship between financial knowledge and financial satisfaction.*** H1a suggested that financial knowledge would have a positive relationship with financial satisfaction; however, the results showed that financial knowledge did not have a significant effect on financial satisfaction ( $\beta_1 = .022, p = .94$ ). So, this hypothesis was not supported.

***The relationship between financial status and financial satisfaction.*** H1b expected that financial status would have a positive relationship with financial satisfaction. The findings demonstrated that financial status had a positive effect on financial satisfaction ( $\beta_2 = .301, p = .002$ ). This means that keeping all the other independent variables constant, an increase of one unit in financial status increased financial satisfaction by .301 units. Thus, H1b was supported.

***The relationship between financial behaviour and financial satisfaction.*** H1c suggested that financial behaviour would have a positive relationship with financial satisfaction. The results showed that this relation was not statistically significant ( $\beta_3 = .060, p = .46$ ). So this hypothesis was not supported.

***The relationship between financial attitudes and financial satisfaction.*** At last, H1d expected that financial attitudes would have a positive relationship with financial satisfaction. The results demonstrated that financial attitudes were not significantly

related to financial satisfaction ( $\beta_4 = .170, p = .38$ ). Therefore, hypothesis 1d did not receive support.

**The path from financial satisfaction to overall well-being.** The second hypothesis suggested that financial satisfaction would be positively related to overall well-being. To test it, we conducted a simple linear regression analysis with overall well-being as the dependent variable and financial satisfaction as the independent one ( $OW = \alpha + \beta * FW + \epsilon$ ). The results suggested that 32% of the variation in overall well-being was explained by financial satisfaction ( $F_{(1,260)} = 120.14, p < .001, R^2 = .32$ ). The equation model is represented as follows:  $OW = 5.011 + .356 * FW + \epsilon$ . Thus, if the average financial satisfaction was equal to zero, the estimated value for overall well-being would be 5.011. Moreover, a  $\beta = .356, p < .01$ , signified that, for each unit variation in financial satisfaction, there was an increase of .356 units in overall well-being. So, financial satisfaction had a significant and positive effect on overall well-being, lending support for h2.

**The mediating role of financial satisfaction.** Hypothesis 3 aimed to test the full model and hence expected that all the antecedents of financial satisfaction (financial status, knowledge, attitudes, and behaviour) would be related to overall well-being through the mediation of financial satisfaction. The results of the mediation model support Hypothesis 3 partially because only financial status showed a significant indirect effect. The overall fit indices of this model show adequate fit ( $X^2_{(258)} = 680.96, GFI = .99, CFI = .99, TLI = .95, \text{ and } RMSEA = .04$ ). Moreover, the  $R^2$  for financial satisfaction was 0.05, and for overall well-being was 0.34. We report unstandardized

regression coefficients with bias corrected lower bound and upper bound confidence intervals in Table 3.

The indirect effect of financial knowledge on overall well-being through financial satisfaction was 0.08 ( $p > 0.05$ , CI 95% [-0.13, 0.29]). Hence, h3a was not supported. The indirect effect of financial status on overall well-being through financial satisfaction was 0.10 ( $p < 0.01$ , CI 95% [0.04, 0.16]). Hence, h3b was supported. The indirect effect of financial attitudes on overall well-being through financial satisfaction was 0.05 ( $p > 0.05$ , CI 95% [-0.07, 0.17]). Hence, h3c was not supported. At last, the indirect effect of financial behaviour on overall well-being through financial satisfaction was 0.02 ( $p > 0.05$ , CI 95% [-0.02, 0.07]). Hence, h3d was not supported. Standardized coefficient estimates associated with Hypothesis 3 are presented in Figure 2.

TABLE 3, FIGURE 2

### **Summary of findings**

Overall, the findings showed that regarding the first path of the model (the relationship between financial knowledge, attitudes, behaviour and status and financial satisfaction), only financial status significantly influenced financial satisfaction. We did not find evidence for the relationship between financial knowledge, attitudes, behaviour, and financial satisfaction). Regarding the second path of the model, that is, the relationship between financial satisfaction and overall well-being, we found empirical evidence for the positive and significant path. Last, for the overall model, we only found evidence of the indirect relationship between financial status and overall-wellbeing through financial satisfaction.

## Discussion

The main goal of this study was to test the model developed by Gerrans et al. (2014), which explored the relationship between financial well-being' predictors (financial status, knowledge, behaviour, and attitudes), financial satisfaction, and overall well-being. This is the first study exploring the role of specific financial predictors for Portuguese financial satisfaction and overall well-being. Portugal is a low-income country with average levels of happiness; hence, it is crucial to understand whether financial issues may contribute to their overall well-being.

### Theoretical implications

First, the findings show that only financial status significantly influences financial satisfaction. That is, the higher the perceived financial status, the higher the Portuguese' financial satisfaction. This was contradictory to what has been demonstrated empirically because diverse studies have shown that financial knowledge is the most significant one (Bailey, 2019; Brügggen *et al.*, 2017; Netemeyer *et al.*, 2018; Norvilitis *et al.*, 2006; Patel & Wolfe, 2019; Vlaev & Elliott, 2014). On the other hand, Xiao et al. (2009) evidenced that financial behavior was the better predictor of financial well-being (compared to financial status). However, this does not happen in Portuguese settings. The explanation can be related to income as it is a component of financial status, making it a crucial factor for individuals' financial health (Joo, 2008). Another reason for this result might be the fact that Portugal has, recently, recovered from an economic crisis, in which individuals' economic status has been significantly affected. The financial status is a condition more difficult to change, in the short-term, when compared to the other antecedents, because one can improve financial knowledge (learn about economic issues), have better financial attitudes (understand where to invest given the economic context), and correct financial behaviors (e.g., make good investments),

but it is still difficult to improve, alone, the financial status in the short-term. Therefore, it might be plausible that people value more status, than knowledge, and as such, it is not surprising that it appears to be the only predictor of financial well-being. In addition, Portuguese working adults tend to value their perceived social and economic status more than other financial issues. This is commonly acknowledged by the increasing car and fancy houses credit they engage with. It is also noted in their fancy clothes and shoes they use to impress ("the dress to impress culture"). As such, it might explain why financial status positively contributes to Portuguese feeling satisfied with their financial condition.

On the other hand, the fact that financial behaviours, attitudes, and knowledge do not significantly account for the Portuguese's financial satisfaction may be explained by their tendency to undervalue these dimensions and overestimate their status. Indeed, Portuguese working adults tend to ignore financially effective behaviours and attitudes to the increased number of high-risk credits they are bound to. Moreover, as they overestimate their image and status (financial status), they likely prefer to be tied to a credit of a fancy modern car, than purchase stock market shares from rising enterprises (financial behaviour and knowledge) or be enrolled in retirement savings plans (financial attitudes). Hence, these reasons may support why Portuguese working adults feel more satisfied by having a higher financial status and why their financial knowledge, attitudes, and behaviours do not significantly rise their financial satisfaction.

Nevertheless, all the antecedents present a positive effect on financial well-being, which reveals that individuals who have a high status, correct financial behaviors, better financial knowledge, and adequate financial attitudes, tend to achieve higher levels of well-being and satisfaction which is in line with the original study of

Gerrans et al. (2014) and with several other studies (e.g, Abdeldayem et al., 2021; Brügger *et al.*, 2017).

Second, the results show that financial well-being is positively related to overall well-being. Thus, one can conclude that overall well-being is a multidisciplinary concept with numerous domains, in which the financial one has a positive and significant effect. Moreover, this positive impact is relevant and means that financial well-being is essential to increasing individuals' overall well-being. Therefore, when individuals are financially satisfied, they tend to be more self-confident which may facilitate their goal achievement and success (Loibl & Hira, 2005). This is consistent with the eudaimonic perspective (Ryff, 1989), and with the hedonic one (Diener, 1984). Accordingly, overall well-being increases life satisfaction, contributing, therefore, to higher levels of happiness. Moreover, it is noteworthy that the financial domain has crucial implications on other well-being domains, such as health (Arber et al., 2014). Therefore, feeling financially happy tends to increase individuals' health because it impacts on housing environment and access to facilities and health care services.

Third, the mediating effect is only significant between financial status and overall well-being through financial satisfaction, which again reinforces the importance of financial status for satisfaction and well-being within the Portuguese context. Plus, this result demonstrates that Portuguese individuals tend to value more "image" than saving behaviors or positive financial attitudes regarding their financial situation. This might be explained by the Portuguese culture - a culture in which individuals tend to value their image and status (e.g., buying a fancy car instead of saving money), over other healthy financial aspects (e.g., investing savings).

### **Limitations and future directions**

This study has some limitations. First, we used only a quantitative method of collecting data. This may have led to missing important information that can justify these results. Therefore, future studies would rely on mixed methods, such as the combination of quantitative and qualitative ones. Second, the use of self-reported measures might have biased the data, due to the presence of social desirability answers and, as such, limits the generalization of these results. Third, although the sample is a good one, it is needed for future research to amplify it and access these variables in other contexts and countries. Fourth, future studies would test the model and include other well-being indicators, such as health (physical or psychological), and analyze whether financial satisfaction impacts eudaimonic well-being, as in this study, we only analyze hedonic well-being.

Contrary to our predictions, financial status has greater importance when compared to financial knowledge. In this sense, more studies are needed to understand the main contributor to financial well-being. Plus, future studies would add some items to the original survey, or even, add some open questions to it to understand deeper these relations more. Although the outcomes of overall well-being had been studied, the outcomes of financial well-being have not. So, it is needed to explore the positive and negative, consequences because financial well-being might influence working ability and work engagement. Therefore, further studies would investigate this matter at the individual, group, and organizational levels.

It is noteworthy that the financial well-being phenomenon is still an emergent research area, so it is needed future development and investigation on the subject and an agreement on the definition of it as a construct and its predictors. Thus, it is important to study the link between financial well-being and health because it can have effects on the relationship to overall well-being. So, a multidisciplinary study should be made to



understand the implications that financial well-being has on individuals. Additionally, as this study reveals, the antecedents of financial well-being should be further explored because they can have different meanings depending on the context and culture; they can be perceived in different ways by different cultures, impacting, therefore, different financial satisfaction.

### **Practical implications**

The results show that financial satisfaction has a positive effect on overall well-being. First, organizations should start evaluating their workers' financial satisfaction. Happier workers are productive workers (Rutherford & Fox, 2010). Second, organizations should invest in financial practices (e.g., workshops), adjusted for all age groups, that might increase workers' satisfaction and, at the same time, promote career progression, and reduce absenteeism and turnover ( Abdeldayem et al., 2021; Loibl & Hira, 2005).

Given the economic context of Portugal – a low-income country - organizations should increase incomes and benefits because these results suggest that financial status is the main predictor of financial satisfaction. So, it is crucial to rise individuals' economic status to make them happier.

The results show that financial knowledge does not significantly influence financial satisfaction. The government should be aware of this result and take it as a strategy to counter this trend. For example, measures should be taken in education, where children/young people could have access to subjects such as financial health that would allow them, from an early age, to develop economic and financial knowledge and, in turn, that could translate into the future, in more appropriate financial attitudes and behaviors. By valuing financial knowledge from an early age, it is possible that, in adults, they have more appropriate financial attitudes and behaviors, not valuing their

financial status so much at the expense of bad investments (such as high-risk credit to support a modern car). Organizations can also take steps to develop workshops focused on preventing high-risk financial behavior and learning financial knowledge.

### **Conclusion**

Everyone's goal is to have a "happy life". However, the role of financial satisfaction only recently has received attention. This study provides unexpected evidence of financial status as the main contributor to the financial satisfaction literature. So, for Portuguesees working adults financial status is the individuals' priority, and not financial knowledge. Nevertheless, financial satisfaction contributes significantly to increasing overall well-being. Therefore, organizations and individuals should set their minds to increasing their financial well-being and develop practices to support their financial satisfaction.

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## Tables

**Table 1.** Confirmatory factor analyses model fit indices.

Measurement model comparison	SRMR	CFI	TLI	RMSEA
Model 1 (6-factor model: antecedents (FK, FA, FB, FS), financial satisfaction and overall well-being)	0.06	0.98	0.98	0.05
Model 2 (5-factor model: all antecedents (FK, FA, FB, FS) plus financial satisfaction and overall well-being merged)	0.10	0.95	0.95	0.10
Model 3 (3-factor model: all antecedents merged (FK, FA, FB, FS), financial satisfaction and overall well-being)	0.09	0.96	0.95	0.08
Model 4 (2-factor model: antecedents merged (FK, FA, FB, FS), and overall wellbeing and financial satisfaction merged)	0.14	0.74	0.73	0.14
Model 5 (1-factor model: all measures loaded on a single latent factor)	0.15	0.76	0.75	0.17

*Note.*  $N=262$ ; SRMR = standardized root mean square residual; CFI = comparative fit index; TLI =

Tucker–Lewis index; RMSEA = root mean square error of approximation. FS: Financial status; FK:

Financial knowledge; FA: Financial attitudes; FB: Financial behaviour.

**Table 2 -** Descriptive statistics and correlations between variables.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1.PWB	7.12	1.14						

2. Financial well-being	5.94	1.80	.56**				
3. Financial knowledge	2.06	.42	-.02	-.06			
4. Financial status	2.81	1.21	.16**	.20**	-.33**		
5. Financial behavior	4.26	1.36	.05	.04	-.08	-.03	
6. Financial attitudes	1.57	.58	-.02	.07	.13*	.08	-.07

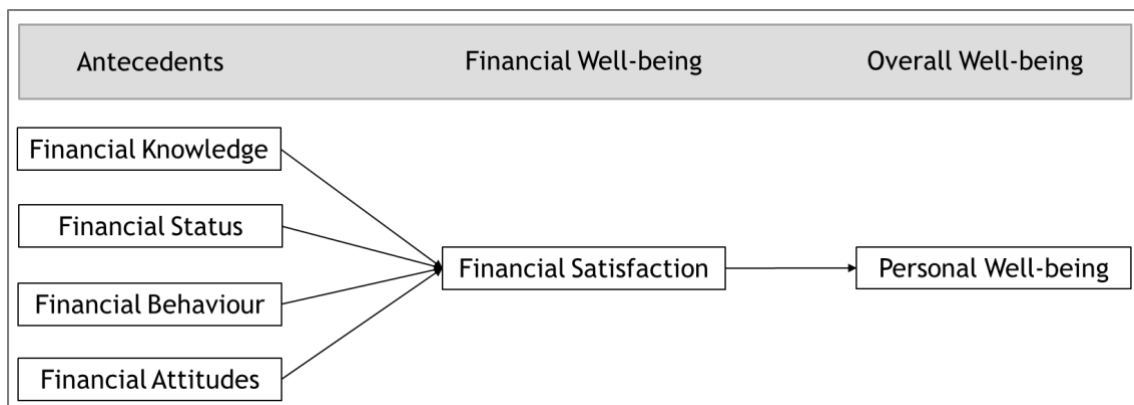
Note. N= 262, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . PWB = Personal well-being.

**Table 3** - Indirect effect of financial satisfaction in all variable relations.

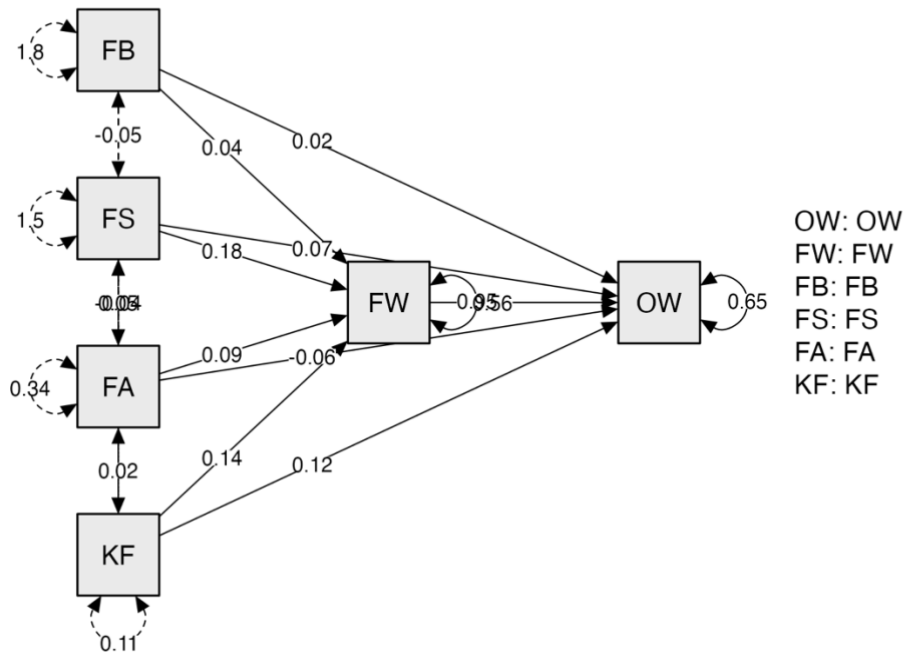
Indirect effect	Estimate	SE	LLCI95%	ULCI95%
FK→FW→ OW	.08	.02	-.29	.07
FS→FW→ OW	.10**	.03	.04	.16
FB →FW→ OW	.02	.02	-.03	.07
FA→ FW→ OW	.05	.06	-.07	.16

Note. N = 262. Sample size bootstrapped = 5000; SE: Standardized error. CI: Confidence Interval; LL: Lower limit; UL Highest limit. \*\* $p < .01$ . FK: Financial knowledge; FS: Financial status; FB: Financial behaviour; FA: Financial attitudes. FW: financial satisfaction; OW: Overall well-being.

### Figures



**Figure 1.** The research model to be tested.



**Figure 2.** Mediation model with SEM standardized parameter estimates.  $N = 262$ . OW: Overall well-being; FW: Financial satisfaction; FB: Financial behaviour; FS: Financial status; FA: Financial attitudes; KF: Financial knowledge.