



Re-considering the linkage between the antecedents and consequences of happiness



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ABSTRACT

A growing number of studies examine the antecedents of happiness but only a handful of them appear to undertake an analysis of its consequences. Employing a unique cross-sectional data set of 413 adults, we examine the relationship of the antecedents of happiness on its outcomes via mediation analysis. We show that the web of relations in this domain is more complicated than it is commonly understood. We provide empirical evidence that income enhances individuals' life satisfaction. We also find a non-linearity in the relation of age to frugality and to attitude towards debt. Whereas a positive relationship exists between employment and frugality, income negatively affects frugality. We find strong evidence to suggest that life satisfaction reverses the relationships of employment and income to frugality. Additionally, we obtained empirical evidence to suggest that employment, income and sex positively affect attitude towards debt. Furthermore, we provide empirical evidence that the relationships of age and income to attitude towards debt are complementarily mediated by frugality while frugality competitively mediates the relationship of employment to attitude towards debt. Finally, the results reveal that there exists an indirect-only effect of life satisfaction to attitudes towards debt through frugality.

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1. Introduction

You will never be happy if you continue to search for what happiness consists of

[Albert Camus]

Happiness has been a topic of interest on the part of economists as well as psychologists since the late 1970s (e.g., Easterlin, 1974; Ng, 1997; Oswald, 1997). Life satisfaction is defined as a global assessment of an individual's quality of life according to her chosen criteria (Shin & Johnson, 1978). It is one of the key components of subjective well-being (SWB) (Linley, Maltby, Wood, Osborne, & Hurling, 2009) which is the preferred term in scientific explorations of happiness (Diener, 1984) and is one of three components of SWB along with pleasant affect and unpleasant affect (Heller, Watson, & Ilies, 2006). Life satisfaction refers to the cognitive component of SWB which is found to be different from the other components (Lucas, Diener, & Suh, 1996).

Scholarly interest in happiness research started with Brickman and Campbell's (1971) study which showed that the increases in individuals' wealth and income do not necessarily equate to continuous higher happiness levels via the employment of the adaptation-level theory. Following Brickman and Campbell (1971) and Easterlin's (1974) introduction of Easter-

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lin Paradox, the economics literature appears to have fallen into the trap of a continuous search of the antecedents of well-being while bequeathing the scrutiny of its outcomes to further research (Guven, 2012). Economists, so far, mainly focused on the effects of macroeconomic variables such as unemployment, inflation, marital status, and health status on SWB (Guven, 2012) while studies on the reverse effect remained moot (Kahneman & Krueger, 2006; Kenny, 1999; Lyubomirsky, King, & Diener, 2005).

Experimental studies within the psychology domain show that happier people tend to behave differently than people who are less happy (Guven, 2012) while studies that examine whether these behavioural differences reflect in individuals saving preferences remain fairly scant with the exception of few studies (e.g., Ameriks & Zeldes, 2004; Frey & Stutzer, 2002; Kahn & Isen, 1993). Therefore, this study does not intend to solely provide empirical evidence of what happiness consists of. Rather, to expand the literature, we wish to present evidence of which insights, as they relate to life satisfaction-attitude towards debt association, may be important to incorporate into economics.

The examination of the mechanisms through which life satisfaction may affect economic behaviour at the individual level will be achieved by treating objective external factors as distal predictors of frugality in a model where life satisfaction is a mediator between age, employment status, gender, income, marital status, frugality, and attitude towards debt. In this manner, this article makes an attempt to extend on the never-ending quest of what happiness consists of by moving its focus to the understanding of the effect of life satisfaction on its behavioural consequences as they relate to economics. In this regard, we fill a very important gap in the literature pertinent to life satisfaction and economic outcomes. Although new research posits that the consumers are paying off less debt and that it points towards the fact that the household debt which peaked in 2008 at \$2.6 trillion (Dellande, Gilly, & Graham, 2015), to offer a fresh perspective to the underlying reasons behind consumer debt is quintessential. The importance of this topic specifically stems from the fact that aggregate saving constitutes an important source of funds for economic development and that the recent financial shocks are particularly leading many countries to assign a greater importance to domestic saving (Seguino & Floro, 2003). Accordingly, expanding the extant literature which suggests that happier people have different economic preferences than the less happy individuals, we intend to link the antecedents and consequences of happiness in an attempt to offer a fresh perspective on consumers' inclinations to accrue debt.

The remainder of this study is as follows. Section 2 reports how the objective external factors such as age, employment status, gender, income, marital status, affect subjective well-being. Section 3 discusses the inter-relationship of life satisfaction and frugality. Section 4 provides details of the mediating role of life satisfaction. Section 5 clarifies how consumer attitude to debt relates to our research model. Section 6 reports the research methodology employed in this study. Section 7 provides the empirical evidence. Section 8 presents evidence of robustness for the analyses. Section 9 discusses the consequences for economic policy as well as economic theory. Finally, Section 10 highlights the limitations of this research.

2. A bottom-up approach to life satisfaction

A comprehensive theory of life satisfaction remains scant in the literature (Diener, 1984; Headey, Veenhoven, & Wearing, 1991) and its scrutiny generally adopts two main approaches: top-down and bottom-up (Diener, 1984; Headey et al., 1991). The top-down approach treats life satisfaction as a function of stable traits (Diener, 1996) while the bottom-up approach focuses on the role of situations, events and contexts in life (Heller, Watson, & Ilies, 2004; Pavot & Diener, 2008). Heller et al. (2004) suggest that SWB is a product of subjective processes rather than external factors. Although previous studies that show that demographic factors account for only 8–20% of variance in SWB (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976; Kammann, 1983), the economics domain appears to be widely interested in the relationship of objective external factors (e.g., income, age, marital status) to SWB.

Extant studies on the examination of life satisfaction revolve around various attempts to assess the effect of objective external factors on life satisfaction (Guven, 2012). The relationship of age to life satisfaction (Diener, 1984; Diener & Diener, 1996; Mroczek & Kolarz, 1998) as well as subjective well-being (e.g., Blanchflower & Oswald, 2007; Graham, Eggers, & Sukhtankar, 2004), has proved to be negative in various studies. Blanchflower and Oswald (2007) provide evidence of a U-type relationship between age and SWB where SWB hits bottom around the age of 40. Similarly, Graham et al. (2004) present a similar U-type relationship where SWB hits bottom in the first half of 40s in OECD countries. Therefore, the relation of the quadratic form of age to life satisfaction should also be examined in studies pertinent to the scrutiny of SWB.

Marital status has also found to be positively related to life satisfaction (Clarke, Marshall, Ryff, & Rosenthal, 2000; Larson, 1978) and subjective well-being (Price & McKenry, 1988; Stutzer & Frey, 2006; Tsang, Harvey, Duncan, & Sommer, 2003). The effect of marriage on SWB has become a topic of interest in psychology, sociology, and epidemiology (Stutzer & Frey, 2006). The results widely suggest that SWB and marriage goes in parallel with higher happiness levels in a large number of studies for various countries and time periods (Coombs, 1991; Diener, Gohm, Suh, & Oishi, 2000; Myers, 1999; Stack & Eshleman, 1998). The economics domain that focuses on the effect of marriage on SWB provides empirical evidence of a positive relationship in the United States, the European Countries (Di Tella, MacCulloch, & Oswald, 2001) as well as for Latin America and Russia (Graham & Pettinato, 2002).

Calasanti (1996) suggests that gender is also related to life satisfaction. Other studies also provide evidence of the relationship between gender and subjective well-being (Blanchflower & Oswald, 2000; Bonke, Deding, & Lausten, 2007; Mroczek & Kolarz, 1998). Blanchflower and Oswald (2000), where they have utilized a panel data from the United States for between

the years 1970 and late 1990s, found that although women participated in social life more and more, men reported higher SWB than women. Although various studies report a gender gap in SWB, Myers and Diener (1995) suggest that there is almost no difference for women and men in SWB. Conversely, Anand, Hunter, and Smith (2005) highlights slight differences in what makes men and women happy.

Another external objective factor that is found to be related to life satisfaction is income (Diener & Biswas-Diener, 2009; Lykken & Tellegen, 1996; Schwarz & Strack, 1999). The positive relationship of income to SWB, however, is mostly attributable to citizens of lower income countries. Diener and Biswas-Diener (2009), Blanchflower and Oswald (2005) and Frey and Stutzer (2002) provided evidence that increasing income does not necessarily equate to higher SWB levels in higher-income countries such as the United States and Japan. Another factor that is often argued to affect SWB levels is employment status. For instance, Di Tella and Savedoff (2001) provided empirical evidence on the negative relationship between unemployment and life satisfaction. Similarly, Clark and Oswald (1994) showed that the effect of unemployment on life satisfaction was greater in magnitude than the effect of other major life events such as divorce. Other studies also provided evidence on the positive relationship of employment on SWB (e.g., Calvo, 2006; Calvo, Haverstick, & Sass, 2007; Clark & Oswald, 1994; Di Tella et al., 2001). Therefore, we examined relationship of age, marital status, sex, income, and employment status to life satisfaction. The squared term of the age variable is included within the analysis subscribing to previous studies (Blanchflower & Oswald, 2007; Graham et al., 2004).

3. Life satisfaction and frugality

Defined as “a uni-dimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in both acquiring and in-resourcefully using economic goods and services to achieve longer-term goals” (Lastovicka, Bettencourt, Hughner, & Kuntze, 1999:88), frugality has recently become a topic of interest (e.g., Albinsson, Wolf, & Kopf, 2010; Rick, Cryder, & Loewenstein, 2008) since the 2007 global economic crisis that forced consumers to become increasingly frugal (Birkner, 2013; Egol, Clyde, Rangan, & Sanderson, 2010). The extant literature on the relationship between frugality and life satisfaction, so far, approaches the issue from a singular direction: life satisfaction as a consequence of frugality (Brown & Kasser, 2005; De Young, 1996, 2000; Kasser & Sheldon, 2002; Tatzel, 2008). On the other hand, a closer examination of the literature only provides a small number of articles that look into a possible relationship and concludes that happier people may be more inclined to exhibit an environmental morale (Frey & Stutzer, 2002; Guven, 2012; Walker, 1999).

Along with Walker (1999) and Guven (2012), Frey and Stutzer (2002) is one of few studies that reverse the relationship of SWB¹ to frugality. Frey and Stutzer (2002) suggest that happier people are more likely to save and spend different proportions of their income. Additionally, happier people were found to purchase different combinations of goods and services than those who are less happy (Frey & Stutzer, 2002). In the same vein, Guven (2012) showed that happier people have more control over their expenditures. Additionally, in his study where he employed data from the Dutch National Bank Household Survey, Guven (2012) also provided empirical evidence which suggests that happier people tend to save more and spend less. This, according to Guven (2012) originates from the fact that happier people tend to be more concerned about the future. In the light of previous studies, though small in numbers, which reverse the frugality – life satisfaction association, we expect to observe a positive direct relationship of life satisfaction to frugality.

4. The mediating role of life satisfaction

The literature on the relationship between frugality and life satisfaction becomes sparse when the association is reversed. Extant studies that investigate a possible causal relationship of SWB to frugality, however, fail to explore the mechanisms through which the antecedents of life satisfaction may be affecting its consequences. This singular perspective (irrespective of direction of causality) automatically leads to reducing external objective factors to control variables of life satisfaction that need to be partialled out. Due to this reason, this paper also takes on the investigation of the indirect effects of objective external factors on frugality through life satisfaction.

Lastovicka et al.'s (1999) influential paper on frugality suggests that the phenomenon may be approached from five distinct perspectives: religious, economic, early American, self-help and psychological. Similarly, a recent study on the etiology of frugality (Goldsmith, Reinecke Flynn, & Clark, 2014) suggests that people become more frugal as a result of negative economic conditions such as unemployment or low income levels. Pepper, Jackson, and Uzzell (2009) also provides empirical support of a negative relationship of income and employment to frugality. Although not directly related to economic conditions, Pepper et al. (2009) provided empirical evidence of additional external objective factors such as age, gender and marital status also affect frugality. Pepper et al. (2009) showed that age and marital status positively affect frugality while females are less likely to be frugal. In addition to the direction of the direct effects of objective external factors on frugality and considering that SWB enhances frugality, the indirect effects of external objective factors to frugality were also scrutinized.

¹ SWB and happiness are used interchangeably.

5. Consumer attitudes towards debt

The literature on indebtedness which has intensified over the years (Garðarsdóttir & Dittmar, 2012; Gathergood, 2012; Harrison, Agnew, & Serido, 2015) was brought into the economic psychology domain by Katona (1975). Katona (1975) identified three reasons that explain why an individual would spend more than s/he earns: (1) low income; (2) high income accompanied by a strong desire to spend; (3) a lack of motivation to save. In their influential paper on the economic psychology of consumer debt, Lea, Webley, and Levine (1993) classified the variables that may affect consumer attitude to debt into five diverse categories: economic resources (income, employment status, home ownership); economic need (household size and constitution); social factors (behaviour and attitudes of people known the respondents); attitude-forming variables (age, gender and religion) and attitudes (that may be measured by psychological scales).

The categories identified as economic resources, economic need and attitude-forming variables greatly intersect with the objective external factors that are argued to directly influence life satisfaction and frugality. Lastovicka et al. (1999) suggest that the frugal consumer choose to spend conservatively because s/he enjoys saving. While we are interested in replicating the proposed negative relationship between frugality and attitude to debt (Bernthal, Crockett, & Rose, 2005; Peñaloza & Barnhart, 2011), we are primarily interested in uncovering whether age, employment status, income, marital status and sex affect attitude to debt through life satisfaction and frugality. A secondary objective would to also assess the indirect effect of life satisfaction on attitude to debt through frugality. Fig. 1 which shows the model that was tested in this study, depicts the relationships that we aim to discover.

6. Research methodology

6.1. Research context

This research puts understanding the consequences of life satisfaction at the focal point. We aim to establish a theoretical model where life satisfaction mediates the relationship of objective external factors on economic outcomes that may be economically detrimental at both individual and national levels (Leigh-Pemberton & Minford, 1989). This study does not only make a mere attempt to establish antecedents of life satisfaction and frugality but also investigates possible indirect effects of these variables to attitude towards debt. This is especially important in developing countries where a culture of indebtedness is emerging due to reasons discussed in the subsequent paragraphs.

Against the theoretical framework established in earlier sections, we argue that individuals from Turkey provide an appropriate context for this study. It is argued that the Turkish economy has experienced transitions that facilitated incurring household debt. This was made possible through a sequence of events starting from the early 1980s. The Turkish economy can be characterized by a process of opening up during the 1980s (Boratav, Türel, & Yeldan, 1996), capital account liberalization and a boom-bust cycle of economic performance during the 1990s (Boratav, Yeldan & Köse, 2000) and a relatively calm economic climate in 2000s with the exception of the distress due to the latest global financial crisis (Öniş & Kutlay, 2013). The last of these episodes is especially important due to a couple of reasons. The relatively more stable macroeconomic environment allowed economic units to enjoy an elevated level of private consumption (Öniş, 1997). Lower consumer price inflation that came down to single digit levels after 2004 (8.2% per annum during 2005–2012) following three decades of chronic high inflation, which averaged 56% during the 1990s, yielded a wealth effect and lower uncertainty helped individuals allocate their income better.

Once the devastating effects of the 2001 crisis of Turkey have been over, Turkish Lira surfed over a wave of relative appreciation at least until the Lehman crisis in 2008 (Gray & Murphy, 2013). Such appreciation of national currency gave rise to an environment where people could spend more on imported products such as consumer electronics. Moreover, they could also channel a larger portion of their income towards services. Along with normalization of the economy from 2002 to 2009, lower rates of interest and a better functioning banking sector facilitated improved access of households to a wide spectrum of loans. In a nutshell, post-2001 stabilization of the Turkish economy induced expansions of both private consumption spending and higher credits outstanding at the side of households.

Consumption and credit rally of post-2001 environment did not come to a halt even after the Lehman crisis, leaving temporary interruptions aside. A glance at outstanding debt of households gives a clear idea about how economic units utilized an enormous volume of mortgages in a construction sector-driven climate of economic activity (Duman, 2013). Consequently, academic research has recently started to focus on understanding attitudes towards debt (Ameriks & Zeldes, 2004; Frey & Stutzer, 2002; Guven, 2013). Based on our short characterization of the Turkish economy and households, a unique Turkish data fits the purpose of this research.

6.2. Pre-tests and measures

This article empirically scrutinizes the direct effects of objective external factors on both life satisfaction and frugality and the mediating effect of life satisfaction on the relationship between objective external factors to frugality. To measure frugality, following past research, we opted for Lastovicka et al.'s (1999) eight-item single factor frugality scale. Life satisfaction was measured Diener, Emmons, Larsen, and Griffin's (1985) five-item single factor the satisfaction with life scale. Income

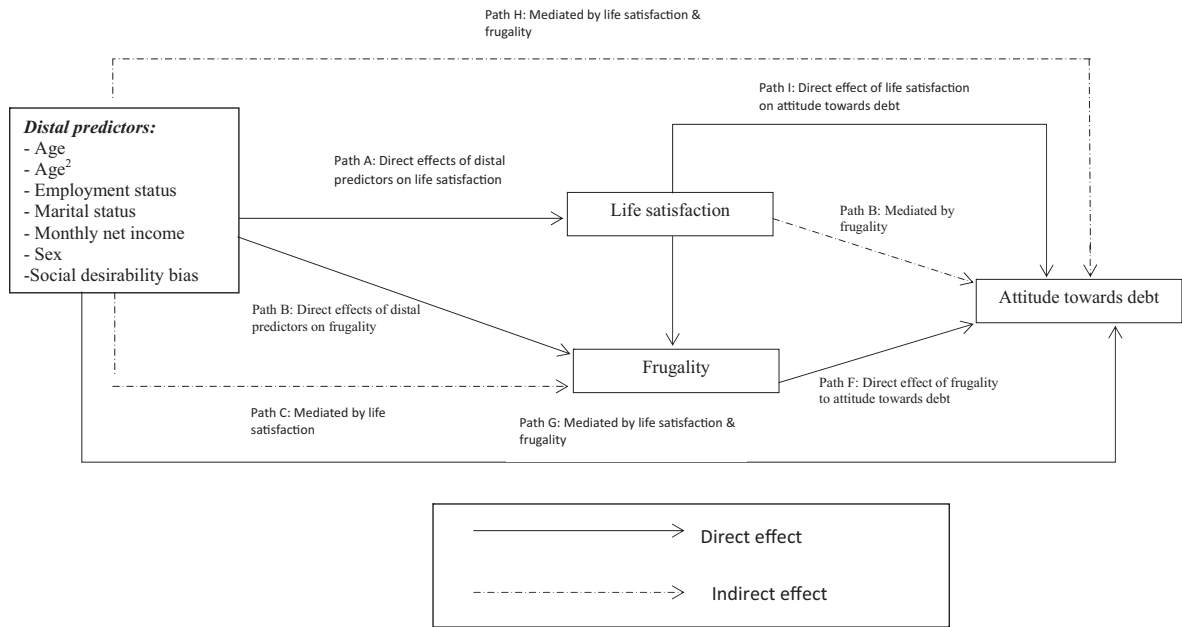


Fig. 1. Conceptual framework.

and age were both measured by a five-point Likert scale. The quadratic functions of income and age variables were also calculated and included into the analyses. Marital status, gender and employment status are dichotomous items where the respondents were asked whether they were married or not. Also, to check for any endogeneity issues which the omitted variable bias may have caused we employed the centrality dimension of Richins (2004) materialism scale. To control for any social desirability bias, the 10-item, short form of Marlowe-Crowne social desirability scale (Strahan & Gerbasi, 1972) was employed. The details of the measures are presented in Table 1.²

A randomly selected thirty non-student adults evaluated the content and meaningfulness of the items to provide evidence of content validity prior the data collection. The calculation of content validity ratio (CVR) with the data obtained from thirty non-student adults gave us the ability to assess whether the combination of items employed to operationalize each scale were found to have content validity. Content validity is defined as “the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose” (Haynes, Richard, & Kubany, 2004, 1995) and was calculated by the formula presented in Fig. 2 where N_e is the number of panelists indicating that the item is very representative of the related scale; $n/2$ is the total number of panelists divided into two.

The participants were asked to evaluate items’ representativeness on a 7-point Likert type scale (ranging from 1 = not very relevant to 7 = very relevant). The items that were retained based on the criteria set by Lawshe (1975). Lawshe (1975) suggest that the minimum acceptable CRV value in a panel of 30 is .33. Therefore, we retained each item that exceeded .33. The results showed that the CRV scores of each item ranged from a low of .43 to a high of 1.00. Accordingly, we kept the original scales without any further modification. Next, four academics were contacted for their comments on the utility of items and the questionnaire was finalized without losing any items.

6.3. Sample and data collection

A random sample of 413 (206 males and 207 females) was achieved via face-to-face structured surveys from five randomly selected municipalities of Istanbul. Thirty-nine percent of the sample were single (159 respondents) while sixty-one percent (254 respondents) were married. Also, descriptive statistics showed that thirty percent of the participants (125 respondents) were aged between 18 and 29 while 27.4% (113 respondents) were aged between 30 and 39. The participants who were aged between 40 and 49 made up 17.9% of the sample (74 individuals) while 14% (58 respondents) were aged between 50 and 59. An additional 10.4% of the sample (43 respondents) were 60 and over.

Fifty-nine respondents reported to have no monthly income (14.3%) while, 114 respondents (27.6%) reported a monthly net income of up to 1500TL. 26.3% of the sample (109 respondents). 13.6% of individuals (56) who participated in the survey reported a monthly net income of 3001–4000TL. Finally, while 8% (33 respondents) reported a monthly net income of 4001–

² See Appendix A for the questionnaire used in this study.

Table 1
Measures employed.

Frugality	Sprotles and Kendall (1986) (e.g., There are things I resist buying today so I can save for tomorrow; Making better use of my own resources makes me feel good; I believe in being careful in how I spend my money)	Ranging from 1 to 5 1 = Completely disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Completely agree
Satisfaction with life	Diener, Emmons, Larsen and Griffin (1985) (e.g., In most ways my life is close to my ideal; I am satisfied with my life; So far I have gotten the important things I want in life)	Ranging from 1 to 5 1 = Completely disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Completely agree
Attitude towards debt	Lea, Webley, and Walker (1995) (e.g., Taking out a loan is a good thing because it allows you to enjoy life; Credit is an essential part of today's lifestyle; Borrowing money is sometimes good)	Ranging from 1 to 5 1 = Completely disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Completely agree
Materialism (centrality)	Richins (2004) (e.g., I usually buy only the things I need; I enjoy spending money on things that aren't practical; I put less emphasis on material things than most people I know)	Ranging from 1 to 5 1 = Completely disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Completely agree
Social desirability bias	Strahan and Gerbasi (1972) (e.g., I'm always willing to admit it when I make a mistake; I always try to practice what I preach; I never resent being asked to return a favour)	0 = False 1 = True
Monthly net income	On this card is an income scale on which 1 indicates 0–1500TL per month 6 the 5000TL+ per month. We would like to know in what group you are. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in	Ranging from 1 to 5 1 = 0–1500TL 2 = 1501–3000TL 3 = 3001–4000TL 4 = 4001–5000TL 5 = 5001TL+
Age	On this card is an age scale on which 1 indicates “18 and below” and 6 indicates “60 and above”. We would like to know in what group you are. Please, specify the appropriate number	Ranging from 1 to 6 1 = 18 and below 2 = 19–29 3 = 30–39 4 = 40–49 5 = 50–59 6 = 60+
Sex	By observation	1 = Female 0 = Male
Marital status	On this card is a number that indicates your current marital status. 0 indicates “single” and 1 indicates, “married”. We would like to know what group you are. Please, specify the appropriate number	Ranging from 0 to 1 0 = Single 1 = Married

$$CVR = \frac{(Ne - n/2)}{n/2}$$

Fig. 2. Calculation of CVR.

5000TL (an approximate amount of \$1.379 to \$1.724) 10.2% (42 respondents) reported a monthly income of 5000TL and over. Among the participants 2.2% (10 respondents) had no educational degree while 35.6% (147) had a primary school degree, 42.4% (175 individuals) graduated from high school, 17.7% (73 respondents) had a university degree and 1.9% (8 respondents) had a postgraduate degree.

6.4. Method of analysis

In order to investigate the interrelationships between the objective external factors, life satisfaction and frugality Zhao, Lynch, and Chen's (2010) two-dimensional mediation analysis was adopted employing Preacher & Hayes' (2004) bootstrapping method. Mediation relates to the central idea that the effects of stimuli on response are mediated by various transformation processes which are internal to the individual (Baron & Kenny, 1986). Baron and Kenny (1986) further suggest that the mediators explain how external events take on internal psychological significance which then shapes responses. It should be noted that mediation analysis has been previously used in the extant literature on happiness (e.g., Oishi, Kesebir, & Diener, 2011). Deshpande and Zaltman (1982) argue that the mediation analysis involves the decomposition and examination of linear relationships among a set of variable under the assumption that a weak casual order is theoretically hypothesized. The size of the associations, called paths, shows whether the hypotheses are supported. The selection of the mediation analysis as the method of analysis to discover whether objective variables such as age, employment status, income, marital status, and sex indirectly effect individuals' saving preferences through life satisfaction appears to be fitting. Therefore, in this paper, we tested the mediating effect of life satisfaction on the relationship between age, employment status, income, marital status, sex and frugality as well as attitude towards debt as shown previously in Fig. 1.

Zhao et al. (2010) identify three patterns that are consistent with mediation (complementary, competitive and indirect-only mediation) and two that are consistent with non-mediation (direct-only non-mediation, no-effect non-mediation). Fig. 3 illustrates the mediating effect of the mediator on the relationship between the independent and dependent variable. Zhao et al. (2010) suggests the mediating effect is calculated as follows: (1) $M = i_1 + aX + e_1$, (2) $Y = i_2 + c'X + e_2$, (3) $Y = i_3 + cX + bM + e_3$ and $c' = (a \times b) + c$. Complementary mediation exists when both the mediated effect and the direct effect are significant and have the same relational direction. That is, when c and $a \times b$ are of same sign, c' will have the same sign. Competitive mediation occurs when the mediated effect and the direct effect have different relational direction. In other words, competitive mediation exists when c and $a \times b$ are of opposite signs. Indirect-only mediation is when there is a mediated effect but no direct relationship. To put it differently, indirect-only effect is existent when $a \times b$ is significant while the direct effect c is insignificant. Direct-only non-mediation is specified by an insignificant mediated effect ($a \times b$) and a significant direct effect c . The final type of pattern, no-effect non-mediation does not provide a statistically significant direct or mediated effect.

The sample was also bootstrapped to circumvent the power problem that may be produced by asymmetries and other forms of non-normality in sampling distribution (Shrout & Bolger, 2002). Bootstrapping makes no assumptions regarding the shape of the distribution of the variables (Mooney, Duval, & Duval, 1993) and therefore was utilized. To provide empirical evidence of robustness for the mediation effects Preacher and Hayes (2008) process with bootstrapping was employed since small samples hardly meet the distributional assumptions underlying the Sobel test (Sobel, 1982).

The measurement of the indirect effects of the distal predictors on frugality and attitudes towards debt also involved the calculation of their direct effects on life satisfaction, frugality and attitude towards debt as previously shown in Fig. 1. Also, the use of Preacher and Hayes (2008) mediation method permitted us to single out the mediating effect of frugality and life satisfaction on the relationship between the distal predictors and attitude towards debt. This let us to assess how much life satisfaction and frugality's solitarily account for these relationships.

7. Results

Correlational patterns, descriptive statistics and reliability statistics for multi-item scales are presented in Table 2. Distal predictors only accounted for 7.7% of variation in life satisfaction. The examination of the direct effects of objective external factors³ (age, age², employment status, income, marital status, and sex) showed that income positively and directly affected life satisfaction ($\beta = .124$; $se = .0251$; $p < .01$). This provided empirical evidence to suggest that the individuals with higher monthly income levels are more satisfied with their lives. All other direct effects were found to be insignificant at .95 level. The insignificant relationships between age, marital status, sex and life satisfaction prevented this study to offer further assertions about these relationships.

The scrutiny of the direct relationship of distal predictors and life satisfaction to frugality⁴ accounted for 40.7% of variation in frugality. The findings provided empirical evidence to suggest that income ($\beta = -.278$; $se = .0174$; $p < .01$) and age² ($\beta = -.043$; $se = .0126$; $p < .01$) negatively affected frugality while life satisfaction⁵ ($\beta = .137$; $se = .0385$; $p < .01$), age ($\beta = .056$; $se = .023$; $p < .01$) and employment status ($\beta = .225$; $se = .064$; $p < .01$) exhibited positive relationships. The \cap -shaped relationship between age and frugality provided empirical support to the argued hump-shaped relationship between age and savings (Modigliani, 1986) and the Life-Cycle hypothesis (Ando & Modigliani, 1963). Also, the positive direct effect of life satisfaction to frugality adds to the extant literature that mostly assumes a unidirectional relationship between frugality and life satisfaction (frugality \rightarrow life satisfaction) and confirms Frank (1999), Frey and Stutzer (2002) and Guven's (2012) findings. This finding showed that the commonly assumed relationship may be reversed and that those who satisfied with their lives tend to restrain

³ Depicted as Path A in Fig. 1.

⁴ Depicted as Path B in Fig. 1.

⁵ Depicted as Path I in Fig. 1.

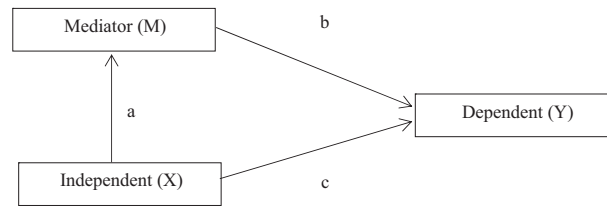


Fig. 3. Mediation.

Table 2

Correlational patterns, descriptive and reliability statistics.

Variables	1	2	3	4	5	6	7	8	9	10
1. Age	–									
2. Monthly net income	.087	–								
3. Sex dummy (women)	.102*	–.124*	–							
4. Marriage status dummy (married)	.575**	.077	.037	–						
5. Employment status (employed)	.070	.310**	–.304**	–.005	–					
6. Frugality	.086	–.549**	–.018	.091	.001	–				
7. Life satisfaction	.125*	.239**	–.050	.102*	.015	.031	–			
8. Attitude towards debt	–.092	.480**	.061	–.101*	.108*	–.609**	.044	–		
9. Centrality	–.109*	.307**	.067	–.097*	.128**	–.508**	–.097	.563**	–	
10. Social desirability bias	.160**	–.064	.102*	.119*	–.176**	.105*	.042	–.188**	–.152*	–
Mean	3.41	2.04	.501	.615	.748	3.97	3.16	2.30	2.70	.622
Standard deviation	(1.41)	(1.49)	(.50)	(.48)	(.43)	(.62)	(.74)	(.47)	(.55)	(.15)
Cronbach α	–	–	–	–	–	.867	.781	.803	.600	.528
Standard error of the mean	.070	.073	.024	.029	.023	.030	.036	.023	.026	.007
Median	3.00	2.00	1.00	1.00	1.00	4.00	3.20	2.29	2.71	.600

* Intercorrelation significant at .05 level.

** Intercorrelation significant at .01 level.

from consumption while trying to resourcefully use the goods and services that they acquire. We failed to discover any statistically significant direct relationships between employment status, marital status, sex and frugality.

Next, to liberate the objective factors from being control variables, we examined the mediating effect of life satisfaction on the relationships between the distal predictors and frugality.⁶ The scrutiny of external objective factors on frugality through life satisfaction showed that life satisfaction mediates the relationship of employment status and income to frugality. We found that income ($\beta = .0169$; $se = .0047$; $p < .01$) indirectly affected frugality through life satisfaction. This provided empirical evidence of a competitive mediation effect of life satisfaction on income–frugality association and a complementary mediation effect of life satisfaction on employment status–frugality relationship. Life satisfaction did not mediate any other relationships providing evidence of direct-only effect non-mediation of age and age² to frugality. Table 3 presents the mediation effects of life satisfaction on the relationship between the distal predictors and frugality.

To test whether age, employment status, income, and sex affected attitude towards debt through life satisfaction and frugality, we first estimated the direct effects of the distal predictors on attitude towards debt.⁷ The results showed that the direct effects of the distal predictors, life satisfaction and frugality accounted for 43.7% of variation in attitude towards debt. Frugality ($\beta = -.349$; $se = .0370$; $p < .01$)⁸ showed negative direct relationships while employment status ($\beta = .085$; $se = .0476$; $p < .01$) and income ($\beta = .067$; $se = .016$; $p < .01$) positively affected attitude towards debt. Also, the results showed that women were more likely to accumulate debt than men ($\beta = .109$; $se = .0378$; $p < .05$). The summary of all direct effects are presented in Table 4.

The mediating effects of frugality and life satisfaction on the relationship between the distal predictors and attitude towards debt were also scrutinized as part of this study.⁹ The results showed that life satisfaction does not mediate the relationship of the distal predictors to attitude towards debt. Frugality, however, competitively mediated the relationship of employment status ($\beta = -.066$; $se = .024$; $p < .01$) while complementarily mediating the relationship of age ($\beta = -.022$; $se = .0386$; $p < .01$), age² ($\beta = .0153$; $se = .0049$; $p < .01$) and income ($\beta = .0912$; $se = .0115$; $p < .01$) to attitude towards debt. Table 5 summarizes the isolated indirect effects through life satisfaction and frugality. The results also provided evidence of a negative indirect effect ($\beta = -.0495$; $se = .0131$; $p < .01$) of life satisfaction on attitude towards debt through frugality. Consid-

⁶ Depicted as Path C in Fig. 1.⁷ Depicted as Path G in Fig. 1.⁸ Depicted as Path F in Fig. 1.⁹ Depicted as Path H in Fig. 1.

Table 3

Direct and indirect effects of the distal predictors.

	Direct effects		Direct effects	Mediated by life satisfaction	Indirect effects	Mediation type
Age → Life satisfaction	.098 (<i>p</i> > .05)	Age → Frugality	.364 (<i>p</i> < .05)	Age → Frugality	.0136 (<i>p</i> > .05)	Direct effect only non-mediation
Age ² → Life satisfaction	-.006 (<i>p</i> > .05)	Age ² → Frugality	-.044 (<i>p</i> < .05)	Age ² → Frugality	-.0008 (<i>p</i> > .05)	Direct effect only non-mediation
Employment → Life satisfaction	-.155 (<i>p</i> < .05)	Employment → Frugality	.206 (<i>p</i> < .05)	Employment → Frugality	-.021 (<i>p</i> < .05)	Complementary mediation
Income → Life satisfaction	.123 (<i>p</i> < .05)	Income → Frugality	-.279 (<i>p</i> < .05)	Income → Frugality	.018 (<i>p</i> < .05)	Competitive mediation
Marital status → Life satisfaction	.032 (<i>p</i> > .05)	Marital status → Frugality	.047 (<i>p</i> > .05)	Marital status → Frugality	.0045 (<i>p</i> > .05)	No-effect non-mediation
Sex → Life satisfaction	-.085 (<i>p</i> > .05)	Sex → Frugality	-.064 (<i>p</i> > .05)	Sex → Frugality	-.0118 (<i>p</i> > .05)	No-effect non-mediation

Table 4

Direct effects of distal predictors on life satisfaction, frugality, and attitude towards debt.

Dependent variable: Life satisfaction	<i>b</i>	<i>p</i> value	Dependent variable: Frugality	<i>b</i>	<i>p</i> value	Dependent variable: Attitude towards debt	<i>b</i>	<i>p</i> value
Constant	2.788	<.05		3.677	<.05		3.657	<.05
Age	.054	>.05	Age	.056	<.05	Age	-.028	<.05
Age ²	-.005	>.05	Age ²	-.043	<.05	Age ²	.015	<.05
SDB	.140	>.05	SDB	.268	<.05	SDB	-.331	<.05
Employment status	-.155	>.05	Employment status	.225	<.05	Employment status	.085	<.05
Income	.124	<.05	Income	-.278	<.05	Income	.069	<.05
Marital status	.032	>.05	Marital status	.047	>.05	Marital status	-.015	>.05
Sex	-.087	>.05	Sex	-.067	>.05	Sex	.113	<.05
Life satisfaction	-	-	Life satisfaction	.137	<.05	Life satisfaction	.018	>.05
Frugality	-	-	Frugality	-	-	Frugality	-.349	<.05
R ²	.077		R ²	.407		R ²	.437	
F-model	4.834	<.05	F-model	34.720	<.05	F-model	34.717	<.05

Table 5

Mediating effect of life satisfaction and frugality on the relationship between the distal predictors and attitude towards debt.

Mediated by life satisfaction	Indirect effects	Mediation type	Mediated by frugality	Indirect effects	Mediation type
Age → Attitude towards debt	.0009 (<i>p</i> > .05)	Direct effect only	Age → Attitude towards debt	-.0221 (<i>p</i> < .05)	Complementary mediation
Age ² → Attitude towards debt	-.0001 (<i>p</i> > .05)	Direct effect only	Age ² → Attitude towards debt	.0153 (<i>p</i> < .05)	Complementary mediation
Employment → Attitude towards debt	-.0026 (<i>p</i> > .05)	Direct effect only	Employment → Attitude towards debt	-.0715 (<i>p</i> < .05)	Competitive mediation
Income → Attitude towards debt	.002 (<i>p</i> > .05)	Direct effect only	Income → Attitude towards debt	.0912 (<i>p</i> < .05)	Complementary mediation
Marital status → Attitude towards debt	.006 (<i>p</i> > .05)	No-effect non-mediation	Marital status → Attitude towards debt	-.0180 (<i>p</i> > .05)	No-effect non-mediation
Sex → Attitude towards debt	-.001 (<i>p</i> > .05)	Direct effect only	Sex → Attitude towards debt	.0275 (<i>p</i> > .05)	Direct effect only mediation
			Life satisfaction → Attitude towards debt	-.0495 (<i>p</i> < .05)	Indirect-only mediation

ering that there was not any direct relationship between life satisfaction and attitudes towards debt, the results showed an indirect only mediating effect of frugality on this relationship.

8. Endogeneity: omitted variable approach

To provide evidence of any potential endogeneity problems which may have occurred because of an omitted variable (Cameron & Trivedi, 2005; Greene, 2008), we selected a variable based on its theoretical importance and significant zero order correlations with the main constructs of the model to include into our model. We opted for the inclusion of a theoret-

ically related variable since the use of fixed effects estimation or instrumenting the endogenous variables are advised only if the theoretically related variables are difficult to identify (Antonakis, Bendahan, Jacquart, & Lalive, 2014). A variable that is not theoretically unrelated or with insignificant correlations might not only reduce the statistical power of the model but also cause a suppression effect (Carlson & Wu, 2012; Spector & Brannick, 2011). Therefore, as part of this study, we have opted for the use of the centrality dimension Richins (2004) three dimensional (centrality, happiness, success) materialism scale (22 items). Centrality dimension of materialism relates to the degree of importance of acquisition in individuals' lives (Richins & Dawson, 1992). The success dimension is defined as "to judge their own and others' success by the number of quality of possessions accumulated (Richins & Dawson, 1992, 304). The happiness dimension relates to individuals' pursuit of happiness through acquisition of material objects rather than other means. For the purposes of robustness check we employed the centrality component of the materialism scale considering that the literature provides evidence of significant materialism–frugality (Lastovicka et al., 1999), materialism–attitudes towards debt (Garðarsdóttir & Dittmar, 2012), materialism–SWB (Garðarsdóttir & Dittmar, 2012; La Barbera & Gürhan, 1997) relationships.

The analyses pertinent to the direct and indirect effects of the distal predictors on life satisfaction, frugality and attitude towards debt showed that the results remained considerably stable despite the inclusion of centrality into the model, providing evidence of the non-existence of an endogeneity issue due to omitted variable bias. Nevertheless, we observed two minor changes in the model. First change was the direct significant effect of age on life satisfaction transforming into an insignificant relationship with the inclusion of centrality. Second, frugality that did not have a mediating effect on the relationship between sex and attitude towards debt positively mediated this relationship. We did not observe any major changes which satisfied omitted variable bias test which we employed to check for any potential endogeneity issues. The detailed results of the direct effects and the mediating effect of frugality and life satisfaction on the relationships between the distal predictors and attitude towards debt are presented in the appendix in Tables A1 and A2.

9. General discussion and conclusion

The results of this paper may be classified into two broad categories. What was accomplished in this study was to approach the issue of happiness from two different perspectives. The first perspective entailed a more conventional approach where the assessment of the effects of its pre-determined antecedents on life satisfaction. To our surprise, we have not found any significant relation of age² marital status and sex to life satisfaction. Whereas income and age positively affected SWB, we found that employed individuals were less happy. Although this finding may seem to oppose previous findings regarding the positive effect of employment on life satisfaction (Blanchflower & Oswald, 1998; Graham, 2005), it points towards a possibility of a negative relationship between employment and life satisfaction in low-income countries. Considering that previous research highlighted a negative relationship between self-employment and happiness (e.g., Stam et al., 2011), the investigation of this relationship via comparing it for different income level countries appears to be a pristine area of research. A growing number of studies examine the relationship of objective external factors and SWB in the conventional way where scholars most focus on the direct effects of the antecedents on SWB. The major implication of this study was focusing on the consequences of life satisfaction instead of replicating previous studies where assessing the effects of antecedents of life satisfaction were at the centre of the discussion.

The motivation behind our study was to understand whether consumers' happiness levels had a role in the adaptation of frugality by reversing the conventional question. The novelty of our study lies in the scrutiny of the relation of life satisfaction to frugality and attitude to debt as well as the inclusion of objective external factors into the model via the adoption of bottom-up approach. This permitted us to analyze not only the direct effects of life satisfaction to frugality and of frugality to attitude to debt but also the indirect effects of objective external factors on frugality and attitude to debt as well as the indirect effect of life satisfaction on attitude to debt. Accordingly, the positive direct effect of life satisfaction on frugality and the negative indirect effect of life satisfaction on attitude to debt through frugality prove the examination of the consequences of life satisfaction to be a fruitful area for further research.

The results pertinent to the scrutiny of indirect effects of external objective factors on frugality and attitude to debt provided interesting perspectives. The square of age directly and negatively affects frugality validating the life-cycle hypothesis (Ando & Modigliani, 1963). In addition, the positive indirect effect of income on frugality may reflect individuals' search for social recognition from behaving frugally (Corral-Verdugo, Bechtel, & Fraijo-Sing, 2003). Another interesting finding is the negative indirect effect of employment status on frugality. The negative indirect effect of employment on frugality through life satisfaction suggests that individuals' preference to in-resourcefully use economic goods and services may be explained by how satisfied they are with their lives.

The findings suggest that attitude towards debt is negatively and directly affected by frugality and negatively and indirectly by life satisfaction. This provides empirical evidence to suggest that frugality accounts for the negative relationship between life satisfaction and attitude towards debt. To put it differently, those who are satisfied with their lives sway away from incurring debts because of the frugal attitude that they adopt. Another interesting finding relates to the direct and indirect effect of employment on attitude towards debt. In accordance with Goldsmith et al. (2014), we provided empirical evidence of a positive direct relationship of employment to attitude towards debt. Also, this study provided empirical evidence

that women are more inclined to accruing debt. This provided contradictory empirical evidence to studies which argue that women are more financially prudent than men (Baek & Hong, 2004; Wang, Lu, & Malhotra, 2011). The contradictory finding pertinent to the relationship between sex and attitude towards debt points towards the necessity of further examination of this matter. Frugality, however, reversed this positive relationship which suggested that although employment creates a tendency to accrue debt, the frugal attitudes that individuals have sway them away from debt.

10. Limitations and further research

The findings presented in this paper exhibit a complicated network of relations among the objective external antecedents and consequence of life satisfaction. The results should be of importance to policy makers as well as academics. Understanding the web of relations may help explain individual differences in people's attitude towards consuming and borrowing. Such information would help in the design and implementation of economic policies such as taxation and pension as well as the retailing sector. While providing important insights in the examination of life satisfaction as it relates to economic outcomes, it should be noted that the data that was employed was of cross-sectional nature. Optimally, a longitudinal data set would be preferred to rule out the reverse causality effects (Echambadi, Campbell, & Agarwal, 2006). However, at the present time no such data is available to us to make this possible. A replication of this study with panel data could potentially rule out the endogeneity issues regarding reverse causality. Also, frugality and attitude to debt was measured at the attitudinal level. Obtaining objective information on these attitudes with a time dimension would help establish a stronger theory, building on the insights obtained within this study. Another limitation of this study relates to its inability to examine the relativity of happiness and the role of the diachronous levels of life satisfaction in the hypothesized web of relationships. Further examination pertinent to the individual effects of past, present, future levels of life satisfaction on the stated relationships would help understand the relativity of happiness notion which was initiated by Duesenberry (1949) and further examined in a wide range of studies (e.g., Brickman, Coates, & Janoff-Bulman, 1978; Grimes & Reinhardt, 2015; Staudinger, Bluck, & Herzberg, 2003; Torshizian & Grimes, 2014).

The results of this study are bound by the availability of data. Although Istanbul may be considered to be representative of the Turkish population with its characteristics, the analyses may be extended to the national level to grasp the differences across regions. The extant literature that examines subjective well-being (e.g., Caporale, Georgellis, Tsitsianis, & Yin, 2009; Hayo & Seifert, 2003) mostly relies on data at the cross-national level. The replication of our research via the use of a longitudinal data set may offer interesting insights regarding the web of relations offered within our paper. Furthermore, we believe that future line of research may also focus on the use of objective measures of income, employment status, and indebtedness to approach the issue from a macro perspective. At the present time, such data is not available to us which would make it possible. Also, there may be other mediating and/or moderating variables which may account for the indirect effects between the distal predictors and attitude towards debt. Further research which also would undertake the task of reversing the conventional question must look into this possibility. Lastly, although we provided empirical evidence of the mechanisms through which the distal predictors may affect frugality and attitudes towards debt, we have not been able to provide empirical evidence of whether individuals' current debt levels may affect their attitudes towards both frugality and debt. Further research pertinent to the examination of the relationship between the antecedents and consequences of life satisfaction is greatly needed in this relatively untouched area.

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Appendix A

See Tables A1 and A2.

Table A1
Robustness check – direct effects.

Dependent variable: Life satisfaction	<i>b</i>	<i>p</i> value	Dependent variable: Frugality	<i>b</i>	<i>p</i> value	Dependent variable: Attitude towards debt	<i>b</i>	<i>p</i> value
<i>Constant</i>	2.817	<.05	<i>Constant</i>	3.319	<.05	<i>Constant</i>	3.062	<.05
<i>Age</i>	<u>.053</u>	<u>>.05</u>	<i>Age</i>	.039	<.05	<i>Age</i>	-.043	<.05
<i>Age</i> ²	-.005	>.05	<i>Age</i> ²	-.033	<.05	<i>Age</i> ²	.009	>.05
<i>Employment status</i>	-.145	<.05	<i>Employment status</i>	.229	<.05	<i>Employment status</i>	.091	<.05
<i>Income</i>	.126	<.05	<i>Income</i>	-.238	<.05	<i>Income</i>	.073	<.05
<i>Marital status</i>	-.033	>.05	<i>Marital status</i>	.064	>.05	<i>Marital status</i>	-.032	>.05
<i>Sex</i>	-.085	>.05	<i>Sex</i>	-.045	>.05	<i>Sex</i>	.097	<.05
<i>SDB</i>	.130	<.05	<i>SDB</i>	.088	<.05	<i>SDB</i>	-.189	<.05
<i>Life satisfaction</i>	-	-	<i>Life satisfaction</i>	.135	<.05	<i>Life satisfaction</i>	.013	>.05
<i>Frugality</i>	-	-	<i>Frugality</i>	-	-	<i>Frugality</i>	-.307	<.05
<i>Success</i>	-.009	>.05	<i>Success</i>	-.167	<.05	<i>Success</i>	.143	<.05
<i>R</i> ²	.077		<i>R</i> ²	.412		<i>R</i> ²	.72	
<i>F</i> -model	4.223	<.05	<i>F</i> -model	35.408	<.05	<i>F</i> -model	35.890	<.05

Table A2
Robustness check – indirect effects.

Mediated by life satisfaction	Indirect effects	Mediation type	Mediated by frugality	Indirect effects	Mediation type
<i>Age</i> → Attitude towards debt	.007 (<i>p</i> > .05)	Direct effect only	<i>Age</i> → Attitude towards debt	-.143 (<i>p</i> < .05)	Complementary mediation
<i>Age</i> ² → Attitude towards debt	-.001 (<i>p</i> > .05)	Direct effect only	<u><i>Age</i>² → Attitude towards debt</u>	<u>.0104</u> (<i>p</i> ≤ .05)	Indirect-only mediation
<i>Employment</i> → Attitude towards debt	-.002 (<i>p</i> > .05)	Direct effect only	<i>Employment</i> → Attitude towards debt	-.064 (<i>p</i> < .05)	Complementary mediation
<i>Income</i> → Attitude towards debt	.002 (<i>p</i> > .05)	Direct effect only	<i>Income</i> → Attitude towards debt	.068 (<i>p</i> < .05)	Complementary mediation
<i>Marital status</i> → Attitude towards debt	-.004 (<i>p</i> > .05)	No-effect non-mediation	<i>Marital status</i> → Attitude towards debt	-.021 (<i>p</i> > .05)	No-effect non-mediation
<i>Sex</i> → Attitude towards debt	-.001 (<i>p</i> > .05)	Direct effect only	<u><i>Sex</i> → Attitude towards debt</u>	<u>.018</u> (<i>p</i> ≥ .05)	Direct effect only non-mediation
<i>Life satisfaction</i> → Attitude towards debt			<i>Life satisfaction</i> → Attitude towards debt	-.0416 (<i>p</i> < .05)	Indirect-only mediation
<i>Success</i> → Attitude towards debt	-.0001 (<i>p</i> > .05)	-	<i>Success</i> → Attitude towards debt	.0514 (<i>p</i> < .05)	-

Questionnaire

The following questions relate to understanding your saving preferences. In this study there are no right or wrong answers. What matters, is your opinion and beliefs from that you have experienced. Thank you in advance for your help in completing this questionnaire.

Please answer the following questions by ticking the appropriate boxes.

(1: Completely disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Completely agree)

<u><i>Frugality scale</i></u>	Completely disagree				Completely agree
If you take good care of your possessions, you will definitely save money in the long run	①	②	③	④	⑤
There are many things that are normally thrown away that are still quite useful	①	②	③	④	⑤
Making better use of my resources makes me feel good	①	②	③	④	⑤
If you can re-use an item you already have, there's no sense in buying something new	①	②	③	④	⑤
I believe in being careful in how I spend my money	①	②	③	④	⑤
I discipline myself to get the most from my money	①	②	③	④	⑤
I am willing to wait on a purchase I want so that I can save money	①	②	③	④	⑤
There are things I resist buying today so I can save for tomorrow	①	②	③	④	⑤

Please answer the following questions by ticking the appropriate boxes.

(1: Completely disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Completely agree)

<u><i>Satisfaction with life scale</i></u>	Completely disagree				Completely agree
In most ways my life is close to my ideal	①	②	③	④	⑤
The conditions of my life are excellent	①	②	③	④	⑤
I am satisfied with my life	①	②	③	④	⑤
So far I have gotten the important things I want in life	①	②	③	④	⑤
If I could live my life over, I would change almost nothing	①	②	③	④	⑤

Please answer the following questions by ticking the appropriate boxes.

(1: Completely disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Completely agree)

<u><i>Attitude towards debt scale</i></u>	Completely disagree				Completely agree
Taking out a loan is a good thing because it allows you to enjoy life	①	②	③	④	⑤
It is a good idea to have something now and pay for it later	①	②	③	④	⑤
Using credit is basically wrong	①	②	③	④	⑤
I'd rather go hungry than buy food 'on tick'	①	②	③	④	⑤
I plan ahead for larger purchases	①	②	③	④	⑤
Being in debt is never a good thing	①	②	③	④	⑤
Credit is an essential part of today's lifestyle	①	②	③	④	⑤
It is better to go into debt than to let children go without Christmas presents	①	②	③	④	⑤
It is important to live within one's means	①	②	③	④	⑤
Even on a low income, one should save a little regularly	①	②	③	④	⑤
Borrowed money should be repaid as soon as possible	①	②	③	④	⑤
Most people run up too much debt	①	②	③	④	⑤
It is too easy for people to get credit cards	①	②	③	④	⑤
I do not like borrowing money	①	②	③	④	⑤
Borrowing money is sometimes a good thing	①	②	③	④	⑤
I am rather adventurous with my money	①	②	③	④	⑤
It is ok to borrow money to pay for children's clothes	①	②	③	④	⑤

Please answer the following questions by ticking the appropriate boxes.

(1: Completely disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Completely agree)

<i>Centrality dimension of materialism</i>	
I usually buy only the things I need	① ② ③ ④ ⑤
I try to keep my life simple, as far as possessions are concerned	① ② ③ ④ ⑤
The things I own aren't all that important to me	① ② ③ ④ ⑤
I enjoy spending money on things that aren't practical	① ② ③ ④ ⑤
Buying things gives me a lot of pleasure	① ② ③ ④ ⑤
I like a lot of luxury in my life	① ② ③ ④ ⑤
I put less emphasis on material things than most people I know	① ② ③ ④ ⑤

Please answer the following questions by ticking the appropriate boxes.

(F=False; T=True)

<i>Social desirability bias</i>		
I'm always willing to admit it when I make a mistake	F	T
I always try to practice what I preach	F	T
I never resent being asked to return a favor	F	T
I have never deliberately said something that hurt someone's feelings	F	T
I have never been irked when people expressed ideas very different from my own	F	T
I like to gossip at times	F	T
There have been occasions when I took advantage of someone	F	T
I sometimes try to get even rather than forgive and forget	F	T
At times I have really insisted on having things my own way	F	T
There have been occasions when I felt like smashing things	F	T

Please answer the following questions by ticking the appropriate boxes

Age	<input type="checkbox"/> 18 and below	<input type="checkbox"/> 19-29	<input type="checkbox"/> 30-39	<input type="checkbox"/> 40-49	<input type="checkbox"/> 50-59	<input type="checkbox"/> 60+
Monthly net income	<input type="checkbox"/> 0-1.4999TL	<input type="checkbox"/> 1.500-2.999TL	<input type="checkbox"/> 3.000-3.999TL	<input type="checkbox"/> 4.000-4.999TL	<input type="checkbox"/> 5.000+	
Marital status	<input type="checkbox"/> Married	<input type="checkbox"/> Celibate				
Employment status	<input type="checkbox"/> Employed	<input type="checkbox"/> Unemployed				
Sex	<input type="checkbox"/> Male	<input type="checkbox"/> Female				

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