

# Stimulation values and life satisfaction among young people: the role of impulsive buying and financial problems

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## Abstract

**Purpose** – *This paper aims to examine the connections between young Finnish consumers' stimulation values, impulsive buying, financial problems and life satisfaction.*

**Design/methodology/approach** – *Path analysis with maximum likelihood robust standard errors estimation was used to examine relationships between variables and composite variables, as well as to explore indirect connections among them. The data set included 2,297 respondents aged 18–29 years in Finland.*

**Findings** – *Results show that stimulation values were directly positively associated with greater life satisfaction and indirectly linked to lower life satisfaction through impulsive buying and financial problems. Findings also reveal the connections between stimulation values and impulsive buying and between impulsive buying and financial problems.*

**Research limitations/implications** – *This study extends the authors' understanding of Schwartz's values theory by showing how consumers' stimulation values have both positive (i.e. higher life satisfaction) and negative (i.e. lower life satisfaction) outcomes.*

**Practical implications** – *This study brings recommendations for educators to reinforce young consumers' media literacy and financial literacy to prevent the youth from developing a tendency toward impulsive buying and to seek stimulation more constructively. Also, from a public policy perspective, it would be beneficial to include more financial literacy and financial skills courses in young people's curricula to help them recognize and resist impulsive buying tendencies, which can further reduce financial problems.*

**Originality/value** – *This study broadens the knowledge of the important connections between young consumers' stimulation values, impulsive buying, financial problems and life satisfaction, an area where the authors' understanding has been limited.*

**Keywords** *Consumer behavior, Financial problems, Impulsive buying, Life satisfaction, Stimulation values, Young consumers*

**Paper type** *Research paper*

## Introduction

The need for stimulation guides consumer behavior. Schwartz's values theory proposes that stimulation values are part of individuals' core values. The goals of stimulation values are daring, excitement, variation and challenges in life (Schwartz, 2011; Steenkamp and Burgess, 2002). Stimulation values represent consumers' willingness to try new things, take risks, seek adventure and live an exciting life (Krystallis *et al.*, 2012; Schwartz *et al.*, 2001). Individuals also have an optimal stimulation level (personality trait) which is closely related to stimulation values (Steenkamp and Burgess, 2002). Optimal stimulation level refers to the amount of stimulation an individual prefers in life (McReynolds, 1971). If an individual perceives the stimulation provided by the environment as below optimal, they will try to increase it (Raju, 1980). Individuals strive to achieve an optimal stimulation level through

certain actions (Steenkamp and Baumgartner, 1992). For instance, consumers can try to reach the optimal stimulation level through exploratory consumer behavior including thrill-seeking, disinhibition and seeking new experiences (Steenkamp and Burgess, 2002).

Online and mobile shopping are popular forms of digital commerce. These platforms help consumers achieve stimulation by providing continuous excitement, arousal and flow experiences (Hyun *et al.*, 2022; Li *et al.*, 2022). This is particularly relevant for younger consumers who value higher stimulation values (Henry, 2003; Robinson, 2013) and are more active social media users than others (Anderson *et al.*, 2023). Young Finnish consumers were chosen as the target group for this study because they are particularly active social media users (Saarenmaa and Kohvakka, 2019). Furthermore, Finland has a well-developed communication technology infrastructure (Nyrhinen *et al.*, 2024), and, in general, Finnish consumers are active online shoppers (Official Statistics of Finland, 2021).

However, although studies suggest that stimulation values can yield positive outcomes, such as greater life satisfaction and happiness (Le, 2011; Maciuszek *et al.*, 2019) and are generally considered healthy values (Sagiv and Schwartz, 2000), they can also lead to more complex consequences. In the context of consumer behavior, stimulation values play a significant role in shaping purchasing decisions. For instance, consumers with high stimulation values are more prone to impulsive buying, as the thrill and excitement of such purchases align with their desire for stimulation and novelty (Rook, 1987; Sharma *et al.*, 2010). Impulsive buying refers to a consumer's sudden urge to make a purchase without a prior intention to do so and without considering long-term goals and ideals (Baumeister, 2002). Stimulation seeking through impulsive buying may also lead to other various negative consequences, such as money problems (Rose and Dhandayudham, 2014), like indebtedness or budget constraint. Budget constraint is defined as a consumer's perception of whether they have enough money to buy what they need to live, whether their budget is always tight and whether they often have to spend more money than they have (J. Wang and Xiao, 2009).

Despite the importance of this topic, several gaps remain in the existing research. First, prior studies have not examined how particularly young consumers' stimulation values can simultaneously lead to higher and lower life satisfaction. Second, there is limited understanding of how stimulation values lead to lower life satisfaction through mechanisms such as impulsive buying and financial problems. Third, although previous studies have examined the effects of consumer values (Czarnecka *et al.*, 2020) and non-value factors such as marketing stimuli (e.g. in-store posters and price discounts; Iyer *et al.*, 2020) and online stimuli (Nyrhinen *et al.*, 2023) on impulsive buying, the specific relationship between young consumers' stimulation values and impulsive buying remains unclear. Studies may have overlooked the connections between stimulation values, impulsive buying, financial problems and life satisfaction because many studies on impulsive buying emphasize external stimuli (e.g. Nyrhinen *et al.*, 2024) as drivers, placing less focus on the role of values in this process. In addition, studies may have predominantly linked stimulation values to higher life satisfaction, while overlooking pathways through which these values can also lead to lower life satisfaction.

Therefore, this study uses path analysis to examine how young consumers' higher stimulation values have a positive direct effect on life satisfaction and can also lead to impulsive buying, indebtedness and, consequently, lower life satisfaction. This study is important because it provides valuable information, for example, on how stimulation values and impulse buying are related to (a) young people's life satisfaction and (b) a socially concerning phenomenon – namely, the indebtedness of young people (Moksu, 2022; Oksanen *et al.*, 2015). This study focuses on Finnish young consumers, aged 18–29 years, because young people are active online shoppers (Statista, 2024) and social media users (Anderson *et al.*, 2023), and are more likely to buy impulsively than older consumers (Iyer *et al.*, 2020). Moreover, consumption is part of the foundation of young persons' identities

(Wilska, 2017), and young adults are more likely to develop harmful habits, such as excessive consumption, which may lead to long-lasting problems with their finances and well-being (Oksanen *et al.*, 2018). In addition, young people typically put more emphasis on stimulation values than older people (Robinson, 2013).

The present study makes three contributions. First, it augments Schwartz's (1992) values theory and enhances the understanding of the role of values in consumers' lives by revealing how consumers' stimulation values can have both positive (i.e. higher life satisfaction) and negative (i.e. lower life satisfaction) outcomes. Second, this study contributes to the literature on impulsive buying by showing how stimulation values can act as a catalyst for impulse buying. This provides a novel understanding of the drivers of impulsive buying. Third, the study answers the call for more research on the long-term consequences of impulsive buying (Redine *et al.*, 2023) by showing that stimulation values can lead to financial problems and lower life satisfaction through impulsive buying.

## Theoretical framework and hypotheses

### *Schwartz's values theory*

Schwartz's (2011) values theory is divided into two distinctive theories – individual-level and cultural-level theories – and the present study focuses on the former. According to this theory, values are the “guiding principles of life” (Schwartz, 2011) and tell people what is important in life (Schwartz, 2006). The theory suggests that people choose their actions and evaluate events, others and themselves based on their values (Schwartz, 1992). The individual-level theory identifies 10 basic values: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security. These values are based on humans' fundamental needs. For example, conformity values ensure smooth interactions between individuals, which are essential for humans (Schwartz, 2011). The theory implies that values affect behavior when they are activated either consciously or unconsciously (see Russo *et al.*, 2022). In addition, the easier a value comes to an individual's mind, the easier the value will be activated (Schwartz, 2006).

Schwartz's values can play a significant role in consumer behavior. For instance, Dreezens *et al.* (2005) found that consumers who scored high on universalism values (e.g. welfare for all individuals) preferred organically grown food. In contrast, consumers who scored high on power values (e.g. social status and control over people) preferred genetically modified food and perceived organically grown food negatively. Furthermore, consumers with stronger conservative values (e.g. resistance to change) showed more negative attitudes toward online grocery shopping (Hansen, 2008). Likewise, Coelho *et al.* (2023) showed that consumers who place a high value on certainty and stability were less likely to participate in adventure shopping, because they tend to avoid risks.

As prior studies have used Schwartz's values theory to understand consumer behavior, this theoretical perspective is particularly relevant for the present study. Specifically, this study examines how consumers' stimulation values are connected to impulsive buying, financial problems and life satisfaction. According to Schwartz (1992), consumers' actions are guided by their values. By focusing on stimulation values, which emphasize a consumers' willingness to take risks and seek adventures (Schwartz *et al.*, 2001), the theory provides a strong basis for understanding why consumers may engage in impulsive buying and its potential consequences.

### *Stimulation values and impulsive buying*

The motivational goals of stimulation values are “excitement, novelty, and challenge in life (daring, a varied life, an exciting life)” (Schwartz and Bardi, 2001, p. 270). Researchers often measure stimulation values by assessing a consumer's willingness to take risks,

explore new activities and seek exciting experiences (Krystallis *et al.*, 2012; Schwartz *et al.*, 2001). In general, research has shown that Schwartz's values are strongly associated with behaviors that reflect these values. For example, stimulation values have been positively correlated with stimulation-related behaviors, such as engaging in unconventional activities (Bardi and Schwartz, 2003).

Stimulation values also affect consumers' behavior. Sharma *et al.* (2010) argued that consumers with high optimal stimulation levels have lower arousal levels, which is why they typically seek something to help them reach their desired stimulation levels. One way to achieve the desired level is impulsive buying, because it is a highly stimulating experience (Sharma *et al.*, 2010). Impulsive buying is a consumer's sudden and powerful urge to buy something immediately (Rook, 1987). This behavior is especially common among younger consumers (Darrat *et al.*, 2023). Digital environments can amplify impulsive buying tendencies (Nyrhinen *et al.*, 2024). For instance, a systematic review showed how a variety of website stimuli can lead to impulsive buying, such as visually appealing website features, website's interactivity and persuasive claims (e.g. nearly sold out) (Chan *et al.*, 2017). Moreover, social media influencers can also make consumers buy impulsively (Shamim and Islam, 2022).

Consumers with higher optimal stimulation levels are more likely to make risky choices than consumers with lower optimal stimulation levels (Steenkamp and Baumgartner, 1992). One factor that closely relates to stimulation values is adventure-seeking shopping, through which consumers pursue stimulation, adventure and excitement (Arnold and Reynolds, 2003). Research has shown that adventure-seeking shopping and adventure-shopping motivations are positively related to impulsive buying (Coelho *et al.*, 2023). Hence, it is plausible that young consumers with higher stimulation values are more likely to have stronger impulsive buying tendencies, because impulsive buying offers consumers excitement and stimulation. Therefore, we propose the following hypothesis:

H1. Consumers' stimulation values will be positively associated with impulsive buying.

### ***Stimulation values and financial problems***

We expect that stimulation values are positively associated with financial problems. Schwartz *et al.* (1997) noted that the pursuit of stimulation often requires risk-taking. This is because the goals of stimulation values, such as living a challenging life and seeking excitement, encourage consumers to take risks and seek adventure (Schwartz *et al.*, 2012). Thus, consumers with higher stimulation values may be more likely to engage in consumer behavior that involves financial risks, such as taking out a payday loan, to achieve their desired level of stimulation.

In addition, stimulation values are closely related to a sensation-seeking personality. Sensation seekers typically engage in behaviors that yield stimulating experiences, such as reckless driving (Roberti, 2004). Sensation-seeking is especially common among younger consumers (Evans-Polce *et al.*, 2018). It is plausible that the connections between stimulation values and financial problems can also be inferred through sensation-seeking personality traits resembling stimulation values.

Research suggests that sensation-seeking can lead to financial problems. For instance, the definition of sensation-seeking implies that sensation-seekers are more willing to take physical, social, financial and legal risks (Zuckerman, 1994). A study showed that high sensation-seekers were more likely to show greater financial risk tendencies in everyday situations than low sensation-seekers (Wong and Carducci, 1991). Likewise, another study revealed that younger adults are more likely to take financial risks because they have a higher need of sensation-seeking (Zabel *et al.*, 2009). Sensation-seeking consumers were also more likely to demonstrate problematic financial behavior, such as trouble with paying bills or spending their student loans (Worthy *et al.*, 2010). Sensation seeking has also been

connected to higher indebtedness (Wang *et al.*, 2011) and higher value credit card transactions (Cornea, 2021). Therefore, we hypothesize as follows:

- H2. Consumers' stimulation values will be positively associated with budget constraint.
- H3. Consumers' stimulation values will be positively associated with indebtedness.

### *Stimulation values and life satisfaction*

Despite some contradictory evidence, multiple studies have suggested (e.g. Ng and Ye, 2016) that stimulation values are positively connected to higher life satisfaction. Consumers who scored higher on openness values (including stimulation and self-direction values) also scored higher on life satisfaction (Le, 2011). Likewise, Maciuszek *et al.* (2019) found a positive correlation between stimulation values and life satisfaction. A study involving 25 European countries also revealed that stimulation values were positively connected to higher life satisfaction in countries with low or average levels on the Human Development Index (Sortheix and Lönnqvist, 2014). Stimulation values have also been connected to greater subjective well-being (Bobowik *et al.*, 2011). Consumers who prioritize high stimulation values seek excitement, novelty and challenge. Thus, it is possible that achieving these experiences may enhance their life satisfaction. To support this, Grosz *et al.* (2021) argued that pursuing growth values, such as stimulation values, enhances well-being because growth values are self-actualizing (i.e. one ends up using their full potential). Thus, we hypothesize as follows:

- H4. Consumers' stimulation values will be positively associated with life satisfaction.

### *Financial consequences of impulsive buying*

Impulsivity is a multidimensional construct that includes four psychological factors driving impulsive behavior: urgency (e.g. if someone does unfortunate things as a result of negative affect they later regret), sensation seeking (e.g. seeking new experiences), lack of premeditation (e.g. acting without thinking) and lack of perseverance (e.g. inability to finish a task and resist boredom; Gröndal *et al.*, 2023). Impulsive buying refers to consumers' experience of a strong, spontaneous urge to buy something instantly (Rook, 1987).

We propose that consumers' impulsive buying tendencies lead to budget constraints and higher indebtedness, because consumers have not considered whether they need or can afford the purchases when they experience the urge to buy. To illustrate, Frigerio *et al.* (2020) noted that impulsivity leads to indebtedness because it makes consumers favor immediate gratification in purchase situations by using credit cards and ignoring the negative consequences. Supporting this, Abrantes-Braga and Veludo-de-Oliveira (2020) found that consumers who tended to behave impulsively to obtain immediate gratification were more likely to demonstrate risky indebtedness behavior. Research has also shown that consumers with higher impulsiveness had a higher propensity than less impulsive consumers to misuse their credit cards (Pirog and Roberts, 2007). A meta-analysis also revealed a positive association between consumers' impulsiveness and over-indebtedness (Frigerio *et al.*, 2020). Therefore, we hypothesize as follows:

- H5. Impulsive buying will be positively associated with budget constraint.
- H6. Impulsive buying will be positively associated with indebtedness.

### *Impulsive buying and life satisfaction*

The existing evidence on the relationship between impulsive buying and life satisfaction is somewhat inconsistent. Some studies suggest a positive relationship. Research has shown that impulsive buying has a positive impact on life satisfaction (Olsen *et al.*, 2022), because

impulsive buying can bring happiness and arousal to consumers (Herabadi *et al.*, 2009; Li, 2015). Impulsive buying has also been positively associated with consumers' shopping well-being (e.g. the extent to which shopping increases quality of life; Nghia *et al.*, 2022). In contrast, several studies suggest a negative relationship. Tariq *et al.* (2021) found in Pakistani context that consumers' impulsive buying behavior decreased their level of life satisfaction. Impulsivity has also been connected to unhappiness and depression (Emmons and Diener, 1986). In addition, consumers who buy impulsively are also more likely to regret their purchases (Scheinbaum *et al.*, 2020), which can negatively affect their life satisfaction (Newall *et al.*, 2009). Conversely, a study conducted in the Philippines found no statistically significant relationship between impulsive buying and life satisfaction (Mallari *et al.*, 2023).

Some scholars have also examined this connection in the opposite direction. That is, Habib and Bekun (2023) found in Pakistani context that consumers with higher levels of life satisfaction were less likely to make impulsive purchases. Likewise, Ortiz Alvarado *et al.* (2020) conducted a cross-cultural (i.e. Spain and Mexico) study on impulsive buying and well-being and showed how consumers can buy impulsively to alleviate negative feelings.

Although there is a lack of longitudinal evidence on impulsive buying and life satisfaction, the relationship can be examined through hedonism, as hedonism is closely related to impulsive buying (Coelho *et al.*, 2023). A longitudinal study focused on Dutch consumers found no temporal connection between hedonic values and life satisfaction (Joshnloo, 2021).

To summarize, although impulsive buying can offer consumers momentary feelings of happiness and joy (Herabadi *et al.*, 2009), it seems plausible that the negative outcomes of impulsive buying, such as unhappiness, depression and regret, are more consequential than the positive outcomes of impulsive buying. This aligns with the extensive research by Baumeister *et al.* (2001), who convincingly showed that negative experiences, such as bad life events, bad emotions, bad feedback and bad memories, often outweigh positive ones.

Thus, we propose the following:

H7. Impulsive buying will be negatively associated with life satisfaction.

### ***Budget constraint, indebtedness and life satisfaction***

We assume that financial problems (i.e. budget constraints and indebtedness) are associated with lower life satisfaction. Research shows that households with higher student loan debt reported lower life satisfaction than households with lower debt (Korankye and Kalenkoski, 2021). However, the question of whether debt or loans decrease life satisfaction depends on the type of loan. For instance, it was revealed that credit card debt and student loan debt have short-term negative effects on life satisfaction, while mortgages and car loans, in turn, increased life satisfaction (Bialowolski and Weziak-Bialowolska, 2021). Studies have supported this finding by showing that student loan debt is especially related to lower life satisfaction and psychological well-being (Greenberg and Mogilner, 2021; Kim and Chatterjee, 2019). This is because having a mortgage or a car loan typically means that the consumer has acquired a new home or car, which brings satisfaction. In contrast, a student loan is typically taken to cover expenses.

Why, then, do indebtedness and loans lead to lower life satisfaction? According to Ferreira *et al.* (2021), over-indebted consumers may have lower life satisfaction partly due to a reduced perception of control over their lives. It can also be that consumers' indebtedness and low budgets prevent them from participating in consumption activities that could increase their happiness and life satisfaction, such as extraordinary leisure consumption (e.g. tourism and entertainment; Choung *et al.*, 2021). Therefore, we hypothesize as follows:

H8. Consumers with higher budget constraint are more likely to have lower life satisfaction.

H9. Consumers with higher levels of indebtedness are more likely to have lower life satisfaction.

Based on the theoretical framework, we propose a research model (Figure 1). Altogether, our model implies that while young consumers' stimulation values are initially positively linked to life satisfaction, they may also have indirect negative effects on life satisfaction through the problematic behaviors that they foster (i.e. impulsive buying and financial problems).

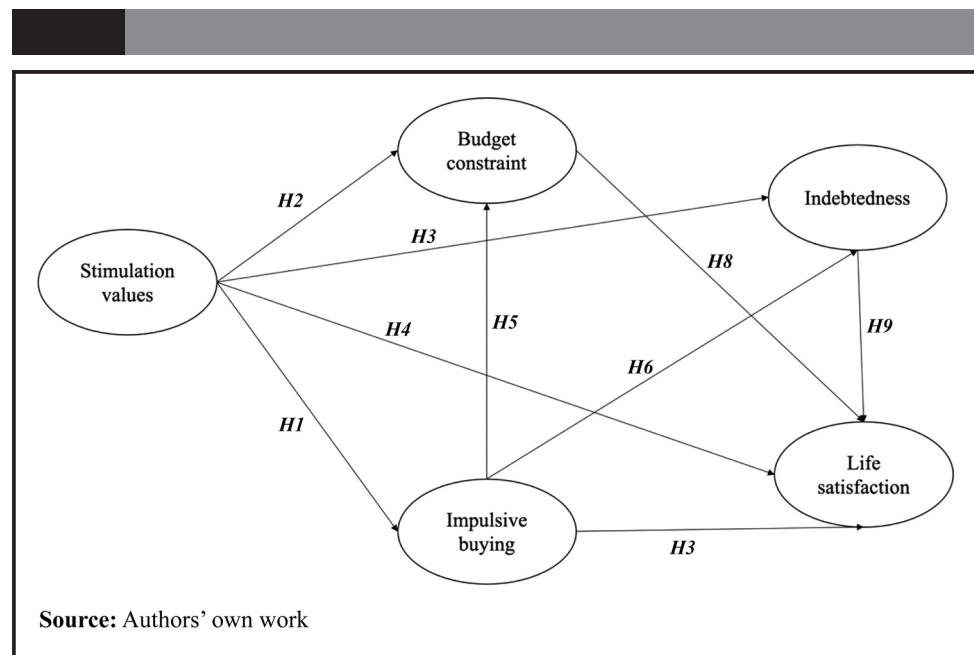
## Data and methods

### Data collection

The data consist of 2,297 valid responses from Finnish young consumers aged 18–29 years. Respondents were randomly recruited from an online consumer panel of 350,000 individuals between December 2020 and February 2021. Stratified sampling was used with predefined quotas based on age groups (18–22, 23–25, 26–29 years). This approach ensured that the final sample was representative of the young adult population in Finland. The panelists were volunteers who chose to participate in surveys based on their interests and were compensated for their time with prizes and other incentives. Table 1 below shows how the sample aligns with the demographic structure of the Finnish population.

### Measurements

The widely used scale to measure consumers' values is Schwartz's Value Survey (SVS), includes 57 items representing ten values: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security (Schwartz, 1992). We chose to use the Short Schwartz's Value Survey (SSVS; Lindeman and Verkasalo, 2005) to evaluate consumers' stimulation values. The SSVS includes 10 items, each measuring one value (e.g. stimulation). Participants were asked to rate, on a scale from 1 (not at all) to 5 (very much), how much they perceive their life as daring, challenging and exciting (single item) as part of their life-guiding principles. The SSVS has demonstrated good validity and



**Table 1** Sample characteristics

Variable	Sample	Population (2019)
<i>Sex</i>		
Male	34%	51%
Female	66%	49%
<i>Age</i>		
18–22	40%	39%
23–25	26%	25%
26–29	34%	36%
<i>Neighborhood</i>		
City	83%	83%
Countryside/rural area	17%	17%
<i>Highest education level attained</i>		
Comprehensive or incomplete education	16%	15%
Upper secondary education	60%	64%
Polytechnic or bachelor's degree	18%	16%
Master's or postgraduate degree	6%	5%
<i>Disposable income</i>		
Median	€1,000	€1,173

Source: Authors' own work

reliability, making it a more practical alternative to the longer SVS scale (Lindeman and Verkasalo, 2005).

Impulsive buying was measured with a composite variable (Cronbach's  $\alpha = 0.74$ ) consisting of items drawn from the four-item impulsive buying scale adapted from Dennis and Fisher (1995), Wang and Xiao (2009) with a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The scale consisted of the following four items: "I do not typically plan my purchases in advance"; "I sometimes purchase goods for the sake of pleasure, not necessity"; "I purchase goods and services more based on how I feel at that time"; and "I find making spontaneous purchases enjoyable."

Participants' perceived budget constraint was measured with a composite variable (Cronbach's  $\alpha = 0.80$ ) consisting of items drawn from the three-item scale adapted from Wang and Xiao's (2009) with 1–5 scale. The items were "I frequently have problems making ends meet"; "My budgeting is always tight"; and "I often have to spend more money than I have available."

Participants' indebtedness was measured with a single item adapted from Abrantes-Braga and Veludo-de-Oliveira (2020). Participants were asked, "Which of the following statements best describes your indebtedness?" The options were "The payment of bills, payments, and/or payment installments are not troublesome, and I am able to save money in the process"; "The payment of bills, payments, and/or payment installments are not troublesome, but I am unable to save money in the process"; "The payment of bills, payments, and/or payment installments are continuously challenging for me"; "I have received payment notices and have been subject to paying interest for tardiness because I have not had sufficient funds to complete payments when they were due"; and "I have a compromised credit score/have been subject to repossession actions."

A single item measure adapted from Cheung and Lucas (2015) was used to measure participants' life satisfaction: "On a scale of 1–10, how satisfied are you with your life in general?" (1 = very unsatisfied, 10 = very satisfied) (see Table A1 in Appendix for the descriptive statistics of the used variables).

## Data analysis

To test the conceptual model and hypotheses, path modeling with the maximum likelihood robust standard errors (MLR) estimation method, using Mplus 8.10 software, was used. This study used path analysis because it is particularly suitable for estimating and testing indirect associations between observed and composite variables (Lleras, 2005). Also, we were especially interested in exploring indirect connections between the studied items. Path analysis is an extension of a regression analysis and uses observed (and composite) variables; thus, it can be seen as an extension of the regression model (Malhotra *et al.*, 2017). Also, path analysis is used to analyze models that are more complex and realistic than multiple regression (Streiner, 2005). The reported coefficients of the saturated path model are standardized. The analysis included 2,297 observations, with 21 missing values excluded (MLR).

## Results

### Direct effects

The following results were derived when controlling for gender, age and education. *H1* proposed that consumers with higher stimulation values are more likely to have higher impulsive buying tendencies. In line with our hypothesis, our results revealed that consumers' higher stimulation values were associated with higher impulsive buying tendencies ( $\beta = 0.20$ ,  $p < 0.001$ ), supporting *H1*. The results revealed that stimulation values were associated with budget constraint ( $\beta = 0.07$ ,  $p < 0.001$ ), which supported *H2*. Stimulation values were positively linked to life satisfaction ( $\beta = 0.09$ ,  $p < 0.001$ ) but not indebtedness ( $\beta = 0.00$ ,  $p = 0.93$ ). Therefore, *H3* was rejected, while *H4* was supported. The findings showed that impulsive buying was positively associated with budget constraints ( $\beta = 0.21$ ,  $p < 0.001$ ), supporting *H5*. Impulsive buying was also positively associated with indebtedness ( $\beta = 0.16$ ,  $p < 0.001$ ), supporting *H6*. However, impulsive buying was not significantly related to life satisfaction ( $\beta = 0.02$ ,  $p = 0.41$ ), and therefore *H7* was rejected. Regarding *H8*, the findings showed that budget constraint was negatively associated with life satisfaction ( $\beta = -0.15$ ,  $p < 0.001$ ). In addition, indebtedness ( $\beta = -0.13$ ,  $p < 0.001$ ) was negatively linked to life satisfaction, supporting *H9*.

### Indirect effects

The identified direct connections provided a good basis for investigating possible indirect connections between constructs. Accordingly, we decided to conduct an additional mediation analysis. First, we found that higher stimulation values were indirectly connected to indebtedness via impulsive buying ( $\beta = 0.03$ ,  $p < 0.001$ ). This is interesting given that stimulation values were not directly connected to indebtedness (see *H3*). We also found that consumers' higher stimulation values were indirectly connected to budget constraint via impulsive buying ( $\beta = 0.04$ ,  $p < 0.001$ ). We were also interested in whether higher stimulation values were indirectly connected to lower life satisfaction via impulsive buying, budget constraint and indebtedness. The findings revealed that consumers' stimulation values were connected to lower life satisfaction via budget constraint ( $\beta = -0.01$ ,  $p = 0.001$ ). Stimulation values were also connected to lower life satisfaction via impulsive buying and indebtedness ( $\beta = -0.004$ ,  $p < 0.001$ ). Stimulation values were also connected to lower life satisfaction via impulsive buying and budget constraint ( $\beta = -0.006$ ,  $p < 0.001$ ). Moreover, consumers' stimulation values were connected to lower life satisfaction via impulsive buying, indebtedness and budget constraint ( $\beta = -0.002$ ,  $p < 0.001$ ). Finally, although there was no direct connection between impulsive buying and lower life satisfaction (*H7*), impulsive buying was indirectly connected to lower life satisfaction through budget constraint ( $\beta = -0.03$ ,  $p < 0.001$ ) and through indebtedness ( $\beta = -0.02$ ,  $p < 0.001$ ).

## Conclusion and discussion

Although young consumers' stimulation values and impulsive buying are relevant and timely topics, prior studies have not focused on how young consumers' stimulation values can simultaneously lead to higher and lower life satisfaction, nor explained the mechanisms through which stimulation values result in lower life satisfaction. It was also unclear how young consumers' stimulation values are related to impulsive buying. This study addressed this research gap by showing that Finnish young consumers' stimulation values can yield both positive and negative consequences. More precisely, young consumers' stimulation values are directly connected to higher life satisfaction and thus can be considered healthy values in that sense. However, our study suggests that stimulation values are directly linked to impulsive buying and budget constraints. They are also indirectly associated with lower life satisfaction through impulsive buying, budget constraints and indebtedness.

The finding that young consumers with higher stimulation values were more likely to have stronger impulsive buying tendencies is consistent with previous studies indicating that consumers with higher optimal stimulation levels tend to seek stimulation through impulsive buying (Sharma *et al.*, 2010) and are more inclined to make risky choices (Steenkamp and Baumgartner, 1992).

The finding suggesting that consumers with higher stimulation values faced higher budget constraint is, in general, consistent with Worthy *et al.* (2010), who showed that sensation-seeking consumers exhibit more problematic financial behavior, such as trouble with paying bills (Worthy *et al.*, 2010). In contrast to earlier findings (Cornea, 2021; Wang *et al.*, 2011), we did not find a significant direct relationship between stimulation values and indebtedness. Thus, while stimulation values can influence budget constraints, they may not be a sufficient factor to escalate directly into indebtedness. However, the results of our mediation analyses revealed that stimulation values were connected to higher budget constraint and indebtedness via impulsive buying, indicating that consumers with higher stimulation values were more likely to have financial problems (i.e. budget constraint and indebtedness) because they tended to buy impulsively. Therefore, we can conclude that the link between stimulation values and indebtedness is indirect and mediated through impulsive buying. In other words, stimulation values alone are not enough to lead to indebtedness, as impulsive buying is needed to mediate their effect on indebtedness.

Furthermore, the finding that higher stimulation values predicted higher life satisfaction aligns with studies showing that stimulation is connected to higher life satisfaction (Le, 2011; Maciuszek *et al.*, 2019) and greater well-being (Bobowik *et al.*, 2011). In that sense, our study supports the idea that stimulation values can be considered healthy values (Sagiv and Schwartz, 2000). Furthermore, our findings that higher impulsive buying tendencies positively predicted higher budget constraint and indebtedness are in line with studies proposing that impulsivity leads to indebtedness (Abrantes-Braga and Veludo-de-Oliveira, 2020; Frigerio *et al.*, 2020). We did not find a direct connection between impulsive buying and lower life satisfaction. This is surprising given that studies have associated impulsive buying with lower life satisfaction (Tariq *et al.*, 2021) or concepts closely related to higher life satisfaction (Herabadi *et al.*, 2009; Olsen *et al.*, 2022). However, it is noteworthy that some studies have also revealed an insignificant relationship between impulsive buying and life satisfaction (Mallari *et al.*, 2023). In turn, we observed that impulsive buying was indirectly connected to lower life satisfaction through financial problems. Thus, it may be that impulsive buying directly affects consumer emotions and happiness only momentarily, but it is not enough on its own to reduce life satisfaction. Instead, financial problems are needed to explain this relationship.

Finally, as expected, higher budget constraint and indebtedness predicted lower life satisfaction, supporting earlier findings (e.g. Ferreira *et al.*, 2021). This finding also aligns with our proposition that budget constraint and indebtedness can discourage consumers

from participating in consumption activities that increase happiness and life satisfaction, such as tourism (Choung *et al.*, 2021) and the consumption of experiences (Brakus *et al.*, 2022).

Interestingly, although we found a direct positive effect of stimulation values on life satisfaction, we also uncovered that young consumers' stimulation values were indirectly connected to lower life satisfaction via budget constraint, via impulsive buying and indebtedness, via impulsive buying and budget constraint and via impulsive buying, indebtedness and budget constraint. These results can be interpreted as suggesting that consumers with higher stimulation values are more likely to make impulsive purchases, leading to budget constraint, indebtedness and subsequently lower life satisfaction.

### *Theoretical implications*

This study makes three significant contributions. First, it extends our understanding of Schwartz's (1992) values theory by showing how consumers' stimulation values have both positive (i.e. higher life satisfaction) and negative (i.e. lower life satisfaction) outcomes. It also explains the mechanisms through which stimulation values lead to lower life satisfaction in the consumer behavior context (i.e. impulsive buying, budget constraint and indebtedness). Second, this study contributes to the literature on impulsive behavior by showing how stimulation values can act as a catalyst for impulse buying. This provides a novel understanding of the drivers of impulsive buying behavior. Third, it answers the call for more research on the long-term consequences of impulsive buying (Redine *et al.*, 2023) by showing that stimulation values can lead to financial problems and lower life satisfaction through impulsive buying.

### *Practical implications*

The present study has several practical contributions. First, the findings are valuable for educators. It is important to acknowledge that stimulation values are associated with high life satisfaction. However, stimulation seeking can also lead to impulsive purchases that have negative consequences for one's personal finances and life satisfaction. Therefore, teachers should reinforce media literacy and financial literacy from an early age to prevent the youth from developing a tendency toward impulsive buying and to seek stimulation in a more constructive way (see e.g. Ranta *et al.*, 2020). One practical way to discourage young consumers from making impulsive purchase decisions may be to promote the conventional wisdom of "sleeping on it." Studies have shown that consumers who "slept on it" tend to make more rational choices (Sinclair *et al.*, 2024). Furthermore, the over-indebtedness of young consumers has been a public concern for a long time and remains so (Moksu, 2022; Oksanen *et al.*, 2015). This study contributes to addressing this public concern by showing that consumers' impulse buying is one factor that explains the problems of indebtedness. Thus, from a public policy perspective, it would be beneficial to include more financial literacy and financial skills courses in young people's curricula to help them recognize and resist impulsive buying tendencies, which can further reduce financial problems. Moreover, companies must take actions to decrease consumers' temptation to make impulsive purchases. Technology companies and marketers should be better aware of the negative consequences of impulse buying and increase the responsibility in their marketing to prevent young consumers from facing issues that might cause financial problems and diminish their life satisfaction.

### *Limitations and future research directions*

Despite the novel findings of this study, limitations need to be acknowledged. First, this study focused on young consumers, a unique group characterized by higher stimulation values (Robinson, 2013), active online shopping (Statista, 2024), active social media use

(Anderson *et al.*, 2023) and higher impulsive buying tendencies (Iyer *et al.*, 2020). Thus, the results cannot be generalized to all consumers. Future studies should include a sample of older consumers.

Furthermore, Finland and other Nordic countries are characterized by high levels of happiness, political rights, low levels of corruption, strong trust between citizens, safety, gender and income equality and a high educational level (Martela *et al.*, 2020). Finland also has a strong ICT infrastructure, and Finnish consumers are active online shoppers (Nyrhinen *et al.*, 2024). Such characteristics make Finland and other Nordic countries distinct compared to others. Consequently, the effect of indebtedness and budget constraints on life satisfaction may be much higher in countries where the social security system does not provide a basic level of social assistance for consumers. Moreover, it has been shown that Western individualistic countries (e.g. Finland) encourage hedonistic consumption, such as impulsive buying, in contrast to Eastern collectivist countries that promote interdependence and may discourage impulsive buying (Kacen and Lee, 2002). Therefore, future studies should test the present model across countries with diverse cultural contexts, such as the USA and Japan, to better understand how cultural differences may influence the results. This is especially because the importance of Schwartz's values, such as stimulation values, can vary across countries. Also, this model could be examined in countries that have less developed ICT infrastructure.

Moreover, as the present study is cross-sectional, future studies could benefit from a longitudinal research design. Specifically, a longitudinal study could examine how stimulation values affect consumers' life satisfaction in the long run, and whether financial problems accumulate over time, ultimately impacting life satisfaction negatively. Finally, although the constructs examined in this study are not particularly time-sensitive, a longitudinal approach could explore how stimulation values affect consumers' life satisfaction over time and whether financial problems accumulate, ultimately impacting life satisfaction negatively.

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*Ethics approval statement:* The authors followed the ethical guidelines of the Human Sciences Ethics Committee of the University of Jyväskylä. The Ethics Committee follows the general guidelines by the Finnish National Board on Research Integrity according to which the study requires an ethical review if the research includes one of the following factors:

- (a) Participation in the research deviates from the principle of informed consent.
- (b) The research involves intervening in the physical integrity of research participants.
- (c) The focus of the research is on minors under the age of 15, without separate consent from a parent or carer or without informing a parent or carer in a way that would enable them to prevent the child's participation in the research.
- (d) Research that exposes participants to exceptionally strong stimuli.
- (e) Research that involves a risk of causing mental harm that exceeds the limits of normal daily life to the research participants or their family members or others closest to them.
- (f) Conducting the research could involve a threat to the safety of participants or researchers or their family members or others closest to them.

(see, Ethical principles of research with human participants and ethical review in the human sciences in Finland 2019: Finnish National Board on Research Integrity TENK guidelines 2019).

Because this study did not include any of those factors, an ethical review was not required. Participation in this study was voluntary and participants were able to refuse to participate or cancel their participation at any time without any consequences. Research participants were informed about the study. The authors did not collect any personal information including indirect identifiers. Also, this study did not include sensitive or harmful content that could be seen as ethically questionable.

## References

- Abrantes-Braga, F.D.M.A. and Veludo-de-Oliveira, T. (2020), "Help me, I can't afford it! antecedents and consequence of risky indebtedness behaviour", *European Journal of Marketing*, Vol. 54 No. 9, pp. 2223-2244, doi: [10.1108/EJM-06-2019-0455](https://doi.org/10.1108/EJM-06-2019-0455).
- Anderson, M., Faverio, M. and Gottfried, J. (2023), "Teens, Social Media and Technology 2023", Pew Research Center, available at: [www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/](http://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/) (accessed 2 July 2024).
- Arnold, M.J. and Reynolds, K.E. (2003), "Hedonic shopping motivations", *Journal of Retailing*, Vol. 79 No. 2, pp. 77-95, doi: [10.1016/S0022-4359\(03\)00007-1](https://doi.org/10.1016/S0022-4359(03)00007-1).
- Bardi, A. and Schwartz, S.H. (2003), "Values and behavior: strength and structure of relations", *Personality and Social Psychology Bulletin*, Vol. 29 No. 10, pp. 1207-1220, doi: [10.1177/0146167203254602](https://doi.org/10.1177/0146167203254602).
- Baumeister, R.F. (2002), "Yielding to temptation: self-control failure, impulsive purchasing, and consumer behavior", *Journal of Consumer Research*, Vol. 28 No. 4, pp. 670-676, doi: [10.1086/338209](https://doi.org/10.1086/338209).
- Baumeister, R.F., Bratslavsky, E., Finkenauer, C. and Vohs, K.D. (2001), "Bad is stronger than good", *Review of General Psychology*, Vol. 5 No. 4, pp. 323-370, doi: [10.1037/1089-2680.5.4.323](https://doi.org/10.1037/1089-2680.5.4.323).
- Bialowolski, P. and Weziak-Bialowolska, D. (2021), "Good credit, bad credit: the differential role of the sources of debt in life satisfaction", *Journal of Consumer Affairs*, Vol. 55 No. 3, pp. 967-994, doi: [10.1111/joca.12388](https://doi.org/10.1111/joca.12388).
- Bobowik, M., Basabe, N., Páez, D., Jiménez, A. and Bilbao, M.Á. (2011), "Personal values and well-being among europeans, spanish natives and immigrants to Spain: does the culture matter?", *Journal of Happiness Studies*, Vol. 12 No. 3, pp. 401-419, doi: [10.1007/s10902-010-9202-1](https://doi.org/10.1007/s10902-010-9202-1).
- Brakus, J.J., Chen, W., Schmitt, B. and Zarantonello, L. (2022), "Experiences and happiness: the role of gender", *Psychology & Marketing*, Vol. 39 No. 8, pp. 1646-1659, doi: [10.1002/mar.21677](https://doi.org/10.1002/mar.21677).
- Chan, T.K.H., Cheung, C.M.K. and Lee, Z.W.Y. (2017), "The state of online impulse-buying research: a literature analysis", *Information & Management*, Vol. 54 No. 2, pp. 204-217, doi: [10.1016/j.im.2016.06.001](https://doi.org/10.1016/j.im.2016.06.001).
- Cheung, F. and Lucas, R.E. (2015), "When does money matter most? Examining the association between income and life satisfaction over the life course", *Psychology and Aging*, Vol. 30 No. 1, pp. 120-135, doi: [10.1037/a0038682](https://doi.org/10.1037/a0038682).
- Choung, Y., Pak, T. and Chatterjee, S. (2021), "Consumption and life satisfaction: the Korean evidence", *International Journal of Consumer Studies*, Vol. 45 No. 5, pp. 1007-1019, doi: [10.1111/ijcs.12620](https://doi.org/10.1111/ijcs.12620).
- Coelho, F., Aniceto, I., Bairrada, C.M. and Silva, P. (2023), "Personal values and impulse buying: the mediating role of hedonic shopping motivations", *Journal of Retailing and Consumer Services*, Vol. 72, p. 103236, doi: [10.1016/j.jretconser.2022.103236](https://doi.org/10.1016/j.jretconser.2022.103236).
- Cornea, D. (2021), "Credit card payments: do cultural values matter? Evidence from the European Union", *Managerial Finance*, Vol. 47 No. 8, pp. 1128-1148, doi: [10.1108/MF-06-2020-0336](https://doi.org/10.1108/MF-06-2020-0336).
- Czarnecka, B., Schivinski, B. and Keles, S. (2020), "How values of individualism and collectivism influence impulsive buying and money budgeting: the mediating role of acculturation to global consumer culture", *Journal of Consumer Behaviour*, Vol. 19 No. 5, pp. 505-522, doi: [10.1002/cb.1833](https://doi.org/10.1002/cb.1833).
- Darrat, A.A., Darrat, M.A. and Darrat, M.A. (2023), "Does wanting more lead to losing control? Examining the psychological drivers of compulsive buying", *Young Consumers*, Vol. 24 No. 1, pp. 56-73, doi: [10.1108/YC-01-2022-1453](https://doi.org/10.1108/YC-01-2022-1453).

- Dennis, R.W. and Fisher, R.J. (1995), "Normative influences on impulsive buying behavior", *Journal of Consumer Research*, Vol. 22 No. 3, pp. 305-313.
- Dreezens, E., Martijn, C., Tenbült, P., Kok, G. and de Vries, N.K. (2005), "Food and values: an examination of values underlying attitudes toward genetically modified- and organically grown food products", *Appetite*, Vol. 44 No. 1, pp. 115-122, doi: [10.1016/j.appet.2004.07.003](https://doi.org/10.1016/j.appet.2004.07.003).
- Emmons, R.A. and Diener, E. (1986), "Influence of impulsivity and sociability on subjective well-being", *Journal of Personality and Social Psychology*, Vol. 50 No. 6, pp. 1211-1215, doi: [10.1037/0022-3514.50.6.1211](https://doi.org/10.1037/0022-3514.50.6.1211).
- Evans-Polce, R.J., Schuler, M.S., Schulenberg, J.E. and Patrick, M.E. (2018), "Gender- and age-varying associations of sensation seeking and substance use across young adulthood", *Addictive Behaviors*, Vol. 84, pp. 271-277, doi: [10.1016/j.addbeh.2018.05.003](https://doi.org/10.1016/j.addbeh.2018.05.003).
- Ferreira, M.B., de Almeida, F., Soro, J.C., Herter, M.M., Pinto, D.C. and Silva, C.S. (2021), "On the relation between over-indebtedness and well-being: an analysis of the mechanisms influencing health, sleep, life satisfaction, and emotional well-being", *Frontiers in Psychology*, Vol. 12, doi: [10.3389/fpsyg.2021.591875](https://doi.org/10.3389/fpsyg.2021.591875).
- Frigerio, M., Ottaviani, C. and Vandone, D. (2020), "A meta-analytic investigation of consumer over-indebtedness: the role of impulsivity", *International Journal of Consumer Studies*, Vol. 44 No. 4, pp. 328-342, doi: [10.1111/ijcs.12570](https://doi.org/10.1111/ijcs.12570).
- Greenberg, A.E. and Mogilner, C. (2021), "Consumer debt and satisfaction in life", *Journal of Experimental Psychology: Applied*, Vol. 27 No. 1, pp. 57-68, doi: [10.1037/xap0000276](https://doi.org/10.1037/xap0000276).
- Gröndal, M., Ask, K. and Winblad, S. (2023), "The distinction between irritability and anger and their associations with impulsivity and subjective wellbeing", *Scientific Reports*, Vol. 13 No. 1, p. 10398, doi: [10.1038/s41598-023-37557-4](https://doi.org/10.1038/s41598-023-37557-4).
- Grosz, M.P., Schwartz, S.H. and Lechner, C.M. (2021), "The longitudinal interplay between personal values and subjective well-being: a registered report", *European Journal of Personality*, Vol. 35 No. 6, pp. 881-897, doi: [10.1177/08902070211012923](https://doi.org/10.1177/08902070211012923).
- Habib, M.D. and Bekun, F.V. (2023), "Does religiosity matter in impulsive psychology buying behaviors? A mediating model and empirical application", *Current Psychology*, Vol. 42 No. 12, pp. 9986-9998, doi: [10.1007/s12144-021-02296-0](https://doi.org/10.1007/s12144-021-02296-0).
- Hansen, T. (2008), "Consumer values, the theory of planned behaviour and online grocery shopping", *International Journal of Consumer Studies*, Vol. 32 No. 2, pp. 128-137, doi: [10.1111/j.1470-6431.2007.00655.x](https://doi.org/10.1111/j.1470-6431.2007.00655.x).
- Henry, A. (2003), "How buzz marketing works for teens", *Young Consumers*, Vol. 4 No. 3, pp. 3-10, doi: [10.1108/17473610310813843](https://doi.org/10.1108/17473610310813843).
- Herabadi, A.G., Verplanken, B. and van Knippenberg, A. (2009), "Consumption experience of impulse buying in Indonesia: emotional arousal and hedonistic considerations", *Asian Journal of Social Psychology*, Vol. 12 No. 1, pp. 20-31, doi: [10.1111/j.1467-839X.2008.01266.x](https://doi.org/10.1111/j.1467-839X.2008.01266.x).
- Hyun, H., Thavisay, T. and Lee, S.H. (2022), "Enhancing the role of flow experience in social media usage and its impact on shopping", *Journal of Retailing and Consumer Services*, Vol. 65, p. 102492, doi: [10.1016/j.jretconser.2021.102492](https://doi.org/10.1016/j.jretconser.2021.102492).
- Iyer, G.R., Blut, M., Xiao, S.H. and Grewal, D. (2020), "Impulse buying: a meta-analytic review", *Journal of the Academy of Marketing Science*, Vol. 48 No. 3, pp. 384-404, doi: [10.1007/s11747-019-00670-w](https://doi.org/10.1007/s11747-019-00670-w).
- Joshanloo, M. (2021), "There is no temporal relationship between hedonic values and life satisfaction: a longitudinal study spanning 13 years", *Journal of Research in Personality*, Vol. 93, p. 104125, doi: [10.1016/j.jrp.2021.104125](https://doi.org/10.1016/j.jrp.2021.104125).
- Kacen, J.J. and Lee, J.A. (2002), "The influence of culture on consumer impulsive buying behavior", *Journal of Consumer Psychology*, Vol. 12 No. 2, pp. 163-176, doi: [10.1207/S15327663JCP1202\\_08](https://doi.org/10.1207/S15327663JCP1202_08).
- Kim, J. and Chatterjee, S. (2019), "Student loans, health, and life satisfaction of US households: evidence from a panel study", *Journal of Family and Economic Issues*, Vol. 40 No. 1, pp. 36-50, doi: [10.1007/s10834-018-9594-3](https://doi.org/10.1007/s10834-018-9594-3).
- Korankye, T. and Kalenkoski, C.M. (2021), "The effect of households' student debt on life satisfaction", *Journal of Family and Economic Issues*, Vol. 42 No. 4, pp. 757-772, doi: [10.1007/s10834-021-09753-9](https://doi.org/10.1007/s10834-021-09753-9).
- Krystallis, A., Vassallo, M. and Chryssohoidis, G. (2012), "The usefulness of Schwartz's 'values theory' in understanding consumer behaviour towards differentiated products", *Journal of Marketing Management*, Vol. 28 Nos 11/12, pp. 1438-1463, doi: [10.1080/0267257X.2012.715091](https://doi.org/10.1080/0267257X.2012.715091).

- Le, T.N. (2011), "Life satisfaction, openness value, self-transcendence, and wisdom", *Journal of Happiness Studies*, Vol. 12 No. 2, pp. 171-182, doi: [10.1007/s10902-010-9182-1](https://doi.org/10.1007/s10902-010-9182-1).
- Li, G., Jiang, Y. and Chang, L. (2022), "The influence mechanism of interaction quality in live streaming shopping on consumers' impulsive purchase intention", *Frontiers in Psychology*, Vol. 13, doi: [10.3389/fpsyg.2022.918196](https://doi.org/10.3389/fpsyg.2022.918196).
- Li, Y. (2015), "Impact of impulsive buying behavior on postimpulsive buying satisfaction", *Social Behavior and Personality: An International Journal*, Vol. 43 No. 2, pp. 339-351, doi: [10.2224/sbp.2015.43.2.339](https://doi.org/10.2224/sbp.2015.43.2.339).
- Lindeman, M. and Verkasalo, M. (2005), "Measuring values with the short Schwartz's value survey", *Journal of Personality Assessment*, Vol. 85 No. 2, pp. 170-178, doi: [10.1207/s15327752jpa8502\\_09](https://doi.org/10.1207/s15327752jpa8502_09).
- Lleras, C. (2005), "Path analysis", *Encyclopedia of Social Measurement*, Elsevier, pp. 25-30, doi: [10.1016/B0-12-369398-5/00483-7](https://doi.org/10.1016/B0-12-369398-5/00483-7).
- Maciuszek, J., Polczyk, R. and Tucholska, K. (2019), "Direct and indirect relationships between life satisfaction, values, and time perspectives: research on a sample of Polish students", *Advances in Cognitive Psychology*, Vol. 15 No. 2, pp. 133-142, doi: [10.5709/acp-0263-0](https://doi.org/10.5709/acp-0263-0).
- Malhotra, N.K., Nunan, D. and Birks, D.F. (2017), *Marketing Research: An Applied Approach*, 5th ed., Pearson, New York, NY.
- Mallari, E.F.I., Ato, C.K.A., Crucero, L.J.M.O., Escueta, J.T., Eslabra, V.A.P. and Urbano, P.E.M. (2023), "The mediating role of impulse buying on hedonic shopping motivation and life satisfaction of online shoppers in the Philippines", *International Social Science Journal*, Vol. 73 No. 249, pp. 861-872, doi: [10.1111/issj.12430](https://doi.org/10.1111/issj.12430).
- Martela, F., Greve, B., Rothstein, B. and Saari, J. (2020), "The Nordic exceptionalism: What explains why the Nordic countries are constantly among the happiest in the world", in Helliwell, J., Layard, R., Sachs, J. and De Neve, J.-E. (Eds), *World Happiness Report 2020*, Sustainable Development Solutions Network, New York, NY, pp. 128-146.
- McReynolds, P. (1971), "The nature and assessment of intrinsic motivation", in McReynolds, P. (Ed.), *Advances in Psychological Assessment*, Science and Behavior Books., Palo Alto, pp. 157-177.
- Moksu, M. (2022), "Toista sataa pikavippiä, kymmeniä rahapelitilejä – nuorten on helpompi velkaantua kuin koskaan aiemmin, siksi heille on talousneuvola", Yleisradio, available at: <https://yle.fi/a/3-12641615> (accessed 12 October 2023).
- Newall, N.E., Chipperfield, J.G., Daniels, L.M., Hladkyj, S. and Perry, R.P. (2009), "Regret in later life: exploring relationships between regret frequency, secondary interpretive control beliefs, and health in older individuals", *The International Journal of Aging and Human Development*, Vol. 68 No. 4, pp. 261-288, doi: [10.2190/AG.68.4.a](https://doi.org/10.2190/AG.68.4.a).
- Ng, T.K. and Ye, S. (2016), "Human values and university life satisfaction among Hong Kong Chinese university students: a cross-lagged panel analysis", *The Asia-Pacific Education Researcher*, Vol. 25 No. 3, pp. 453-461, doi: [10.1007/s40299-015-0255-0](https://doi.org/10.1007/s40299-015-0255-0).
- Nghia, H.T., Olsen, S.O. and Trang, N.T.M. (2022), "A dual process on shopping well-being across shopping contexts: the role of shopping values and impulse buying", *Asia Pacific Journal of Marketing and Logistics*, Vol. 34 No. 3, pp. 594-610, doi: [10.1108/APJML-09-2020-0668](https://doi.org/10.1108/APJML-09-2020-0668).
- Nyrhinen, J., Lonka, K., Sirola, A., Ranta, M. and Wilska, T. (2023), "Young adults' online shopping addiction: the role of self-regulation and smartphone use", *International Journal of Consumer Studies*, Vol. 47 No. 5, pp. 1871-1884, doi: [10.1111/ijcs.12961](https://doi.org/10.1111/ijcs.12961).
- Nyrhinen, J., Sirola, A., Koskelainen, T., Munnukka, J. and Wilska, T.-A. (2024), "Online antecedents for young consumers' impulse buying behavior", *Computers in Human Behavior*, Vol. 153, p. 108129, doi: [10.1016/j.chb.2023.108129](https://doi.org/10.1016/j.chb.2023.108129).
- Official Statistics of Finland (2021), "Use of information and communications technology by individuals".
- Oksanen, A., Aaltonen, M. and Rantala, K. (2015), "Social determinants of debt problems in a Nordic welfare state: a Finnish register-based study", *Journal of Consumer Policy*, Vol. 38 No. 3, pp. 229-246, doi: [10.1007/s10603-015-9294-4](https://doi.org/10.1007/s10603-015-9294-4).
- Oksanen, A., Savolainen, I., Sirola, A. and Kaakinen, M. (2018), "Problem gambling and psychological distress: a cross-national perspective on the mediating effect of consumer debt and debt problems among emerging adults", *Harm Reduction Journal*, Vol. 15 No. 1, p. 45, doi: [10.1186/s12954-018-0251-9](https://doi.org/10.1186/s12954-018-0251-9).

- Olsen, S.O., Khoi, N.H. and Tuu, H.H. (2022), "The 'well-being' and 'ill-being' of online impulsive and compulsive buying on life satisfaction: the role of self-esteem and harmony in life", *Journal of Macromarketing*, Vol. 42 No. 1, pp. 128-145, doi: [10.1177/02761467211048751](https://doi.org/10.1177/02761467211048751).
- Ortiz Alvarado, N.B., Rodríguez Ontiveros, M. and Quintanilla Domínguez, C. (2020), "Exploring emotional well-being in Facebook as a driver of impulsive buying: a cross-cultural approach", *Journal of International Consumer Marketing*, Vol. 32 No. 5, pp. 400-415, doi: [10.1080/08961530.2020.1722979](https://doi.org/10.1080/08961530.2020.1722979).
- Pirog, S.F. and Roberts, J.A. (2007), "Personality and credit card misuse among college students: the mediating role of impulsiveness", *Journal of Marketing Theory and Practice*, Vol. 15 No. 1, pp. 65-77, doi: [10.2753/MTP1069-6679150105](https://doi.org/10.2753/MTP1069-6679150105).
- Raju, P.S. (1980), "Optimum stimulation level: its relationship to personality, demographics, and exploratory behavior", *Journal of Consumer Research*, Vol. 7 No. 3, p. 272, doi: [10.1086/208815](https://doi.org/10.1086/208815).
- Ranta, M., Silinskas, G. and Wilska, T.-A. (2020), "Young adults' personal concerns during the Covid-19 pandemic in Finland: an issue for social concern", *International Journal of Sociology and Social Policy*, Vol. 40 Nos 9/10, pp. 1201-1219, doi: [10.1108/IJSSP-07-2020-0267](https://doi.org/10.1108/IJSSP-07-2020-0267).
- Redine, A., Deshpande, S., Jebarajakirthy, C. and Surachartkumtonkun, J. (2023), "Impulse buying: a systematic literature review and future research directions", *International Journal of Consumer Studies*, Vol. 47 No. 1, pp. 3-41, doi: [10.1111/ijcs.12862](https://doi.org/10.1111/ijcs.12862).
- Roberti, J.W. (2004), "A review of behavioral and biological correlates of sensation seeking", *Journal of Research in Personality*, Vol. 38 No. 3, pp. 256-279, doi: [10.1016/S0092-6566\(03\)00067-9](https://doi.org/10.1016/S0092-6566(03)00067-9).
- Robinson, O.C. (2013), "Values and adult age: findings from two cohorts of the European Social Survey", *European Journal of Ageing*, Vol. 10 No. 1, pp. 11-23, doi: [10.1007/s10433-012-0247-3](https://doi.org/10.1007/s10433-012-0247-3).
- Rook, D.W. (1987), "The buying impulse", *Journal of Consumer Research*, Vol. 14 No. 2, pp. 189-199.
- Rose, S. and Dhandayudham, A. (2014), "Towards an understanding of Internet-based problem shopping behaviour: the concept of online shopping addiction and its proposed predictors", *Journal of Behavioral Addictions*, Vol. 3 No. 2, pp. 83-89, doi: [10.1556/JBA.3.2014.003](https://doi.org/10.1556/JBA.3.2014.003).
- Russo, C., Danioni, F., Zagrean, I. and Barni, D. (2022), "Changing personal values through value-manipulation tasks: a systematic literature review based on Schwartz's theory of basic human values", *European Journal of Investigation in Health, Psychology and Education*, Vol. 12 No. 7, pp. 692-715, doi: [10.3390/ejihpe12070052](https://doi.org/10.3390/ejihpe12070052).
- Saarenmaa, K. and Kohvakka, R. (2019), *WhatsApp Suosituin – Some on Suomalaisten Arkea Iän Mukaan Vaihdellessa*, Helsinki.
- Sagiv, L. and Schwartz, S.H. (2000), "Value priorities and subjective well-being: direct relations and congruity effects", *European Journal of Social Psychology*, Vol. 30 No. 2, pp. 177-198, doi: [10.1002/\(SICI\)1099-0992\(200003/04\)30:2<177::AID-EJSP982>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1099-0992(200003/04)30:2<177::AID-EJSP982>3.0.CO;2-Z).
- Scheinbaum, A.C., Shah, P., Kukar-Kinney, M. and Copple, J. (2020), "Regret and nonredemption of daily deals: individual differences and contextual influences", *Psychology & Marketing*, Vol. 37 No. 4, pp. 535-555, doi: [10.1002/mar.21324](https://doi.org/10.1002/mar.21324).
- Schwartz, S.H. (1992), "Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries", *Advances in Experimental Social Psychology*, Vol. 25, pp. 1-65, doi: [10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6).
- Schwartz, S.H. (2006), *Basic Human Values: Theory, Methods, and Application*, The Hebrew University of Jerusalem.
- Schwartz, S.H. (2011), "Values: cultural and individual", in van de Vijver, F.J.R. and Chasiotis, S.M.B. (Eds), *Fundamental Questions in Cross-Cultural Psychology*, Cambridge University Press, pp. 463-493, doi: [10.1017/CBO9780511974090.019](https://doi.org/10.1017/CBO9780511974090.019).
- Schwartz, S.H. and Bardi, A. (2001), "Value hierarchies across cultures", *Journal of Cross-Cultural Psychology*, Vol. 32 No. 3, pp. 268-290, doi: [10.1177/0022022101032003002](https://doi.org/10.1177/0022022101032003002).
- Schwartz, S.H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., et al. (2012), "Refining the theory of basic individual values", *Journal of Personality and Social Psychology*, Vol. 103 No. 4, pp. 663-688, doi: [10.1037/a0029393](https://doi.org/10.1037/a0029393).
- Schwartz, S.H., Melech, G., Lehmann, A., Burgess, S., Harris, M. and Owens, V. (2001), "Extending the cross-cultural validity of the theory of basic human values with a different method of measurement", *Journal of Cross-Cultural Psychology*, Vol. 32 No. 5, pp. 519-542, doi: [10.1177/0022022101032005001](https://doi.org/10.1177/0022022101032005001).

- Schwartz, S.H., Verkasalo, M., Antonovsky, A. and Sagiv, L. (1997), "Value priorities and social desirability: much substance, some style", *British Journal of Social Psychology*, Vol. 36 No. 1, pp. 3-18, doi: [10.1111/j.2044-8309.1997.tb01115.x](https://doi.org/10.1111/j.2044-8309.1997.tb01115.x).
- Shamim, K. and Islam, T. (2022), "Digital influencer marketing: how message credibility and media credibility affect trust and impulsive buying", *Journal of Global Scholars of Marketing Science*, Vol. 32 No. 4, pp. 601-626, doi: [10.1080/21639159.2022.2052342](https://doi.org/10.1080/21639159.2022.2052342).
- Sharma, P., Sivakumaran, B. and Marshall, R. (2010), "Impulse buying and variety seeking: a trait-correlates perspective", *Journal of Business Research*, Vol. 63 No. 3, pp. 276-283, doi: [10.1016/j.jbusres.2009.03.013](https://doi.org/10.1016/j.jbusres.2009.03.013).
- Sinclair, A.H., Wang, Y.C. and Adcock, R.A. (2024), "First impressions or good endings? Preferences depend on when you ask", *Journal of Experimental Psychology: General*, Vol. 153 No. 10, pp. 2588-2604, doi: [10.1037/xge0001638](https://doi.org/10.1037/xge0001638).
- Sortheix, F.M. and Lönnqvist, J.-E. (2014), "Personal value priorities and life satisfaction in Europe", *Journal of Cross-Cultural Psychology*, Vol. 45 No. 2, pp. 282-299, doi: [10.1177/0022022113504621](https://doi.org/10.1177/0022022113504621).
- Statista (2024), "Distribution of mobile e-commerce shoppers in the United States as of March 2023, by age group", Statista, available at: [www.statista.com/statistics/1343467/ecommerce-shoppers-mobile-audience-united-states-age/](https://www.statista.com/statistics/1343467/ecommerce-shoppers-mobile-audience-united-states-age/)
- Steenkamp, J.-B. and Baumgartner, H. (1992), "The role of optimum stimulation level in exploratory consumer behavior", *Journal of Consumer Research*, Vol. 19 No. 3, p. 434, doi: [10.1086/209313](https://doi.org/10.1086/209313).
- Steenkamp, J.-B. and Burgess, S.M. (2002), "Optimum stimulation level and exploratory consumer behavior in an emerging consumer market", *International Journal of Research in Marketing*, Vol. 19 No. 2, pp. 131-150, doi: [10.1016/S0167-8116\(02\)00063-0](https://doi.org/10.1016/S0167-8116(02)00063-0).
- Streiner, D.L. (2005), "Finding our way: an introduction to path analysis", *The Canadian Journal of Psychiatry*, Vol. 50 No. 2, pp. 115-122, doi: [10.1177/070674370505000207](https://doi.org/10.1177/070674370505000207).
- Tariq, M.Z., Ali Bhatti, G., Khan, N.A. and Qadir, M. (2021), "Impact of consumer emotional intelligence on satisfaction with life during the Covid-19 pandemic", *European Journal of Psychology Open*, Vol. 80 No. 3, pp. 125-132, doi: [10.1024/2673-8627/a000013](https://doi.org/10.1024/2673-8627/a000013).
- Wang, J. and Xiao, J.J. (2009), "Buying behavior, social support and credit card indebtedness of college students", *International Journal of Consumer Studies*, Vol. 33 No. 1, pp. 2-10, doi: [10.1111/j.1470-6431.2008.00719.x](https://doi.org/10.1111/j.1470-6431.2008.00719.x).
- Wang, L., Lu, W. and Malhotra, N.K. (2011), "Demographics, attitude, personality and credit card features correlate with credit card debt: a view from China", *Journal of Economic Psychology*, Vol. 32 No. 1, pp. 179-193, doi: [10.1016/j.joep.2010.11.006](https://doi.org/10.1016/j.joep.2010.11.006).
- Wilksa, T.-A. (2017), "Youth and generations in consumption", in Keller, M., Halkier, B., Wilksa, T.-A. and Truninger, M. (Eds), *Routledge Handbook on Consumption*, Routledge, London, pp. 314-325.
- Wong, A. and Carducci, B.J. (1991), "Sensation seeking and financial risk taking in everyday money matters", *Journal of Business and Psychology*, Vol. 5 No. 4, pp. 525-530, doi: [10.1007/BF01014500](https://doi.org/10.1007/BF01014500).
- Worthy, S.L., Jonkman, J. and Blinn-Pike, L. (2010), "Sensation-seeking, risk-taking, and problematic financial behaviors of college students", *Journal of Family and Economic Issues*, Vol. 31 No. 2, pp. 161-170, doi: [10.1007/s10834-010-9183-6](https://doi.org/10.1007/s10834-010-9183-6).
- Zabel, K.L., Christopher, A.N., Marek, P., Wieth, M.B. and Carlson, J.J. (2009), "Mediational effects of sensation seeking on the age and financial risk-taking relationship", *Personality and Individual Differences*, Vol. 47 No. 8, pp. 917-921, doi: [10.1016/j.paid.2009.07.016](https://doi.org/10.1016/j.paid.2009.07.016).
- Zuckerman, M. (1994), *Behavioral Expressions and Biosocial Bases of Sensation Seeking*, Cambridge University Press, Cambridge.

## Further reading

- Fekih-Romdhane, F., Malaeb, D., Hallit, S. and Obeid, S. (2023), "Does mindfulness moderate the association between impulsivity and well-being in Lebanese university students?", *International Journal of Environmental Health Research*, Vol. 34 No. 3, pp. 1-13, doi: [10.1080/09603123.2023.2212595](https://doi.org/10.1080/09603123.2023.2212595).

Haslam, N., Whelan, J. and Bastian, B. (2009), "Big five traits mediate associations between values and subjective well-being", *Personality and Individual Differences*, Vol. 46 No. 1, pp. 40-42, doi: [10.1016/j.paid.2008.09.001](https://doi.org/10.1016/j.paid.2008.09.001).

Jasrotia, S.S., Darda, P. and Pandey, S. (2023), "Changing values of millennials and centennials towards responsible consumption and sustainable society", *Society and Business Review*, Vol. 18 No. 2, pp. 244-263, doi: [10.1108/SBR-01-2022-0013](https://doi.org/10.1108/SBR-01-2022-0013).

Lindenmeier, J., Schleer, C. and Pricl, D. (2012), "Consumer outrage: emotional reactions to unethical corporate behavior", *Journal of Business Research*, Vol. 65 No. 9, pp. 1364-1373, doi: [10.1016/j.jbusres.2011.09.022](https://doi.org/10.1016/j.jbusres.2011.09.022).

Wang, G., Dou, W. and Zhou, N. (2008), "Consumption attitudes and adoption of new consumer products: a contingency approach", *European Journal of Marketing*, Vol. 42 Nos 1/2, pp. 238-254, doi: [10.1108/03090560810840998](https://doi.org/10.1108/03090560810840998).

## Appendix

**Table A1** Descriptive statistics of the variables

<i>Variable</i>	<i>Mean</i>	<i>Min.</i>	<i>Max.</i>	<i>Variance</i>	<i>n</i>
Life satisfaction	6.63	1	10	4.68	2,277
Indebtedness	2.23	1	6	2.01	2,282
Impulsive buying	3.07	1	5	0.76	2,297
Budget constraint	2.77	1	5	1.29	2,297
Stimulation values	3.26	1	5	1.13	2,297

Source: Authors' own work

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