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The Road to Financial Satisfaction: Testing the Paths of Knowledge, Attitudes, Sense of Control, and Positive Financial Behaviors

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The Road to Financial Satisfaction: Testing the Paths of Knowledge, Attitudes, Sense of Control, and Positive Financial Behaviors

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A goal of financial therapy is to increase clients' financial satisfaction by helping them to perform positive financial behaviors. The present study argues that the success of such therapies can be further enhanced by considering the individual factors that underlie such behaviors. To identify the possibly most promising factors, data from the 2018 Money Advice Service (MAS) Financial Capability Survey (n = 2,133) were used and three sets of individual factors were examined: knowledge factors (financial knowledge and financial confidence), attitudinal factors (future orientation and attitude toward money), and sense of control factors (spending self-control and perceived behavioral control). Path analysis findings indicated that all factors were associated with financial satisfaction via one or more positive financial behaviors. All factors except for attitude toward money were also directly related to financial satisfaction. Financial confidence was the most promising individual factor to improve clients' financial satisfaction, followed by future orientation and perceived behavioral control.

Keywords: financial knowledge; financial attitudes; sense of control; financial behavior; financial satisfaction

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INTRODUCTION

Being satisfied with one's own overall financial circumstances is an important goal in the financial therapy field (Joo & Grable, 2004). The literature offers no standard way of defining and measuring financial satisfaction, and the term financial satisfaction is often interchangeable with financial well-being, financial wellness, and financial health (Joo & Grable, 2004; Robb & Woodyard, 2016). To prevent confusion, the present study used the term "financial satisfaction" because the measure used addressed the subjective side of the broader construct of financial well-being (for further details see Kempson & Poppe, 2018). The term financial satisfaction generally is described as being happy about and feeling in control of one's financial situation (Joo & Grable, 2004; Robb & Woodyard, 2016), and has implications that reach beyond one's finances. Studies have shown that it is associated with several areas of individuals' well-being and life satisfaction, such as happiness, physical and mental health, labor productivity, consumer choice, and freedom from marital stress (Hansen, 2009; Joo & Grable, 2004; Robb & Woodyard, 2016).

Financial satisfaction has attracted considerable attention from financial practitioners, such as therapists, counselors, and psychologists. Knowing the extent to which concrete modifiable factors improve financial satisfaction, these practitioners can help their clients effectively. Previous research has identified positive financial behaviors that contribute to financial satisfaction, such as active saving and managing credit (Easterlin, 2006; Xiao, et al., 2014). The present study contributes to the literature by drawing attention to the possibility that underlying individual factors could directly or indirectly through financial behaviors improve financial satisfaction as well (Joo & Grable, 2004). By widening the scope from specific financial behaviors, such as active saving and managing credit, to the underlying factors that characterize the individuals who should perform these behaviors, practitioners can broaden their arsenal to improve financial satisfaction. With this perspective in mind, the central aim of the present study was to shed light on behavior-based paths to financial satisfaction.

LITERATURE REVIEW

Determinants of Financial Satisfaction

Joo and Grable (2004) were among the first to outline a comprehensive theoretical framework of the determinants of financial satisfaction. Their model, which they tested in a small sample of white-collar clerical workers (N = 220), identified financial behaviors as the main predictors of financial satisfaction. They also acknowledged that these financial behaviors may, in turn, be determined by specific individual factors: demographic factors, financial stressors, financial knowledge, and financial attitudes. This framework offers a starting point, but is limited because it was tested on a small and select sample. To improve the generalizability of Joo and Grable's findings, subsequent studies assessed their framework within large nationally representative samples (Garrett & James, 2013; Robb & Woodyard, 2016; Seay et al., 2015; Xiao et al., 2014). However, these more recent studies did not empirically test whether the aforementioned individual factors predicted financial satisfaction via financial behaviors. In the present study, the aim was to further advance the field by testing these indirect relations.

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Positive Financial Behaviors

Individuals can lead better lives by managing their money effectively. The corresponding positive financial behaviors—those behaviors that imply effective financial decisions—benefit both society and the individual (Ameliawati & Setiyani, 2018). From a societal perspective, positive behaviors contribute to financial stability and economic growth (Lusardi & Mitchell, 2014). For individuals, such behaviors have positive implications for their career, mental and physical health, labor productivity and, especially relevant for the present study, financial satisfaction (Bir, 2014).

To illustrate, individuals who actively save money create a financial buffer that prevents them from getting into problems when they experience a financial setback (Joo & Grable, 2004; Robb & Woodyard, 2016; Xiao et al., 2014). Similarly, individuals who effectively manage their credit know when they can or cannot take loans, which prevents them from becoming over-indebted (Robb & Woodyard, 2016). Another example is that individuals who adjust their spending according to changing conditions protect themselves from spending beyond their financial means (Joo & Grable, 2004). In a similar vein, individuals who keep track of their financial affairs can prevent themselves from spending more money than they really can afford (Joo & Grable, 2004). Likewise, individuals who shop around to obtain better financial deals can spend less money, which allows them to purchase other items they want (Xiao et al., 2014). All these positive financial behaviors help individuals to experience greater satisfaction with their financial situation.

Individual Factors Underlying Positive Financial Behaviors

The above insights point to specific financial behaviors that can be addressed in interventions and therapies. The arsenal may be broadened, however, if one considers the individual factors that underlie these behaviors. Apart from factors beyond the control of financial practitioners (e.g., gender, age, education, and income; see Hira & Mugenda, 1999; Joo, 1998), the literature has also identified a series of individual factors that can be influenced. Below, three sets of these factors are addressed: (a) individuals' financial knowledge and financial confidence, (b) their future orientation and attitudes toward money, and (c) their spending self-control and perceived behavioral control.

Financial Knowledge and Financial Confidence

To know which positive financial behaviors to perform, individuals benefit from having sufficient financial knowledge. Studies often distinguish between objective and subjective measures of financial knowledge. Objective financial knowledge concerns one's understanding of different areas of financial markets, products, and services (Huston, 2010). Subjective financial knowledge (also termed financial confidence) refers to having self-confidence in managing financial matters and assessing the risks and opportunities associated with these matters (Susilowati, et al., 2017). In the present study, subjective financial knowledge and financial confidence were used interchangeably.

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Both types of knowledge can increase financial satisfaction directly (Joo & Grable, 2004; Xiao et al., 2014), but also via specific positive financial behaviors. To illustrate, as accurate knowledge about financial matters can help individuals understand the financial landscape better, this is related to more positive financial behaviors such as active saving and not borrowing for the short term. Such behaviors, in turn, may help individuals to feel more financially satisfied (Arifin, 2018; Falahati, et al., 2012). The relation is not always positive, however. For instance, Mugenda, et al. (1990) explained that individuals who are more financially knowledgeable strive to enhance their financial situation because they are aware that there is room for improvement and therefore are less financially satisfied. Conversely, individuals who are less financially knowledgeable may not realize that their situation is relatively weak. These individuals may report greater financial satisfaction because ignorance can be bliss.

Prior work about financial confidence likewise found that it directly predicts financial satisfaction (De Bassa Scheresberg, 2013; Henager & Cude, 2016; Mudzingiri, et al., 2018), even stronger than objective knowledge does (Xiao, et al., 2011). For example, individuals with more financial confidence may be convinced of their ability to handle their financial situation, thus leading them to experience greater financial satisfaction. Again, this impact can be both direct and indirect via certain positive behaviors. For instance, this may translate into positive financial behaviors, such as working toward financial goals and managing credit. As a result, they may experience greater financial satisfaction. It should be noted, however, that limited studies investigated and found that the relationship between financial confidence and financial satisfaction indeed runs via positive financial behaviors (Atlas, et al., 2019; Joo & Grable, 2004). This can be ascribed to the fact that individuals do not always accurately assess their actual financial knowledge as discussed earlier (Courchane & Zorn, 2005), which therefore results in over-confidence or under-confidence. Since financial knowledge and financial confidence thus may have differential impacts on financial satisfaction, both factors were addressed in the present study.

Future Orientation and Attitude Toward Money

Individuals can also benefit from having an attitude that prevents them from worrying about (future) shortage of money (Kirbiš, et al., 2017). Positive future orientation, described as individuals' attitudes toward planning and providing for the future (Metcalf & Zimbardo, 2016),[1] is such an attitude. This leads to a more optimistic view of the future, which might allow individuals to experience greater financial satisfaction. This link may be direct, but can also run via positive behaviors. One can argue that individuals who have more future-oriented mindsets tend to control their (daily) spending better and have more financial room to build a buffer against financial shocks. Indeed, previous work has found a positive link between future orientation and several positive financial behaviors (Howlett, et al., 2008; Rutledge & Deshpande, 2014), and between future orientation and financial satisfaction (Nyström & Romberg, 2017). It has not, however, been studied yet whether future orientation is related to financial satisfaction indirectly via positive financial behaviors.

[1]Future orientation has been operationalized in several ways and the terms used to describe it have been usually "financial time perspective", "time orientation", or "future orientation" (e.g., Rutledge & Deshpande, 2014). These terms imply the same.

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Attitude toward money also plays a role with regard to financial satisfaction because it involves the frame of reference that one uses to assess and make financial decisions (Henchoz, et al., 2019). For example, having a careful attitude toward money may positively affect financial satisfaction because individuals recognize that they have reached or are working on reaching a stable financial situation. Earlier studies have reported that attitude toward money is a significant contributor to financial satisfaction (Dowling, et al., 2009). The impact may be direct, but might also run via positive financial behaviors. For instance, individuals who have a careful attitude toward money may keep track of their money, save their money for future use, and shop around to obtain better deals. These positive behaviors may help individuals to combat unpleasant financial surprises and avoid financial difficulties, thereby allowing them to experience greater financial satisfaction. So far, no studies have provided evidence on whether or not attitude toward money contributes to financial satisfaction via positive financial behaviors.

Spending Self-Control and Perceived Behavioral Control

One can have sufficient knowledge and an appropriate attitude, but still feel tempted to spend. Spending self-control, often defined as one's ability to curb spending impulses (Haws, et al., 2012), can then help to keep one focused on performing positive financial behaviors, such as adjusting spending and shopping around. These behaviors, in turn, may lead to greater financial satisfaction. Previous research indicated that financial satisfaction is indeed related to spending self-control (Hirvonen, 2018; Rha, et al., 2006; van Rooij, et al., 2012). Nonetheless, the empirical question remains whether or not this relationship runs via positive financial behaviors. The relationship between spending self-control and financial satisfaction can also be influenced by personality traits. For example, individuals who are 'happy-go-lucky' (Thompson, et al., 2019) could have both less spending self-control and greater financial satisfaction (Wiese et al., 2018).

Similarly, perceived behavioral control—the perceived ease or difficulty to enact a behavior (Ajzen, 1985)—may play a role in improving financial satisfaction. For example, when individuals believe that they can execute whatever financial behavior they want, this may enable them to experience greater financial satisfaction. Perceived behavioral control, however, can also promote positive financial behaviors such as working toward financial goals and via these behaviors contribute to financial satisfaction. To date, the role of perceived behavioral control has been examined for some positive financial behaviors, such as sound borrowing, achieving financial goals, and managing money (Chudry, et al., 2011; Lajuni, et al., 2018), but has not yet been linked to financial satisfaction.

The Present Study

The present study argued that the aforementioned individual factors (i.e., financial knowledge, financial confidence, future orientation, attitude toward money, spending self-control, and perceived behavioral control), directly and indirectly contribute to financial satisfaction via positive financial behaviors. If these factors impact financial satisfaction immediately by promoting positive behaviors, practitioners' tools will be enhanced. Financial practitioners can help improve financial

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satisfaction by influencing positive financial behaviors (e.g., Falahati et al., 2012) and the factors that underlie these behaviors. Figure 1 presents the conceptual model of the present study.

The contribution of this study to the financial satisfaction literature is threefold. First, using an adapted version of Joo and Grable's (2004) theoretical framework, it examined whether financial satisfaction can be predicted by knowledge factors (i.e., financial knowledge and financial confidence), attitudinal factors (i.e., future orientation and attitude toward money), and sense of control factors (i.e., spending self-control and perceived behavioral control). Previous research has often used risk tolerance as the only attitudinal factor and has not included factors relating to sense of control (Joo & Grable, 2004; Robb & Woodyard, 2016). Including this array of individual factors simultaneously can provide a better understanding of the determinants of clients' financial satisfaction. Second, this study used a large nationally representative sample to examine the relative effects, both direct and indirect, of the aforementioned individual factors on financial satisfaction. Earlier research either accounted for both direct and indirect effects using comparatively small samples (Joo & Grable, 2004) or when using large representative samples tested only direct effects (e.g., Garrett & James, 2013; Robb & Woodyard, 2016). Thus, it was difficult to identify how underlying individual factors can increase financial satisfaction via their impact on positive financial behaviors. Third, by addressing both the direct and indirect effects, the present study could help practitioners select the most promising factors to shape their therapeutic interventions and develop new educational programs for their clients.

It was hypothesized that individual financial knowledge and financial confidence, future orientation and attitude toward money, and spending self-control and perceived behavioral control are related to positive financial behaviors, and that, in turn, these behaviors are associated with financial satisfaction (H1 in Figure 1). The present study also assessed whether this indirect relationship varied depending on the type of financial behavior. It was furthermore hypothesized that all of the individual factors are directly associated with financial satisfaction (H2 in Figure 1). Demographic factors were treated as control variables, since they cannot be changed through interventions and therapies.

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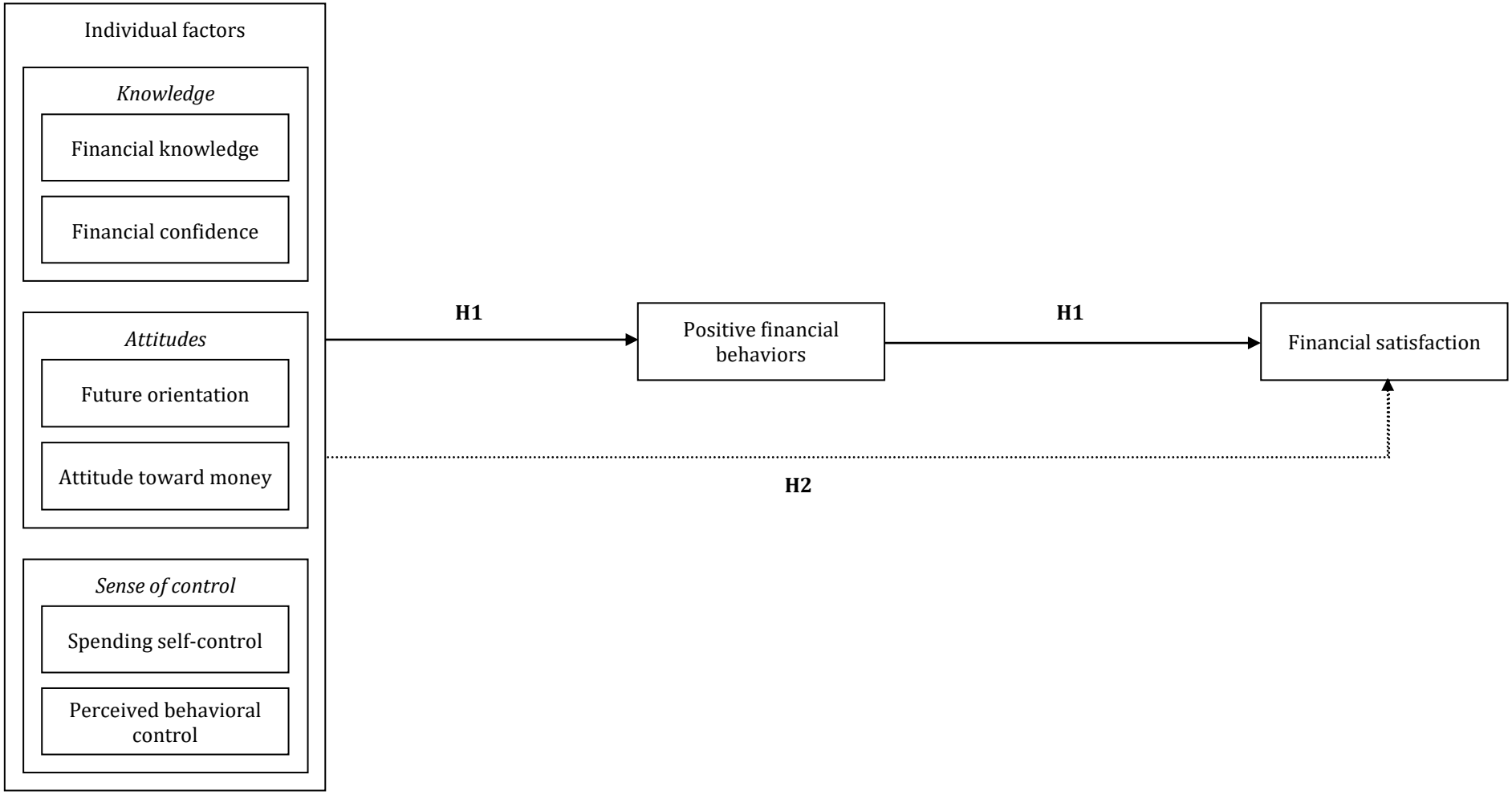
Figure 1

The Conceptual Model of the Present Study



Note. Adapted from Joo and Grable's (2004) theoretical framework of financial satisfaction.

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METHODS

Data and Sample Characteristics

Publicly available data from the Financial Capability Survey commissioned by the Money Advice Service[2] (MAS, 2018b) were used. The data were gathered via a mixed-mode approach (online and face-to-face) from April to June 2018 and weighted to be representative of the UK adult population (see MAS, 2018b, for further details).

From the drawn sample of 5,974 adults (4,385 working age and 1,589 retirees), only data from respondents who were working-age (i.e., 18 and 64 years), completed the survey online, and who indicated that they—personally or jointly—managed their household's money day-to-day were included in the present study.[3] This resulted in a sample of 2,133 respondents (54.6% females and 45.4% males, M_{age} = 40.01 years, SD_{age} = 12.67). The mean effective household income was £22,364 (*SD* = £16,211). Furthermore, 44.4% completed less than higher education, 33.2% completed up to the first-degree qualification, and 22.4% completed university-degree qualification.

Measures

Financial Satisfaction

Financial satisfaction was assessed using the question: "How satisfied are you with your overall financial circumstances?" (1 = *not at all satisfied* to 11 = *completely satisfied*).[4] A higher score indicated greater financial satisfaction.

[2]The MAS is a governmental body that was established under the Financial Services Act 2010 to provide free and impartial financial education and advice to consumers in the UK. As of January 2019, it was merged into the Money and Pensions Service and is now the largest funder of debt advice in the UK.

[3]This specific subsample was selected for three reasons. First, there may be differences between the working-age and the retired respondents regarding the individual factors that influence their financial well-being (see MAS, 2018a). Given that this could also be the case for financial satisfaction (Hansen, et al., 2008) and that the group of working-age respondents was much larger than the group of respondents who were retired, the working-age group was selected. Second, the interview method may influence how respondents answer the questions. Research documented that face-to-face surveys are more susceptible to socially desirable responses than online surveys (Heerwegh, 2009). Therefore, the online working-age group (*n* = 3,385) was selected. Third, from this group those respondents who managed their household's money were selected because the variables included in the present study were mostly relevant to them. Hence, they could benefit the most from our findings and resulting implications and conclusions.

[4]While some researchers prefer to use single-item measures, others favor multiple-item measures (Joo & Grable, 2004). To date, it has been shown that both measures offer valid and reliable results, although single-item measures were used mainly for large nationally representative samples (Robb & Woodyard, 2016).

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Positive Financial Behaviors

The positive financial behaviors included in the present study were: (a) not borrowing for the short term, (b) active saving, (c) working toward goals, (d) adjusting spending, (e) managing credit use, (f) keeping track, and (g) shopping around.

Not borrowing for the short term was assessed using four items, concerning the extent to which respondents: (a) borrowed money to pay off debts, (b) borrowed money from family or friends because they ran out of money, (c) overdrew on their current account, and (d) used a credit card, overdraft or borrowed money to buy food or pay bills because they ran short of money (1 = *very often* to 5 = *never*). Respondents' answers to the four items were averaged to yield an index of not borrowing for the short term. A higher mean indicated not borrowing for the short term (Cronbach's α = 0.87).

Active saving was assessed using the question: "Which of these best describes how often you save money?" (1 = *every month*, 2 = *most months*, 3 = *some months, but not others*, 4 = *rarely/never*). Respondents' answers to this question were reverse scored so that a higher score indicated more active saving.

Working toward goals was assessed using two items, concerning whether respondents: (a) had a plan for their financial goals for the next five years (1 = *clear plan*, 2 = *rough plan*, 3 = *not much of a plan*, 4 = *no plan at all*, 5 = *no financial goals*) and (b) had done something to achieve their financial goals for the next five years (1 = *great deal*, 2 = *fair amount*, 3 = *not very much*, 4 = *nothing at all*, 5 = *no financial goals*). Respondents' answers to the two items were reverse scored and averaged to yield an index of working toward goals. A higher mean indicated working more toward goals (Pearson's r = 0.81).

Adjusting spending was assessed using three items, concerning whether respondents: (a) planned their spending to cover months where they expected money would be tighter (1 = *does not sound like me at all* to 11 = *sounds a lot like me*), (b) adjusted the amount of money they spent on non-essentials when their life changed (1 = *does not sound like me at all* to 11 = *sounds a lot like me*), and (c) changed their spending as a result of keeping track of their (household) income and expenditure (1 = *great deal*, 2 = *fair amount*, 3 = *not very much*, 4 = *not at all*). Respondents' answers to the third item were reverse scored and recoded to an eleven-point scale.[5] Subsequently, their answers to the three items were averaged to yield an index of adjusting spending. A higher mean indicated adjusting spending more (α = 0.66).

Managing credit use was assessed using the question: "How do you generally handle paying your bill each month for your credit card(s) or store card(s)?" (1 = *always*

[5]To convert a 4-point to an 11-point scale, the following formula was used:
(11 - 1) * (X - 1) / (4 - 1) + 1 = 10 * (X - 1) / 3 + 1 = (10/3) * X - (10/3) + 1 = (10/3) * X - (7/3). As intended, X = 1 results in 1, and X = 4 results in 11 (see IBM, 2018, for further details).

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pay only the minimum to 5 = *always pay full*). A higher score indicated managing credit use better.

Keeping track was assessed using the question: "How often do you normally check how much money is in your current account?" (1 = *every day* to 6 = *never*). Respondents' answers to this question were reverse scored so that a higher score indicated keeping more track of spending.

Shopping around was assessed using five items, concerning whether respondents shopped around for better deals on: (a) their phone, internet, or TV packages, (b) utilities, (c) bank or savings accounts, (d) credit cards, and (e) car or home insurance (1 = *not at all*, 2 = *not very much*, 3 = *fair amount*, 4 = *great deal*). Respondents' answers to the five items were averaged to yield an index of shopping around. A higher mean indicated shopping around more for better deals ($\alpha = 0.84$).

Individual Factors Underlying Positive Financial Behaviors

The following individual factors were included in the present study: (a) financial knowledge and financial confidence, (b) future orientation and attitude toward money, and (c) spending self-control and perceived behavioral control.

Financial knowledge[6] was assessed using three questions:

1. Suppose you put £100 into a savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made? This question was open-ended (*Correct answer: £102*).
2. And, how much would be in the account at the end of five years (remembering there are no fees or tax deductions). Would it be more than £110, exactly £110, less than £110, or it is impossible to tell from the information given? (*Correct answer: more than £110*).
3. If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have more, less or the same amount of buying power in a year's time? (*Correct answer: less*)

For each correct answer, respondents were assigned one point and therefore their financial knowledge scores could range from zero to three. A higher sum indicated greater financial knowledge.

Financial confidence was assessed using five items, concerning the extent to which respondents felt confident about: (a) managing their money, (b) making decisions about financial products and services, (c) working with numbers when they need to in everyday life, (d) planning for their financial future, and (e) protecting themselves from financial scams (1 = *not at all confident* to 11 = *very confident*).

[6]Although financial knowledge included only three specific items, it is the common UK approach to measure respondents' understanding of key financial concepts and accompanying mathematical calculations (MAS, 2018a) and is comparable in content and construction to the widely used 'Big Three' questions (Lusardi & Mitchell, 2011).

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Respondents' answers to the five items were averaged to yield an index of financial confidence. A higher mean indicated more financial confidence (α = 0.89).

Future orientation was assessed using the statement: "When it comes to money, I focus on the long term" (1 = *does not sound like me at all* to 11 = *sounds a lot like me*). A higher score indicated a more future-oriented mindset.

Attitude toward money was assessed using four items, concerning the extent to which respondents, when thinking about their (household) finances, thought it was important to: (a) save money for a rainy day, (b) keep track of income and expenditure, (c) put aside money for their retirement, and (d) shop around in order to make their money go further (1 = *very important* to 5 = *very unimportant*). Respondents' answers to the four items were reverse scored and then averaged to yield an index of attitude toward money. A higher mean indicated a more careful attitude toward money (α = 0.83).

Spending self-control was assessed using four items, concerning whether respondents: (a) often bought things on impulse, (b) felt under pressure to spend like their friends even when they could not afford it, (c) ran short of money because they overspent, and (d) tended to buy things even when they could not really afford them (1 = *does not sound like me at all* to 11 = *sounds a lot like me*). Respondents' answers to the four items were reverse scored and then averaged to yield an index of spending self-control. A higher mean indicated more spending self-control (α = .91).

Perceived behavioral control was assessed using the statement: "Nothing I do will make much difference to my financial situation" (1 = *strongly agree* to 5 = *strongly disagree*). A higher score indicated more perceived behavioral control.

Control Variables

The demographic control variables included in the present study were gender (male or female), age (continuous: ranging from 18 to 64 years old), education (three categories: less than higher education, up to first-degree, and university-degree), and effective income (continuous: ranging from £850 to £79,550).[7] For the analyses, the last category of education was used as the reference group.

Data Analysis

Missing Data

Little's (1988) test of missing values yielded a statistically significant result, χ^2 = 21,601.70, *df* = 17,971, $p < 0.001$, indicating that the data were not missing completely

[7]Effective income concerns the annual gross household income divided by the square root of the household's size (Buhmann & Rainwater, 1988). Income (before taxes) had 17 banded levels ranging from under £4,500 to £100,000 or more. It was estimated by using the midpoint of every banded level. As the lowest banded level had no lower limit, it was assumed that respondents' income could start at £0. As the highest banded level had no upper limit, the same range (£24,999) as for the two penultimate income brackets was used.

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at random. Thus, as recommended by van Ginkel, et al. (2019), multiple imputations with five implicate datasets were used for the analysis.

Path Analysis

Using a path analysis enabled us to test the compatibility of our theoretical mediation model (see Figure 1) with the MAS dataset (Stage, et al., 2004). A path analysis identifies the indirect, direct, and total effects. The indirect effects regard the contribution of the independent variables to the dependent variable that operates via the intermediate variable. The direct effects refer to the contribution of the independent variables to the dependent variable, keeping constant the other variables in the model. The total effects concern the sum of indirect and direct effects. All effects are standardized coefficients estimated with maximum likelihood (Jeon, 2015).

All analyses of the present study were performed with the jAMM module of the open-source jamovi statistical platform (Gallucci, 2019; The jamovi project, 2019), based on lavaan R package (Rosseel, 2012). The path analysis was built using the six individual variables underlying positive financial behaviors as the independent variables, the seven positive financial behaviors as the intermediate variables, and financial satisfaction as the dependent variable. The path analysis further included gender, age, education, and effective income as the control variables (see MAS, 2018a, for the original dataset). If a *significant* indirect relation was found, thus supporting H1, a further analysis of the component relations was performed. This was done to explore the relations between the individual factor and the financial behavior in question and between that behavior and financial satisfaction.

RESULTS

Descriptive and Correlation Results

Appendix 1 presents the descriptive statistics and correlation coefficients of the variables included in the present study. Results of a correlation analysis showed that all included individual variables were significantly related to financial satisfaction ($p < 0.001$), except for not borrowing for the short term ($r = 0.01$, $p = 0.640$) and financial knowledge ($r = 0.02$, $p = 0.331$). Results also showed that, among the independent variables, no multicollinearity issues were identified (Collis & Hussey, 2009; Dormann et al., 2012). To assess the overall impact of the included individual variables, a path analysis was performed.

Path Analysis Results

Appendices 2-5 report the standardized coefficients obtained from the path analysis when controlling for gender, age, education, and effective income.

Indirect Effects on Financial Satisfaction

Results showed that financial knowledge had a positive indirect relation with financial satisfaction via managing credit use ($\beta = 0.01$, $z = 3.21$, $p = 0.001$) (see Appendix 2). A subsequent analysis of the component effects revealed that financial knowledge had a positive association with managing credit use ($\beta = 0.13$, $z = 6.08$, $p <$

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0.001), which, in turn, had a positive relationship with financial satisfaction (β = 0.07, z = 3.77, $p < 0.001$) (see Appendix 5). Financial confidence had a positive indirect relation with financial satisfaction via active saving (β = 0.02, z = 4.71, $p < 0.001$) and via working toward goals (β = 0.02, z = 3.65, $p < 0.001$), but a negative indirect relation via adjusting spending (β = -0.01, z = 3.07, $p = 0.002$) (see Appendix 2). A subsequent analysis of the component effects revealed that financial confidence had positive associations with both active saving (β = 0.16, z = 6.29, $p < 0.001$) and working toward goals (β = 0.19, z = 7.64, $p < 0.001$), which, in turn, had positive relationships with financial satisfaction (β = 0.16, z = 7.93, $p < 0.001$; β = 0.09, z = 4.19, $p < 0.001$, respectively) (see Appendix 5). Moreover, financial confidence had a positive association with adjusting spending (β = 0.17, z = 7.24, $p < 0.001$), which, in turn, had a negative relationship with financial satisfaction (β = -0.07, z = 3.40, $p < 0.001$) (see Appendix 5).

Future orientation had a positive indirect relation with financial satisfaction via active saving (β = 0.03, z = 6.15, $p < 0.001$), via working toward goals (β = 0.03, z = 4.01, $p < 0.001$), and via keeping track (β = 0.01, z = 3.20, $p = 0.001$), but a negative indirect relation via adjusting spending (β = -0.02, z = 3.27, $p = 0.001$) (see Appendix 2). A subsequent analysis of the component effects revealed that future orientation had positive associations with active saving (β = 0.22, z = 9.17, $p < 0.001$) and working toward goals (β = 0.32, z = 14.44, $p < 0.001$), which, in turn, had positive relationships with financial satisfaction (β = 0.16, z = 7.93, $p < 0.001$; β = 0.09, z = 4.19, $p < 0.001$, respectively) (see Appendix 5). Additionally, future orientation had a positive association with adjusting spending (β = 0.32, z = 12.06, $p < 0.001$), which, in turn, had a negative relationship with financial satisfaction (β = -0.07, z = 3.40, $p < 0.001$) (see Appendix 5). Furthermore, future orientation had a negative association with keeping track (β = -0.11, z = 4.91, $p < 0.001$), which, in turn, had a negative relationship with financial satisfaction (β = -0.07, z = 4.66, $p < 0.001$) (see Appendix 5). Attitude toward money had a positive indirect relation with financial satisfaction via active saving (β = 0.01, z = 3.53, $p < 0.001$) and via working toward goals (β = 0.01, z = 3.14, $p = 0.002$), but a negative indirect relation via adjusting spending (β = -0.01, z = 3.13, $p = 0.002$) and via keeping track (β = -0.005, z = 2.46, $p = 0.014$) (see Appendix 2). A subsequent analysis of the component effects revealed that attitude toward money had positive associations with both active saving (β = 0.08, z = 3.97, $p < 0.001$) and working toward goals (β = 0.08, z = 4.79, $p < 0.001$), which, in turn, had positive relationships with financial satisfaction (β = 0.16, z = 7.93, $p < 0.001$; β = 0.09, z = 4.19, $p < 0.001$, respectively) (see Appendix 5). Besides, attitude toward money had positive associations with both adjusting spending (β = 0.20, z = 9.14, $p < 0.001$) and keeping track (β = 0.06, z = 2.84, $p = 0.005$), which, in turn, had negative relationships with financial satisfaction (β = -0.07, z = 3.40, $p < 0.001$; β = -0.07, z = 4.66, $p < 0.001$, respectively) (see Appendix 5).

Spending self-control had a positive indirect relation with financial satisfaction via not borrowing for the short term (β = 0.02, z = 2.07, $p = 0.039$), via adjusting spending (β = 0.01, z = 2.71, $p = 0.007$), and via managing credit use (β = 0.01, z = 3.24, $p = 0.001$), but a negative indirect relation via active saving (β = -0.01, z = 2.99, $p = 0.003$) and via working toward goals (β = -0.01, z = 3.25, $p = 0.001$) (see Appendix 2). A subsequent analysis of the component effects revealed that spending self-control had positive associations with not borrowing for the short term (β = 0.49, z = 25.36, $p < 0.001$) and managing credit use (β = 0.16, z = 7.15, $p < 0.001$), which, in turn, had

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positive relationships with financial satisfaction (β = 0.05, z = 2.07, *p* = 0.038; β = 0.07, z = 3.77, *p* < 0.001, respectively) (see Appendix 5). In addition, spending self-control had a negative association with both active saving (β = -0.07, z = 3.24, *p* = 0.001) and working toward goals (β = -0.13, z = 5.84, *p* < 0.001) which, in turn, had positive relationships with financial satisfaction (β = 0.16, z = 7.93, *p* < 0.001; β = 0.09, z = 4.19, *p* < 0.001, respectively) (see Appendix 5). Moreover, spending self-control had a negative association with adjusting spending (β = -0.12, z = 5.16, *p* < 0.001), which, in turn, had a negative relationship with financial satisfaction (β = -0.07, z = 3.40, *p* < 0.001) (see Appendix 5). Perceived behavioral control had a positive indirect relation with financial satisfaction via not borrowing for the short term (β = 0.01, z = 2.06, *p* = 0.039), via active saving (β = 0.02, z = 3.80, *p* < 0.001), via working toward goals (β = 0.01, z = 2.48, *p* = 0.013), via adjusting spending (β = 0.01, z = 2.77, *p* = 0.006), and via managing credit use (β = 0.01, z = 3.49, *p* < 0.001) (see Appendix 2). A subsequent analysis of the component effects revealed that perceived behavioral control had positive associations with not borrowing for the short term (β = 0.22, z = 12.07, *p* < 0.001), active saving (β = 0.10, z = 4.55, *p* < 0.001), working toward goals (β = 0.07, z = 3.24, *p* = 0.001), and managing credit use (β = 0.18, z = 8.37, *p* < 0.001), which, in turn, had positive relationships with financial satisfaction (β = 0.05, z = 2.07, *p* = 0.038; β = 0.16, z = 7.93, *p* < 0.001; β = 0.09, z = 4.19, *p* < 0.001; β = 0.07, z = 3.77, *p* < 0.001, respectively) (see Appendix 5). Additionally, perceived behavioral control had a negative association with adjusting spending (β = -0.11, z = 5.28, *p* < 0.001), which, in turn, had a negative relationship with financial satisfaction (β = -0.07, z = 3.40, *p* < 0.001) (see Appendix 5).

Thus, all individual factors were related to one or more positive financial behaviors which, in turn, were associated with financial satisfaction, providing support for H1. The individual factors with the greatest indirect impact on financial satisfaction were: perceived behavioral control (sum of indirect effects = 0.05), future orientation (sum of indirect effects = 0.05), and financial confidence (sum of indirect effects = 0.04). It is also worth noting that none of the individual factors were related to financial satisfaction via shopping around. Also important to mention is that financial confidence, future orientation, and attitude toward money had a positive impact on adjusting spending, which, in turn, had a negative impact on financial satisfaction. Similarly, attitude toward money had a positive impact on keeping track, which, in turn, had a negative impact on financial satisfaction. On the other hand, both spending self-control and perceived behavioral control had a negative impact on adjusting spending, which, in turn, also had a negative impact on financial satisfaction. Likewise, future orientation had a negative impact on keeping track, which, in turn, also had a negative impact on financial satisfaction.

Direct Effects on Financial Satisfaction

Results showed that financial confidence (β = 0.42, z = 19.12, *p* < 0.001), future orientation (β = 0.13, z = 5.78, *p* < 0.001), and perceived behavioral control (β = 0.06, z = 3.07, *p* = 0.002) had direct positive relations with financial satisfaction (see Appendix 3). By contrast, spending self-control (β = -0.16, z = 6.81, *p* < 0.001) and financial knowledge (β = -0.08, z = 4.71, *p* < 0.001) were shown to have direct negative relations with financial satisfaction. Whereas the indirect relations of attitude toward money with financial satisfaction were significant, this factor did not have a direct relation with financial satisfaction (β = -0.02, z = 1.35, *p* = 0.176).

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Thus, all individual factors except for attitude toward money had a direct relation with financial satisfaction, providing (at least) partial support for H2. The individual factor with the greatest direct impact on financial satisfaction was: financial confidence.

Total (Indirect Plus Direct) Effects on Financial Satisfaction

Results showed that financial confidence was the single strongest positive predictor of financial satisfaction (β = 0.46, z = 24.19, $p < 0.001$), followed by future orientation (β = 0.18, z = 10.12, $p < 0.001$) and perceived behavioral control (β = 0.11, z = 6.22, $p < 0.001$) (see Appendix 4). Spending self-control (β = -0.14, z = 7.59, $p < 0.001$) and financial knowledge (β = -0.06, z = 3.48, $p < 0.001$), however, were negative predictors of financial satisfaction. Attitude toward money was not a significant predictor of financial satisfaction (β = -0.02, z = 0.99, $p = 0.323$).

Of the demographic control variables, effective income was strongly and positively related to financial satisfaction (β = 0.18, z = 10.69, $p < 0.001$), indicating that respondents who had higher effective incomes reported greater financial satisfaction. Regarding education, respondents who had up to first-degree qualification reported greater financial satisfaction relative to those who had university-degree qualification (β = 0.09, z = 4.30, p < 0.001), whereas the opposite held for those who had less than higher education (β = -0.08, z = 3.75, p < 0.001).

DISCUSSION

It is well established that positive financial behaviors, such as active saving and managing credit, are associated with financial satisfaction (e.g., Robb & Woodyard, 2016), but less clear is what individual factors facilitate such behaviors. By broadening the scope from specific behaviors to their underlying factors, practitioners have a broader number of factors to consider when working on financial satisfaction. In the present study, therefore, the focus was on whether such underlying individual factors are related to financial satisfaction directly or indirectly via the positive behaviors. This hypothesis was tested using an adapted version of Joo and Grable's (2004) framework within a large representative British working-age sample (MAS, 2018a). The individual factors included in the present study were people's financial knowledge and financial confidence, their future orientation and attitude toward money, and their spending self-control and perceived behavioral control.

Summary of Findings and Implications for Financial Practitioners

Results indicated that all individual factors were associated with financial satisfaction via one or more positive financial behaviors. Perceived behavioral control, future orientation, and financial confidence were the strongest indirect predictors of financial satisfaction. Furthermore, all individual factors except for attitude toward money had direct associations with financial satisfaction. Financial confidence was the single strongest direct predictor of financial satisfaction. A further discussion of the results for knowledge, attitudinal, and sense of control factors follows.

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Financial confidence had the single strongest overall positive relationship with financial satisfaction and thus deserves primary attention. This finding echoes previous research (e.g., Joo & Grable, 2004) and adds to it by using a multiple-item measure, which more accurately represents the construct of financial confidence. It also underscores a need for practitioners to pay attention to clients' confidence in financial matters, as also recommended by other researchers (e.g., Robb & Woodyard, 2016). Financial knowledge had a negative direct relation but a positive indirect relation with financial satisfaction. It may well be the case that individuals who are more knowledgeable realize that their financial situation has room for improvement and therefore experience lower financial satisfaction (Mugenda et al., 1990). Yet, if individuals can use their knowledge to transform their financial behavior in a positive way, this may benefit their financial satisfaction (Arifin, 2018). This finding contributes to the literature by suggesting that while knowledge could reduce financial satisfaction, it could also increase satisfaction by facilitating positive behaviors. Nonetheless, this finding should be interpreted with caution due to the brief, restricted measure used and the fact that earlier studies have indicated that knowledge only has a limited impact on actual behavior (Simonse, et al., 2017).

Future orientation had an overall positive link to financial satisfaction. This result contributes to the limited research available on the positive relation between these variables, and suggests that if financial therapy applications help individuals to realize the importance of considering their financial future; this might benefit their financial satisfaction. Attitude toward money had significant positive indirect relations with financial satisfaction. This could indicate that having a more careful attitude toward money does not necessarily mean that individuals really, for example, put money aside for future use as a protection against financial shocks. Therefore, the way individuals may reap the benefits from such an attitude is if they translate it into actual concrete positive behaviors that may benefit their financial satisfaction.

Spending self-control had a negative direct relation with financial satisfaction, which is inconsistent with previous research that has shown a positive relationship between spending self-control and financial satisfaction (e.g., Hirvonen, 2018). It could be that individuals with more self-control restrict themselves from purchasing items they really want. While this benefits their financial security, this may lower their financial satisfaction because they cannot enjoy life, as they would want to. The present study also showed that spending self-control was negatively related to financial satisfaction via active saving and working toward goals. A factor to consider would be individuals' personality traits. For example, individuals who are 'happy-go-lucky' (Thompson, et al., 2019) could have less spending self-control while, at the same time, experience greater financial satisfaction (Wiese et al., 2018). Future research is encouraged to examine this issue further. Perceived behavioral control had an overall positive contribution to financial satisfaction. To our knowledge, this finding is the first to show a positive association between these variables. It suggests that practitioners can help clients build their sense of control over their financial behavior as a way to improve clients' satisfaction. This finding may also encourage more research on this topic using other socioeconomic contexts.

There are two exceptions to the aforementioned relationships. The first exception is that financial confidence, future orientation, and attitude toward money

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had negative indirect associations with financial satisfaction via adjusting spending, and attitude toward money also via keeping track. These negative relations stemmed from the relation between the two financial behaviors and financial satisfaction. Studies have shown that positive financial behaviors are positively related to financial satisfaction (e.g., Robb & Woodyard, 2016); the present findings broaden the literature by suggesting that this might not be the case for all positive financial behaviors. Some of these behaviors (adjusting spending and keeping track) are painful. Another factor to consider would be financial problems, as individuals with such problems are forced to adjust their spending and check their finances frequently (Madern, 2015). Future research could test whether financial problems moderate the relation between financial behaviors and satisfaction. If practitioners can help their clients realize that some positive behaviors are painful in the short run but beneficial in the long run, clients could view their (future) financial situation in a more positive light. In this regard, practitioners could guide clients to identify when to perform such behaviors. After all, these behaviors are not positive by all means. For instance, if individuals never spend money on items they want or constantly keep track of finances, this could lead to rumination and stress, thus negatively affecting their financial satisfaction.

The second exception is that perceived behavioral control and spending self-control had negative indirect associations with financial satisfaction via adjusting spending and future orientation via keeping track. These negative relationships stem from the association between the two financial behaviors and financial satisfaction, as discussed above, and the relationship between the individual factors and those behaviors. For instance, individuals with more spending self-control or more perceived behavioral control may realize that they have sufficient control of their financial situation and therefore perform less adjusting spending. Likewise, individuals with more future-oriented mindsets may realize that they are already considering their financial future and thus display less keeping track.

Surprisingly, none of the individual factors were associated with financial satisfaction via shopping around. The component effects showed that some factors had an association with shopping around, but this behavior did not predict financial satisfaction (see Appendix 5). This could indicate that individuals who shop around experience some immediate joy when they pay for the deal, but this joy may be too specific to impact financial satisfaction. Moreover, it could be that shopping around is not a pleasant task, thus offsetting the immediate joy. Alternatively, it might be that some individuals need to shop around, but this task is taxing on their time or energy. This finding reiterates the role that practitioners play in helping their clients comprehend that some behaviors could have benefits for their financial situation, but only in the long run. For example, shopping around could lead individuals to have more financial room to reach their future goals that may benefit their long-term financial satisfaction.

Potential Limitations and Directions for Future Research

Limitations of the present study warrant consideration. First, this study's correlational nature prevents us from drawing definite causal conclusions from the tested relationships. In future research, the causal effects could be determined, for example, through longitudinal studies (e.g., Hershfield et al. 2011; Kalwij et al. 2019).

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Second, the present study used seven positive financial behaviors that were self-reported. In future studies, the actual financial behaviors could be assessed, for instance, by requesting individuals to provide their financial statements or by observing their actual bank account data (e.g., Gamble, et al., 2015). Gathering this financial information, however, may be difficult because of confidentiality reasons. Third, the financial knowledge measure covered three financial aspects. In the future, research should use a more comprehensive measure of objective financial knowledge.

CONCLUSIONS

Financial satisfaction is a priority in the financial therapy field as it is associated with both life satisfaction and general well-being (e.g., Hansen, 2009). Financial therapy practitioners tend to combine financial planning services with mental health treatment, meaning that their clients process feelings, experiences, and beliefs about money while working on plans to reach their goals (e.g., retirement, savings, and investments). Hence, practitioners must know what factors improve financial satisfaction to help their clients effectively. The present study expands practitioners' understanding by showing that financial satisfaction is related to individual factors that underlie positive financial behaviors.

In line with the recommendation of other researchers (e.g., Robb & Woodyard, 2016) and the current approach of practitioners, financial confidence seems to be the most promising individual factor to improve financial satisfaction. Practitioners may also wish to pay attention to perceived behavioral control and future orientation. Regarding the indirect impact of the three aforementioned promising individual factors, it may be useful for practitioners to help their clients realize that some financial behaviors (e.g., adjusting spending and keeping track) could be painful in the short-term but contribute to financial satisfaction in the long run. Furthermore, practitioners are well-advised to help their clients identify the moments when it could be beneficial for them to perform such financial behaviors. The present study provides new means of therapies and interventions. The next step, then, would be to test the effectiveness of such therapies and interventions. Doing so enables practitioners to continue to learn, grow, and establish high-quality support for their clients' road to financial satisfaction.

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APPENDICES

Appendix 1

Descriptive and Correlation Results of All Variables Included in the Present Study

Variable (range)	*M*	*SD*	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Financial satisfaction (1-11)	7.11	2.54	.01	.44	.45	.18	.19	-.08	.27	.02	.60	.44	.09	-.09	.19	-.18	-.01	.24	.33
2. Not borrowing for the short term (1-5)	3.95	1.13	—	.05	-.13	-.24	.43	.02	-.22	.31	.07	-.03	.00	.65	.42	.11	.33	-.21	.10
3. Active saving (1-4)	2.93	1.14		—	.44	.19	.18	-.01	.28	.09	.34	.36	.16	-.06	.16	-.12	-.14	.25	.26
4. Working toward goals (1-5)	3.47	1.06			—	.36	.11	-.00	.37	.08	.41	.48	.19	-.12	.13	-.17	-.12	.30	.26
5. Adjusting spending (1-11)	7.54	2.00				—	-.10	.04	.31	-.04	.28	.42	.27	-.18	-.10	-.01	-.20	.19	-.03
6. Managing credit use (1-5)	3.06	1.39					—	.02	.10	.30	.18	.09	.11	.33	.32	-.05	.28	-.01	.24
7. Keeping track (1-6)	4.84	1.07						—	.05	.03	.01	-.07	.06	.04	.02	.06	-.03	-.01	.04
8. Shopping around (1-4)	2.75	0.81							—	.03	.30	.26	.20	-.18	.00	-.13	-.10	.21	.12
9. Financial knowledge (0-3)	1.66	1.12								—	.15	.03	.16	.29	.23	-.11	.26	.06	.16
10. Financial confidence (1-11)	8.48	1.84									—	.45	.16	.08	.21	-.21	.08	.20	.23
11. Future orientation (1-11)	7.83	2.41										—	.20	-.01	.12	-.12	-.05	.19	.13
12. Attitude toward money (1-5)	4.17	0.77											—	.10	.02	.04	.04	.10	.06
13. Spending self-control (1-11)	7.03	2.91												—	.34	.09	.35	-.19	.06
14. Perceived behavioral control (1-5)	3.25	1.24													—	.01	.07	.01	.16
15. Gender	—	—														—	-.12	-.13	-.14
16. Age	—	—															—	-.24	.08
17. Education	—	—																—	.28
18. Effective income	—	—																	—

Note. Pearson's correlation coefficients among the continuous variables, point-biserial correlation coefficients between the dichotomous and the continuous variables, phi correlation coefficients among the dichotomous variables, Spearman's correlation coefficients between the ordinal and the continuous variables, and rank-biserial correlation coefficients between the dichotomous and the ordinal variables were calculated. All correlations equal to or larger than |0.04| are statistically significant ($p < 0.05$), except for the correlation between financial knowledge and adjusting spending, and the correlation between keeping track and spending self-control.

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Appendix 2

Indirect Effects on Financial Satisfaction

Variable	Standardized effects	*z*	95% CI Lower	95% CI Upper
Indirect Effects				
Financial knowledge=>Not borrowing for the short term=>Financial satisfaction	.00	1.95	-0.00	0.02
Financial knowledge=>Active saving=>Financial satisfaction	.01	1.88	-0.00	0.03
Financial knowledge=>Working toward goals=>Financial satisfaction	.00	1.62	-0.00	0.02
Financial knowledge=>Adjusting spending=>Financial satisfaction	-.00	0.52	-0.01	0.00
Financial knowledge=>Managing credit use=>Financial satisfaction	.01**	3.21	0.01	0.03
Financial knowledge=>Keeping track=>Financial satisfaction	-.00	0.96	-0.01	0.00
Financial knowledge=>Shopping around=>Financial satisfaction	.00	0.49	-0.00	0.00
Financial confidence=>Not borrowing for the short term=>Financial satisfaction	-.00	0.14	-0.00	0.00
Financial confidence=>Active saving=>Financial satisfaction	.02***	4.71	0.02	0.05
Financial confidence=>Working toward goals=>Financial satisfaction	.02***	3.65	0.01	0.04
Financial confidence=>Adjusting spending=>Financial satisfaction	-.01**	3.07	-0.03	-0.01
Financial confidence=>Managing credit use=>Financial satisfaction	.00	1.52	-0.00	0.01
Financial confidence=>Keeping track=>Financial satisfaction	-.00	1.80	-0.01	-0.00
Financial confidence=>Shopping around=>Financial satisfaction	.00	0.99	-0.00	0.02
Future orientation=>Not borrowing for the short term=>Financial satisfaction	-.00	0.35	-0.00	0.00
Future orientation=>Active saving=>Financial satisfaction	.03***	6.15	0.02	0.05
Future orientation=>Working toward goals=>Financial satisfaction	.03***	4.01	0.02	0.05
Future orientation=>Adjusting spending=>Financial satisfaction	-.02**	3.27	-0.04	-0.01
Future orientation=>Managing credit use=>Financial satisfaction	.00	1.48	-0.00	0.01
Future orientation=>Keeping track=>Financial satisfaction	.01**	3.20	0.00	0.01
Future orientation=>Shopping around=>Financial satisfaction	.00	0.94	-0.00	0.01

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Attitude toward money=>Not borrowing for the short term=>Financial satisfaction	-.00	1.84	-0.02	0.00
Attitude toward money=>Active saving=>Financial satisfaction	.01***	3.53	0.02	0.07
Attitude toward money=>Working toward goals=>Financial satisfaction	.01**	3.14	0.01	0.05
Attitude toward money=>Adjusting spending=>Financial satisfaction	-.01**	3.13	-0.07	-0.02
Attitude toward money=>Managing credit use=>Financial satisfaction	.00	1.73	0.00	0.02
Attitude toward money=>Keeping track=>Financial satisfaction	-.00*	2.46	-0.03	-0.00
Attitude toward money=>Shopping around=>Financial satisfaction	.00	1.00	-0.01	0.03
Spending self-control=>Not borrowing for the short term=>Financial satisfaction	.02*	2.07	-0.00	0.04
Spending self-control=>Active saving=>Financial satisfaction	-.01**	2.99	-0.02	-0.00
Spending self-control=>Working toward goals=>Financial satisfaction	-.01**	3.25	-0.02	-0.00
Spending self-control=>Adjusting spending=>Financial satisfaction	.01**	2.71	0.00	0.01
Spending self-control=>Managing credit use=>Financial satisfaction	.01**	3.24	0.00	0.02
Spending self-control=>Keeping track=>Financial satisfaction	-.00	1.18	-0.01	0.00
Spending self-control=>Shopping around=>Financial satisfaction	-.00	0.99	-0.01	0.00
Perceived behavioral control=>Not borrowing for the short term=>Financial satisfaction	.01*	2.06	-0.00	0.04
Perceived behavioral control=>Active saving=>Financial satisfaction	.02***	3.80	0.02	0.05
Perceived behavioral control=>Working toward goals=>Financial satisfaction	.01*	2.48	0.00	0.02
Perceived behavioral control=>Adjusting spending=>Financial satisfaction	.01**	2.77	0.01	0.03
Perceived behavioral control=>Managing credit use=>Financial satisfaction	.01***	3.49	0.01	0.04
Perceived behavioral control=>Keeping track=>Financial satisfaction	-.00	0.13	-0.01	0.01
Perceived behavioral control=>Shopping around=>Financial satisfaction	-.00	0.13	-0.00	0.00

Note. The indirect effects were estimated covariating the control variables. Confidence Intervals (CI) are computed with the Bootstrap percentiles method. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

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Appendix 3

Direct Effects on Financial Satisfaction

Variable	Standardized effects	*z*	95% CI Lower	95% CI Upper
Direct Effects				
Financial knowledge=>Financial satisfaction	-.08***	4.71	-0.26	-0.11
Financial confidence=>Financial satisfaction	.42***	19.12	0.52	0.65
Future orientation=>Financial satisfaction	.13***	5.78	0.09	0.18
Attitude toward money=>Financial satisfaction	-.02	1.35	-0.18	0.04
Spending self-control=>Financial satisfaction	-.16***	6.81	-0.17	-0.09
Perceived behavioral control=>Financial satisfaction	.06**	3.07	0.04	0.19

Note. Confidence Intervals (CI) are computed with the Bootstrap percentiles method. ** $p < 0.01$; *** $p < 0.001$.

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Appendix 4

Total Effects on Financial Satisfaction

Variable	Standardized effects	*z*	95% CI Lower	95% CI Upper
Total Effects				
Financial knowledge=>Financial satisfaction	-.06***	3.48	-0.21	-0.06
Financial confidence=>Financial satisfaction	.46***	24.19	0.58	0.68
Future orientation=>Financial satisfaction	.18***	10.12	0.16	0.23
Attitude toward money=>Financial satisfaction	-.02	0.99	-0.16	0.05
Spending self-control=>Financial satisfaction	-.14***	7.59	-0.16	-0.09
Perceived behavioral control=>Financial satisfaction	.11***	6.22	0.15	0.29
Gender=>Financial satisfaction	-.02	0.97	-0.13	0.04
Age=>Financial satisfaction	.02	0.86	-0.00	0.01
Low education=>Financial satisfaction	-.08***	3.75	-0.34	-0.11
Intermediate education=>Financial satisfaction	.09***	4.30	0.17	0.44
Effective income=>Financial satisfaction	.18***	10.69	0.00	0.00

Note. High education was the reference group. Confidence Intervals (CI) are computed with the Bootstrap percentiles method. *** p <0 .001.

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Appendix 5

Components Effects on Financial Satisfaction

Variable	Standardized effects	*z*	95% CI Lower	Upper
Financial knowledge=>Not borrowing for the short term	.10***	5.67	0.07	0.14
Not borrowing for the short term=>Financial satisfaction	.05*	2.07	-0.00	0.22
Financial knowledge=>Active saving	.04	1.90	-0.00	0.09
Active saving=>Financial satisfaction	.16***	7.93	0.26	0.43
Financial knowledge=>Working toward goals	.04	1.83	-0.00	0.07
Working toward goals=>Financial satisfaction	.09***	4.19	0.13	0.34
Financial knowledge=>Adjusting spending	.01	0.55	-0.05	0.09
Adjusting spending=>Financial satisfaction	-.07***	3.40	-0.13	-0.03
Financial knowledge=>Managing credit use	.13***	6.08	0.11	0.21
Managing credit use=>Financial satisfaction	.07***	3.77	0.06	0.19
Financial knowledge=>Keeping track	.02	1.01	-0.02	0.07
Keeping track=>Financial satisfaction	-.07***	4.66	-0.24	-0.10
Financial knowledge=>Shopping around	.02	0.82	-0.02	0.04
Shopping around=>Financial satisfaction	.02	1.01	-0.05	0.18
Financial confidence=>Not borrowing for the short term	-.00	0.16	-0.02	0.02
Financial confidence=>Active saving	.16***	6.29	0.07	0.13
Financial confidence=>Working toward goals	.19***	7.64	0.08	0.14
Financial confidence=>Adjusting spending	.17***	7.24	0.14	0.24
Financial confidence=>Managing credit use	.04	1.77	-0.00	0.06
Financial confidence=>Keeping track	.06*	1.99	0.00	0.06
Financial confidence=>Shopping around	.21***	8.54	0.07	0.11
Future orientation=>Not borrowing for the short term	-.01	0.41	-0.02	0.01

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Future orientation=>Active saving	.22***	9.17	0.08	0.12
Future orientation=>Working toward goals	.32***	14.44	0.12	0.16
Future orientation=>Adjusting spending	.32***	12.06	0.22	0.31
Future orientation=>Managing credit use	.04	1.61	-0.00	0.05
Future orientation=>Keeping track	-.11***	4.91	-0.07	-0.03
Future orientation=>Shopping around	.10***	4.24	0.02	0.05
Attitude toward money=>Not borrowing for the short term	-.06***	3.91	-0.14	-0.04
Attitude toward money=>Active saving	.08***	3.97	0.06	0.18
Attitude toward money=>Working toward goals	.08***	4.79	0.07	0.17
Attitude toward money=>Adjusting spending	.20***	9.14	0.41	0.62
Attitude toward money=>Managing credit use	.04	1.95	0.00	0.14
Attitude toward money=>Keeping track	.06**	2.84	0.03	0.15
Attitude toward money=>Shopping around	.16***	7.04	0.12	0.21
Spending self-control=>Not borrowing for the short term	.49***	25.36	0.18	0.20
Spending self-control=>Active saving	-.07**	3.24	-0.04	-0.01
Spending self-control=>Working toward goals	-.13***	5.84	-0.06	-0.03
Spending self-control=>Adjusting spending	-.12***	5.16	-0.11	-0.05
Spending self-control=>Managing credit use	.16***	7.15	0.05	0.10
Spending self-control=>Keeping track	.03	1.24	-0.01	0.03
Spending self-control=>Shopping around	-.18***	7.96	-0.06	-0.04
Perceived behavioral control=>Not borrowing for the short term	.22***	12.07	0.17	0.23
Perceived behavioral control=>Active saving	.10***	4.55	0.05	0.13
Perceived behavioral control=>Working toward goals	.07**	3.24	0.02	0.09
Perceived behavioral control=>Adjusting spending	-.11***	5.28	-0.25	-0.11
Perceived behavioral control=>Managing credit use	.18***	8.37	0.15	0.25
Perceived behavioral control=>Keeping track	.00	0.13	-0.04	0.05
Perceived behavioral control=>Shopping around	-.00	0.18	-0.03	0.02

Note. Confidence Intervals (CI) are computed with the Bootstrap percentiles method. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

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