




Spending Motives Matter: Using Self-Determination Theory to Explore the Effects of Motives for Spending on Psychological Health

Lara Manganelli¹ · Jacques Forest² 

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Abstract

Research based on self-determination theory suggests that the reasons that motivate people to spend money have an influence on psychological need satisfaction and well-being (e.g., Zhang et al., *Journal of Happiness Studies* 14:817–842, 2013). This article adds to this literature by identifying how a broader set of reasons for spending influence psychological health and exploring the relative presence of these spending motives across prosocial, experiential, and material purchases. Using an online survey asking participants to answer a series of questions about a recent purchase, the results of Study 1 ($N=312$) revealed five motives that may underlie spending decisions. When individuals spend money with the intent of helping others, enjoying a leisure activity, and investing in self-development, this encourages well-being through psychological need satisfaction. When money is spent with the intent of overcoming feelings of insecurity, this leads to greater ill-being through need frustration. Using a similar procedure, Study 2 ($N=305$) indicated that individuals are motivated to make material, prosocial, and experiential purchases for different reasons. These results provide additional insight into what motivates people to make these specific purchases and their consequent effects on psychological health.

Keywords Spending · Motives · Self-determination theory · Well-being · Ill-being

Money partly buys happiness to the extent that it allows us to acquire the basic necessities to live, such as decent housing and nutrition (Howell & Howell, 2008). Once these needs are met, increases in income have a negligible impact on well-being (Howell & Howell, 2008; Jebb et al., 2018) primarily because the fulfillment

✉ Jacques Forest
forest.jacques@uqam.ca

¹ UQAM, Montréal, Canada

² Département Organisation Et Ressources Humaines, ESG UQAM, CP 8888, Succ. Centre-Ville, Montréal, Québec H3C 3P8, Canada

of psychological needs becomes a better predictor of happiness once extracted from poverty (Tay & Diener, 2011). Research based on self-determination theory (SDT; Ryan & Deci, 2000) suggests that money can buy happiness if it is used in ways that allow for the fulfillment of the three psychological needs for autonomy, competence, and relatedness. Specifically, people are motivated to make money for a variety of reasons and these have different effects on well-being depending on whether they satisfy or actively thwart psychological need satisfaction (Thibault Landry et al., 2016). Desiring money for self-integrated reasons (e.g., giving to charity, enjoying leisure activities, etc.) encourages need satisfaction and well-being, whereas non-integrated motives (e.g., attracting attention to oneself, to avoid feelings of self-doubt, etc.) lead to the active thwarting of the psychological needs and, in turn, ill-being. In addition to exploring the reasons why people make money, a substantial amount of research has focused on discovering the types of purchases that make people happiest (Aknin et al., 2019). There is much evidence supporting the recommendation that spending money on others (as opposed to oneself) and investing in experiences (rather than material goods) lead to greater happiness (Aknin et al., 2019; Gilovich & Gallo, 2019). Nevertheless, a very small but growing number of studies have highlighted the importance of considering the motives people have when they make purchases because these can influence psychological need satisfaction and consequently the level of well-being derived from the purchase (Hill & Howell, 2014; Zhang et al., 2013).

Given the very limited number of studies on spending motives, scholars urge for a more exhaustive exploration of the reasons that motivate people to spend money (Gilovich & Gallo, 2019). Thus, the primary objective of this article is to uncover whether a broader set of motives underlie everyday spending choices and to explore their impact on psychological well-being. Specifically, Study 1 uses the Motives for Spending Scale (an adapted version of the Motives for Making Money Scale; Srivastava et al., 2001), to uncover individuals' motives for spending and explores how these motives influence psychological health (i.e., well-being and ill-being) through psychological need satisfaction and frustration. A secondary objective of this article (Study 2) is to inspect the relative presence of the different spending motives across three common categories of purchases, namely material, experiential and prosocial purchases. This analysis may provide additional insight about the pathways through which specific purchases provide happiness (or not).

Money, happiness, and self-determination theory

A great amount of scientific effort has been devoted to understanding the association between money and subjective well-being (used interchangeably with the terms “well-being” and “psychological well-being” in this article), which typically includes an assessment of both happiness (i.e., the frequency and intensity of positive and negative emotions) and life satisfaction (i.e., a cognitive assessment of a person's life as a whole; Kahneman & Deaton, 2010). While income has stronger associations with life satisfaction (Diener et al., 2010), its ability to predict daily happiness is particularly weak (Diener & Biswas-Diener, 2002;

Diener et al., 2010; Diener et al., 2009; Howell & Howell, 2008). Moreover, the link between income and happiness is the weakest among individuals with high socio-economic standing living in relatively affluent countries and is far more pronounced at lower income levels (Cummins, 2000; Diener & Biswas-Diener, 2002; Howell & Howell, 2008). Nevertheless, both life satisfaction and particularly happiness do not increase indefinitely with income (Clingsmith, 2016; Kahneman & Deaton, 2010), reaching satiation around \$95,000 for life satisfaction and \$60,000 for happiness (Jebb et al., 2018). This suggests that money buys well-being to the extent that it allows people to acquire basic life necessities, such as sufficient food and shelter (Howell & Howell, 2008; Kahneman & Deaton, 2010). At low-income, acquiring money leads to substantial gains in well-being, but for wealthier individuals (who presumably have these needs met) earning additional income does little to improve happiness (Diener & Biswas-Diener, 2002). In fact, the fulfillment of psychological needs is a better predictor of daily happiness than money (Diener et al., 2010; Tay & Diener, 2011). Thus, income may buy happiness to the extent that, in addition to securing food and shelter, it is used to help individuals fulfill their psychological needs (Howell & Hill, 2009).

According to SDT, people experience optimal well-being only when their three innate psychological needs for autonomy (having a relative perception of choice and to live according to one's values), competence (feeling efficacious in carrying out one's goals) and relatedness (having meaningful relationships with others) are satisfied (Ryan & Deci, 2000; Sheldon et al., 2011). Diverse forms of research show that the fulfillment of these needs plays a central role in predicting well-being, vitality, and positive affect as well as in predicting the absence of mental and physical ill health (Gagné et al., 2015; Vansteenkiste et al., 2010). This finding has been replicated cross-culturally (Chen et al., 2015) and across a variety of domains as individuals with greater need satisfaction display higher achievement (Adie et al., 2008), better job performance (Vansteenkiste et al., 2007), and report better overall physical health (Ng et al., 2012). Moreover, need frustration reflects instances when individuals experience actual feelings of rejection, incompetence, and/or oppression. Compared to the mere absence of satisfaction, need frustration is a better predictor of ill-being, such as depression, negative affect, and burnout (Bartholomew et al., 2011a, 2011b, 2014).

A main premise of SDT is that people engage in behaviors for different reasons/motivations, which fall along a continuum ranging from intrinsically or autonomously motivated (e.g., because the behavior is enjoyable or interesting and/or because it is believed to be important) to extrinsically motivated or controlled (e.g., engaging in behaviors to receive rewards and/or to avoid punishment and feelings of guilt; Ryan & Deci, 2000). Behaviors that are autonomously motivated lead to well-being, whereas behaviors that are pursued for controlled reasons lead to ill-being (Niemic et al., 2009). Traditionally, some types of behaviors, such as becoming involved in one's community, were viewed as inherently intrinsically motivated. On the other hand, goals such as seeking social status and money, were considered as being extrinsically motivated and thus detrimental to long term well-being (Kasser & Ryan, 1993). Some authors have contested the notion that the pursuit of money is always detrimental to well-being by

showing that the pursuit of money can be intrinsically and/or extrinsically motivated (Carver & Baird, 1998).

Motivations for making money

People are motivated to make money for a number of reasons and these reasons differentially influence well-being. In developing the Motivations for Making Money Scale, Srivastava et al. (2001) revealed that people are motivated to make money for ten main reasons: to support a family (family support), to ensure basic life requirements such as housing and food (security), to earn a fair compensation for one's work and effort (market worth), to donate money and time to those in need (charity), to participate in enjoyable activities and hobbies (leisure), to have the ability to live life independently (freedom), to experience a sense of pride for life accomplishments (pride), to attract the attention of others (social comparison), to appease feelings of personal insecurity (overcoming self-doubt) as well as to spend impulsively (impulse). Recently, Thibault Landry et al. (2016) revealed that Srivastava et al.'s (2001) ten motives are suitably represented by three broad categories of motives. The motives of Charity, Leisure, Freedom, Pride, and Market worth were conceptualized as 'Self-integrated motives' as they represent individuals' desire to behave in line with their values and allow optimal social, emotional and physical development (Sheldon & Elliot, 1999). The motives of social comparison, overcoming self-doubt and impulse represent "Non-integrated motives" because they impede healthy personal development. Moreover, family support and security motives were labeled "Financial stability" motives as they represent individuals' desire to support themselves and loved ones, especially during precarious financial times. Their study revealed that people endorsing self-integrated motives were more likely to experience need satisfaction, which in turn led to greater well-being (as well as lower ill-being). On the other hand, non-integrated motives positively predicted need frustration (and negatively predicted need satisfaction), which then led to greater ill-being (and lower well-being). Stability motives were unrelated to need satisfaction or need frustration. Thus, the reasons why people want money impact psychological health by either encouraging or impeding need satisfaction. In trying to understand if and when money facilitates need satisfaction, research has also focused on people's spending behavior and their motives for buying.

Spending motives and psychological health

Most of the research on spending focuses on how different purchases affect happiness (Aknin et al., 2019). A substantial number of studies find that spending money on others (e.g., gifts, donations to charity, etc.), typically called prosocial spending, has positive consequences on well-being (Aknin et al., 2019; Dunn et al., 2008; Helliwell et al., 2017) and is associated with better physical health (Dunn et al., 2010; Whillans et al., 2016). Moreover, research also indicates that buying experiences (i.e., an event that people live through such as a trip or a concert), compared

to material things (i.e., tangible objects kept in one's possession such as a laptop and jewelry), provide greater well-being (Gilovich & Gallo, 2019; Gilovich et al., 2015; Van Boven & Gilovich, 2003). The finding that experiential purchases provide more enduring happiness compared to material purchases has been replicated many times across a variety of designs (Gilovich & Gallo, 2019; Gilovich et al., 2015).

Despite the known benefits of prosocial and experiential spending, some researchers emphasize that people may be motivated to make such purchases for different reasons and these can influence the level of well-being experienced (Burroughs et al., 2013). For instance, Harbaugh et al. (2007) provided neural evidence that people can be motivated to give to charity for different reasons. Specifically, people can be motivated to give to charity for purely altruistic reasons (i.e., giving in order to gain satisfaction simply from the act of helping others in need) and/or giving to others because it provides the giver a sense of agency and freedom (i.e., the Warm glow motive). Similarly, an experiment by Wiwad and Aknin (2017) revealed that participants who recalled a prosocial purchase in which they were motivated to help someone else experienced greater happiness than those who made a prosocial purchase with the intent of helping themselves.

A couple of studies have gone a step further in suggesting that the different motives for making purchases are linked to psychological health through their effect on need satisfaction. Hill and Howell (2014) explored the impact of self-transcendent values (i.e., a set of values that represent a concern for others, such as social justice and protecting the environment), self-enhancement values (i.e., a set of values that represent a desire for self-promotion, such as attaining social status and influence), and need satisfaction on the well-being experienced after making prosocial purchases. A sample of 167 adults were recruited through Amazon's MTurk and were asked to report how much money they spent in a typical month on purchases for themselves (i.e., bills, expenses and gifts for themselves) and for others (i.e., gifts for others and donations to charity). The results revealed that prosocial spending led to happiness only for individuals who endorsed a concern for others (high self-transcendence) and that psychological need satisfaction mediated this association. Individuals low in self-transcendence experienced neither increased well-being nor psychological need satisfaction and self-enhancement values did not influence the relationship between prosocial spending and well-being. The authors argue that prosocial purchases allow individuals to satisfy their psychological needs only when individuals have a desire to help others.

With respect to experiential purchases, Zhang and colleagues (2013) developed the Motivation for Experiential Buying Scale (MEBS) to explore how individuals' motivations for making experiential purchases influence need satisfaction and well-being. The results of their study indicated that people who spend money on life experiences for autonomous reasons (purchasing experiences because they align with one's core values and because they provide genuine pleasure) experienced significantly higher need satisfaction, flourishing, vitality as well as less loneliness. On the other hand, individuals who spend money on life experiences for controlled reasons (purchasing experiences in order to receive external approval or recognition from others) and for amotivated reasons (not knowing why one buys experiences) reported less psychological need satisfaction and less well-being. The authors argue

that it is possible for people to purchase life experiences for extrinsic reasons and that the benefits of experiential purchases depend on the reasons why people buy them. These studies highlight the importance of considering people's motives for spending, as these may be important for well-being (Gilovich & Gallo, 2019). As elucidated by Gilovich and Gallo (2019), "The consumer's motives matter." Evidently, more studies are needed to reach a more comprehensive understanding of the motives that underlie everyday spending behavior.

The current research

Compared to the vast literature on the effect of specific purchases on well-being, to the authors' knowledge, there are only a handful of studies exploring the possible motives people have when spending money and only two studies that implicate need satisfaction¹ (Hill & Howell, 2014; Zhang et al., 2013). Moreover, these studies have focused primarily on a limited set of motives (i.e., self-transcendent vs self-enhancement values and autonomous versus controlled motives). To extend this literature, the primary aim of this article is to uncover whether a broader set of motives underlie everyday spending choices and determine how these influence well-being and ill-being (Study 1). A first objective of Study 1 is to explore whether a set of ten potential motives underlie general spending behavior by using the Motives for Spending Scale, which was adapted from the Motivations for Making Money Scale (Srivastava et al., 2001). Given that individuals make money in order to eventually spend it, the ten motives identified by Srivastava et al. (2001) may also represent the motives people have when they spend money. Study 1 will also explore how the spending motives influence psychological health (well-being and ill-being) through their effects on need satisfaction and frustration.

In line with previous research on money motives, if people spend money for Self-integrated reasons (market value, leisure, charity, pride and freedom), it is hypothesized that they will experience greater need satisfaction and well-being. For instance, a person could make a purchase, such as a computer, because it represents a way for them to develop their own business projects (freedom) and/or to invest in their knowledge and skills (market value). Spending money for these reasons is likely to increase feelings of autonomy in that they allow people the freedom to pursue personal life projects. They may also promote feelings of competence because such purchases may help the person develop their skills and abilities. In a similar way, when people make a purchase with the intent of helping someone (charity), this is likely to encourage the development of meaningful relationships with others (relatedness) and feelings of competence and autonomy in being able to have a

¹ The following databases were used to identify studies that explored spending motives and psychological need satisfaction: ABI/INFORM, EBSCO, Elsevier, Emerald Insight, Google scholar, JSTOR, Proquest, psycARTICLES, PsycINFO SAGE, Science direct, Springer, Taylor & Francis, and Wiley Online Library. The following keywords (English only) were used: need satisfaction, need thwarting, need frustration, motivation, motive, money, purchase, spending, experiential, material, prosocial, well-being, ill-being, happiness.

positive impact in others' lives. Finally, being motivated to make a purchase in order to pursue a hobby (leisure) is likely to encourage feelings of autonomy in having the freedom to pursue activities that one enjoys while also increasing feelings of personal competence as people become better skilled at the activity. Moreover, if the leisure activity is enjoyed with others, the need for relatedness is also likely to be fulfilled. In line with SDT and with the findings of Thibault Landry et al. (2016), Study 1 tests the following hypothesis:

H1: The spending motives of market value, pride, leisure, charity and freedom positively predict need satisfaction, which in turn predicts well-being.

People who endorse non-integrated motives for spending money (impulse, overcoming self-doubt and social comparison), on the other hand, are more likely to experience elevated need frustration and greater ill-being. For instance, buying a new car with the primary intention of attracting attention to oneself and boasting to others (social comparison) or as a way to compensate for feelings of inferiority (overcoming self-doubt) may lead to feelings of isolation, incompetence and pressure over the long term. Spending money to appear better than others is likely to prevent the development of close and meaningful relationships with others. Moreover, using purchases as a way to appease feelings of insecurity is unlikely to promote positive self-development and may lead to feelings of pressure over the long term because more and more purchases are needed to maintain a compensatory sense of self-worth. Thus, Study 1 also tests the hypothesis that people motivated to spend money for these reasons are likely to experience need frustration and ill-being because these reasons do not promote personal growth (Thibault Landry et al., 2016). By investigating the role of need frustration, this study addresses a gap in the research as no study to date has examined whether people's motivations for making purchases can lead to the active thwarting of the psychological needs (not just the mere absence of satisfaction) and consequently bring about greater ill-being.

H2: The spending motives of impulse, overcoming self-doubt and social comparison positively predict need frustration, which in turn predicts ill-being.

With respect to the financial stability motives (security and family support), these motives are conceptualized as separate from the other motives as they reflect a person's general desire to ensure a stable financial situation for themselves and their family members (Thibault Landry et al., 2016). In line with Thibault Landry et al.'s (2016), spending money with the intent of acquiring basic life necessities and financial security may represent a basic sense of responsibility that is independent from psychological need satisfaction.

H3: The spending motives of security and family support are unrelated to need satisfaction and need frustration.

Finally, a secondary objective of this article (Study 2) is to explore whether people endorse different motives when making specific purchases. A few studies have

highlighted the importance of considering that people can make purchases for different reasons and this can influence the level of well-being provided by the purchase (e.g., Zhang et al., 2013). For instance, going on a trip to Italy to learn more about the culture certainly presents an opportunity for personal growth and enrichment, but such a trip is likely to be very expensive and not accessible to everyone. Thus, even an experience may be undertaken for reasons such as boasting to friends about the expensive vacations one can afford (Zhang et al., 2013). Similarly, donating to charity for reasons such as gaining prestige and social status is unlikely to provide enduring psychological benefits (Hill & Howell, 2014; Wiwad & Aknin, 2017). Study 2 explores the relative presence of the spending motives (identified in Study 1) across three common categories of purchases, namely material, experiential, and prosocial purchases. In line with the research on motives (e.g., Hill & Howell, 2014; Zhang et al., 2013), it is hypothesized that people make prosocial, experiential, and material purchases for different reasons. This exploratory analysis may provide additional insight into the pathways through which specific purchases provide happiness (or not).

H4: There are significant differences between prosocial, experiential, and material purchases with respect to the spending motives.

Method: Study 1

Recruitment and study procedure

Recruitment was accomplished through various methods. A first sample ($N=106$) was recruited through an online advertisement (which included an invitation to participate in the study and a description of the purpose and nature of the study) posted on social media networks. People who were interested in participating in the study could simply click the link provided in the advertisement and they would be automatically directed to the questionnaire on SurveyMonkey. Another round of recruitment ($N=99$) was accomplished using the listserv of the professional order of Certified Human Resources Professionals (CHRP) in the province of Québec, Canada. Emails were sent to members of this professional order, which included an invitation to participate in the study and the link towards the questionnaire. Finally, Prolific Academic, an online crowdsourcing website was used to recruit participants ($N=107$). Participants voluntarily decided to participate in the study after seeing the baseline payment, estimated completion time and study description that was published on the Prolific Academic website. Prolific Academic recommends that participants receive \$10 per hour for any type of study completed. Given that this study took approximately 15 min to complete, participants received on average of 2.50\$CAN for their participation. Prolific Academic's "country of origin" filter was used, such that only individuals born in Canada could participate.

Participation involved completing an online survey using SurveyMonkey (which took 15 min to complete). Upon clicking the study link, participants were first asked to read and sign a consent form before proceeding to the questionnaire. Participants

were then asked to think about and describe their most recent purchase that cost more than \$50 and answer a series of questions assessing their motives for making that particular purchase. Participants then completed measures assessing the variables of interest (i.e., psychological need satisfaction/frustration and well-being/ill-being). Participants had the option of completing the study in the language of their choice (English or French).

Sample description and demographics

The total sample included 312 individuals with an average age of 38.2 years and included 218 women (69.9%) and 94 men (30.1%). With respect to education, 44.2% held a graduate degree, 41% held a Bachelor's degree, 7.7% a general or vocational college degree, and 7.1% a high school degree or less. A majority of the sample worked full-time (72.4%), 14.8% worked between 15 and 34 h, 8% worked less than 15 h, and 4.8% did not work. The salary (annual income before taxes) breakdown was the following: below \$10,000 (6.7%), \$10,000–\$19,999 (4.5%), \$20,000–\$29,999 (7.1%), \$30,000–\$39,999 (5.8%), \$40,000–\$49,999 (9.9%), \$50,000–\$74,999 (20.2%), \$75,000–\$99,999 (21.8%), \$100,000–\$124,999 (11.9%), \$125,000–\$149,999 (3.8%), and \$150,000 and above (8.3%).

Measures

Motives for Spending

The Motives for Spending Scale (MSS) was developed by adapting the items of the Motivations for Making Money Scale (MMMS; Srivastava et al., 2001). In the MMMS, three items are used to assess each of the ten motivations for making money. To create the MSS, one item per motive was created to assess ten motives for spending (10 items in total). Participants were asked to think about the purchase they had described and to rate the extent to which they were motivated by these ten reasons when making the purchase. Participants rated each item using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The French version of this scale was created based on the existing French version of the MMMS (Thibault Landry et al., 2016).

Need satisfaction

The Balanced Measure of Psychological Needs Scale (Sheldon & Hilpert, 2012) is a 9-item scale, which assesses the satisfaction of the needs for autonomy (e.g., “I feel my choices express my true self”), relatedness (e.g., “I feel close and connected with other people who are important to me”) and competence (e.g., “I feel I can successfully complete difficult tasks”). Participants indicate their level of agreement with each item on a 5-point scale, ranging from 1 (completely disagree) to 5 (completely agree). This scale was translated into French using the back-translation method (Valleland, 1989). This retranslated version was then compared to the original English

version. Any required modifications were made to the French version to ensure that it accurately represented the original English version. Reliability estimates for the three subscales were adequate (autonomy $\alpha=0.79$; relatedness $\alpha=0.84$, and competence $\alpha=0.90$).

Need frustration

An adapted version of the Psychological Need Thwarting Scale (PNTS; Gillet et al., 2012) was used to assess psychological need frustration. An already existing validated French version of this scale was used. Participants are asked to indicate their level of agreement to 12 items on a 5-point scale, which assess the frustration of the needs for autonomy (e.g., “I feel prevented from making choices with regard to the way I do things”), relatedness (e.g., “I feel other people dislike me”), and competence (e.g., “There are situations in which I am made to feel inadequate”). Reliability estimates for the three subscales were adequate: autonomy ($\alpha=0.86$), relatedness ($\alpha=0.82$), and competence ($\alpha=0.86$).

Well-being

In line with previous research (Hill and Howell, 2014; Thibault Landry et al., 2016), well-being was conceptualized using positive affect, life satisfaction, and eudaimonic well-being (i.e., the feeling that one has a purpose in life; Ryan & Deci, 2001). A shortened version of the Positive and Negative Affect Schedule (PANAS-SF; Thompson, 2007) was used to measure positive affect (translated into French using the back translation method; Vallerand, 1989). The scale contains a list of five different positive emotions (e.g., “inspired” and “active”) and participants indicate the frequency with which they generally experience these emotions on a 5-point scale ranging from 1 (never) to 5 (always). The reliability estimate for the positive affect subscale was $\alpha=0.69$. The Measure of Psychological Well-being developed by Choi et al. (2014) was used to assess life satisfaction (e.g., “I like my living situation very much”) as well as eudaimonic well-being (e.g., “My life has meaning and purpose”). Participants indicate their level of agreement to 7 items using a 3-point scale (1=Don’t agree at all; 2=Agree a little; 3=Completely Agree). This scale was also translated into French using the back translation method (Vallerand, 1989). In the current study, the reliability estimate for this scale was $\alpha=0.80$. Mean scores of the positive affect subscale of the PANAS-SF and the Measure of Psychological Well-being were transformed into standardized scores (z -scores) and then combined and used as a general indicator of well-being. The reliability estimate ($\alpha=0.82$) for the global well-being score (all items) suggests that the combination of these two scales was appropriate.

Ill-being

In line with previous research (Thibault Landry et al., 2016), ill-being was conceptualized using negative affect and depressive symptoms. The negative affect subscale of the Positive and Negative Affect Schedule (PANAS-SF, Thompson, 2007) was

used as a measure of negative affect (translated into French using the back translation method; Vallerand, 1989). The scale contains a list of five different negative emotions (e.g., “upset,” “hostile”) and participants indicate the frequency with which they generally experience these emotions on a 5-point scale ranging from 1 (never) to 5 (always). Reliability for the negative affect subscale was $\alpha=0.76$. Moreover, depression symptoms were assessed using the Center for Epidemiologic Studies-Depression Scale (CES-D; Cole et al., 2004). This scale was also translated into French using the back translation method (Vallerand, 1989). Participants indicate the frequency (1 = none of the time; 4 = all of the time) with which they experience eight different negative states (e.g., “I felt my life had been a failure”) over the last 12 weeks. The internal consistency of the CES-D short form was $\alpha=0.88$. The mean scores of the PANAS-SF negative affect subscale and the CES-D (short form) were transformed into standardized scores (*z*-scores) and then combined and used as a general indicator of ill-being. The reliability estimate ($\alpha=0.90$) for the global ill-being score (all items) suggests that the combination of these two scales was appropriate.

Results

Preliminary analyses

One spending motive item (Item 9 – Social comparison) was significantly skewed (skew = 2.229). The generally accepted range for skewness is below 2 and above -2 (Tabachnik & Fidell, 2007). Thus, a square root transformation was carried out for this item (new skew value = 1.874).

Exploratory factor analysis (EFA)

Initially, the factorability of the 10 item Motives for Spending Scale was examined using several well-recognized criteria (Tabachnik & Fidell, 2013). Firstly, six of the 10 items correlated at least 0.3 with at least one other item, suggesting reasonable factorability. Secondly, the Kaiser–Meyer–Olkin measure of sampling adequacy was 0.64, above the recommended value of 0.6 and Bartlett’s test of sphericity was significant ($\chi^2(45) = 736.76, p < 0.001$). Moreover, no issue of multicollinearity between items was present as all tolerances were above 0.20. EFA using maximum likelihood estimation and varimax rotation revealed the presence of four factors with eigenvalues greater than 1. However, inspection of the scree plot suggested that a five-factor solution would be appropriate. Thus, five factors were extracted explaining 77.67% of the variance. All items had primary loadings above 0.5 (except Impulse item 8 = 0.39) and all communalities were above 0.3 (except Impulse item 8 = 0.22). Although two items had cross loadings above 0.3 (Family support item 2 = 0.50 and Pride item 4 = 0.33), these items had strong primary loadings (Family support item 2 = 0.62 and Pride item 4 = 0.60) with their associated factor. The residual correlation matrix revealed 0% of nonredundant residuals with absolute values greater

than 0.05, which indicates that the number of factors extracted fit the data well. The five factors extracted are presented in Table 1. It is important to note that two factors are represented by only one item (i.e., Helping others item 6 and Leisure item 5). This indicates that either the items are not adequately loading on their appropriate factors or that these two items represent different factors (and more items are needed to represent the factor). These two factors had communalities above 0.9 and each explained a significant portion of the variance (Helping others = 19.22% and Leisure = 8%). Nevertheless, a future replication effort is required to validate the existence of these five independent factors, ideally by generating more items and conducting confirmatory factor analysis. Given the exploratory nature of the study, it was chosen to proceed in the extraction of five factors because this provided the most appropriate conceptual understanding of the motives.

The first factor extracted was labeled “Stability” because it represents expenses made to ensure one’s own and one’s family physical and financial well-being. The second factor extracted was labeled “Self-development” because it represents expenses made with the purpose of investing in one’s current and/or future professional endeavors. The third factor extracted was labeled “Personal insecurity” because it encompasses purchases made (often impulsively) with the intent of overcoming self-doubt by developing an image that others will envy. The final two factors extracted represent the motives of “Helping others” and “Fun.” The motive “Helping others” encompasses purchases made with the intent of providing help to others and the “Fun” motive represents purchases made with the intent of participating in an enjoyable leisure activity.

Main analyses

Control variables

A MANOVA was carried out to verify whether the study variables (Spending motive factors, need satisfaction/frustration, and well-being/ill-being) varied significantly with respect to the different recruitment methods (i.e., online ads, CHRP professional order, crowdsourcing website). Results revealed that the variables varied significantly across the different recruitment methods ($F(18, 602) = 9.50, p < 0.000$; Wilk’s $\Lambda = 0.606$, partial $\eta^2 = 0.22$). Specifically, well-being ($F(2, 309) = 57.92, p < 0.001$, partial $\eta^2 = 0.27$), ill-being ($F(2, 309) = 23.28, p < 0.001$, partial $\eta^2 = 0.13$), need satisfaction ($F(2, 309) = 21.41, p < 0.001$, partial $\eta^2 = 0.12$), need frustration ($F(2, 309) = 36.28, p < 0.001$, partial $\eta^2 = 0.19$), fun ($F(2, 309) = 7.28, p = 0.001$, partial $\eta^2 = 0.05$), self-development ($F(2, 309) = 8.49, p < 0.001$, partial $\eta^2 = 0.05$), and personal insecurity ($F(2, 309) = 22.53, p < 0.001$, partial $\eta^2 = 0.13$) varied significantly with respect to recruitment method. Given that multiple ANOVAs were run, a Bonferroni correction was applied and thus statistical significance was accepted at the $p < 0.005$ level ($p = 0.05$ divided by nine tests). Table 2 presents the means of the variables that differ according to recruitment method. With respect to well-being, follow-up analyses indicated that there were significant differences

Table 1 Study 1—results of exploratory factor analysis of the Motives for Spending Scale

Items	Factors and Loadings				
	Stability	Self- development	Personal insecurity	Helping others	Fun
Item 1: "I made this purchase because it allowed me to acquire the basic necessities to live (e.g., decent housing, food, security)	.70				
Item 2: "I made this purchase because it allowed me to provide for my family (and/or friends, loved ones) and ensure their well-being."	.62				
Item 3: "I made this purchase because it allows me to ensure that I will be fairly compensated for the knowledge, skills, and effort I put into my job and to ensure that my value in the market is fair."		.76			
Item 7: "I made this purchase because it allows me (or will allow me in the future) to have more freedom and time to develop my own projects, businesses, or activities."		.54			
Item 4: "I made this purchase because it represents the success I have experienced in my life; I made this purchase because it allows me to feel proud of my accomplishments."			.58		
Item 8: "I made this purchase impulsively because I enjoy the thrill of buying things in an impulsive way without giving them much forethought."			.39		
Item 9: "I made this purchase because it reassures me that I am not a failure in life and/or because it allowed me reduce my sense of self-doubt or insecurity."			.85		
Item 10: "I made this purchase because it allows me to show others that I am better than them and/or because others will admire me for it."			.64		
Item 6: "I made this purchase because it allowed me to make somebody else happy or to help someone in need."				.96	
Item 5: "I made this purchase because it represents a leisure activity that I enjoy; it allows me spend time participating in a hobby of mine."					.94
Eigen value	1.11	1.30	2.64	1.92	.80
% variance explained	11.09	12.99	26.37	19.22	8.00

Table 2 Study 1—means and standard deviations for study variables that differ according to recruitment method

Variables	Online ads	CHRP	Crowdsourcing website
Need satisfaction	12.82 (1.41)	12.54 (1.45)	11.50 (1.75)
Need frustration	10.53 (4.10)	10.66 (4.35)	14.90 (4.27)
Well-being	.39 (.59)	.26 (.68)	-.63 (.93)
Ill-being	-.24 (.83)	-.24 (.84)	.46 (.91)
Fun motive	3.28 (2.41)	3.41 (2.46)	4.43 (2.32)
Self-development motive	1.97 (1.41)	1.75 (1.25)	2.52 (1.49)
Personal insecurity motive	1.74 (.97)	1.63 (.78)	2.47 (1.15)

between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p < 0.001$). For ill-being, there were significant differences between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p < 0.001$). For need satisfaction, there were significant differences between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p < 0.001$). For need frustration, there were significant differences between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p < 0.001$). For the fun motive, there were significant differences between crowdsourcing website and CHRP recruitment ($p = 0.008$) and between crowdsourcing website and online ads recruitment ($p = 0.002$). For the self-development motive, there were significant differences between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p = 0.013$). Finally, for the personal insecurity motive, there were significant differences between crowdsourcing website and CHRP recruitment ($p < 0.001$) and between crowdsourcing website and online ads recruitment ($p < 0.001$).

Similarly, a MANOVA was also conducted to determine whether study variables varied according to language (English and French). Results revealed that the variables of interest varied significantly with respect to language ($F(9, 302) = 19.41, p < 0.001$; Wilk's $\Lambda = 0.63$; partial $\eta^2 = 0.37$). Specifically, well-being ($F(1, 310) = 106.27, p < 0.001$, partial $\eta^2 = 0.26$), ill-being ($F(1, 310) = 46.28, p < 0.001$, partial $\eta^2 = 0.13$), need satisfaction ($F(1, 310) = 38.30, p < 0.001$, partial $\eta^2 = 0.11$), need frustration ($F(1, 310) = 66.24, p < 0.001$, partial $\eta^2 = 0.18$), fun ($F(1, 310) = 12.52, p < 0.001$, partial $\eta^2 = 0.04$), self-development ($F(1, 310) = 20.76, p < 0.001$, partial $\eta^2 = 0.06$), and personal insecurity ($F(1, 310) = 41.04, p < 0.001$, partial $\eta^2 = 0.12$) varied significantly with respect to language. Table 3 presents the means of the variables that differ according to language. Thus, in addition to the variables of age, gender, education, work hours, and salary, language, and recruitment method were also included as control variables in the analyses. Categorical control variables (i.e., gender, recruitment method, and language) were dummy coded.

Table 3 Study 1—means and standard deviations for study variables that differ according to language

Variables	English	French
Need satisfaction	11.56 (1.72)	12.69 (1.45)
Need frustration	14.66 (4.28)	10.58 (4.26)
Well-being	-.58 (.93)	.33 (.63)
Ill-being	.44 (.90)	-.25 (.84)
Fun motive	4.35 (2.32)	3.35 (2.44)
Self-development motive	2.56 (1.52)	1.82 (1.29)
Personal insecurity motive	2.43 (1.15)	1.68 (.88)

Spending motives and psychological health outcomes

Consistent with most studies in the spending literature (e.g., Guevarra & Howell, 2015; Zhang et al., 2013), this study explored how the five spending motives relate to the satisfaction and frustration of the three psychological needs separately using structural equation modeling (correlations between all study variables are presented in Table 4). A measurement model (Model 1) was first tested in which indicators of the variables included in the structural model (stability, self-development, and personal insecurity motives, autonomy satisfaction, relatedness satisfaction, competence satisfaction, autonomy frustration, competence frustration, relatedness frustration, well-being, and ill-being) loaded on their respective latent factor. Five goodness-of-fit indices were used to assess model fit: the Minimum discrepancy per degree of freedom (CMIN/DF), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). In general, threshold values of less than 0.08 for RMSEA are indicative of an acceptable fit (MacCallum et al., 1996) and CMIN/DF values less than 3 are considered acceptable (Kline, 1998). Generally, values higher than 0.90 for the CFI and TLI (Hoyle, 1995; Schumacher & Lomax, 1996a, 1996b) and lower than 0.08 for the SRMR (Browne & Cudeck, 1993; Hu & Bentler, 1999) indicate an acceptable fit. The Akaike Information Criterion (AIC) was used when comparing models as smaller values generally indicate a better fitting and parsimonious model (Akaike, 1987; Tabachnick & Fidell, 2013). Model 1 provided a good fit to the data (CMIN/DF=1.80, RMSEA=0.05, CFI=0.94, TLI=0.92, SRMR=0.05) and all indicators had significant loadings on their corresponding latent factor. The motives of Helping others and Fun were included in the model as observed variables. Given that all data were self-reported, Harman's single factor score (in which all items measuring the latent variables are loaded into one common factor) was calculated in order to test for common method bias (CMB; Harman, 1960). The results revealed that the total variance for a single factor was 32.73% below the recommended value of 50%, suggesting that CMB was unlikely to distort the interpretation of the relationships among variables.

Structural equation modeling (SEM) using AMOS (Version 23; Arbuckle, 2014) was subsequently conducted to explore associations between spending motives and psychological health (well-being and ill-being) and to test whether

Table 4 Study 1—descriptive statistics and intercorrelations between study variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Stability	3.33	2.06																	
2. Self-development	2.09	1.42	.10																
3. Fun	3.72	2.44	-.40**	.13*															
4. Helping others	3.25	2.33	.29**	.06	.13*														
5. Personal insecurity	1.95	1.05	-.19**	.29**	.24**	.02													
6. Autonomy satisfaction	11.62	2.20	-.04	.03	.09	.16**	-.15**												
7. Competence satisfaction	12.51	2.15	.04	-.09	-.08	.09	-.25**	.48**											
8. Relatedness satisfaction	12.71	2.03	.08	-.08	.08	.23**	-.20**	.35**											
9. Autonomy frustration	12.98	5.53	.004	.11	.01	-.09	.28**	-.52**	-.37**	-.33**									
10. Competence frustration	13.53	5.90	-.02	.17**	.05	-.06	.29**	-.37**	-.40**	-.32**	.69**								
11. Relatedness frustration	9.70	5.08	-.08	.13*	.12*	-.06	.40**	-.36**	-.39**	-.47**	.52**	.55**							
12. Well-being	.87	.06	-.08	-.08	-.05	.18**	-.24**	.54**	.61**	.56**	-.52**	-.50**	-.52**						
13. Positive affect	3.81	.53	.06	-.08	-.05	.20**	-.17**	.40**	.52**	.46**	-.32**	-.30**	-.33**	-.57**					
14. General well-being	2.61	.42	.04	-.05	-.03	.11	-.25**	.55**	.54**	.52**	-.59**	-.57**	-.57**	.52**					
15. Ill-being	.92	.01	.07	.03	.03	-.10	.33**	-.50**	-.47**	-.49**	.58**	.62**	.66**	-.63**	-.40**				
16. Negative affect	2.40	.59	.01	.02	.003	-.08	.26**	-.37**	-.39**	-.42**	.49**	.55**	.58**	-.51**	-.31**				
17. Depression	1.91	.55	-.04	.12*	.05	-.10	.34**	-.54**	-.47**	-.48**	.57**	.60**	.64**	-.66**	-.43**	-.72**			.69**

*Correlations are significant at the 0.05 level

**Correlations are significant at the 0.01 level

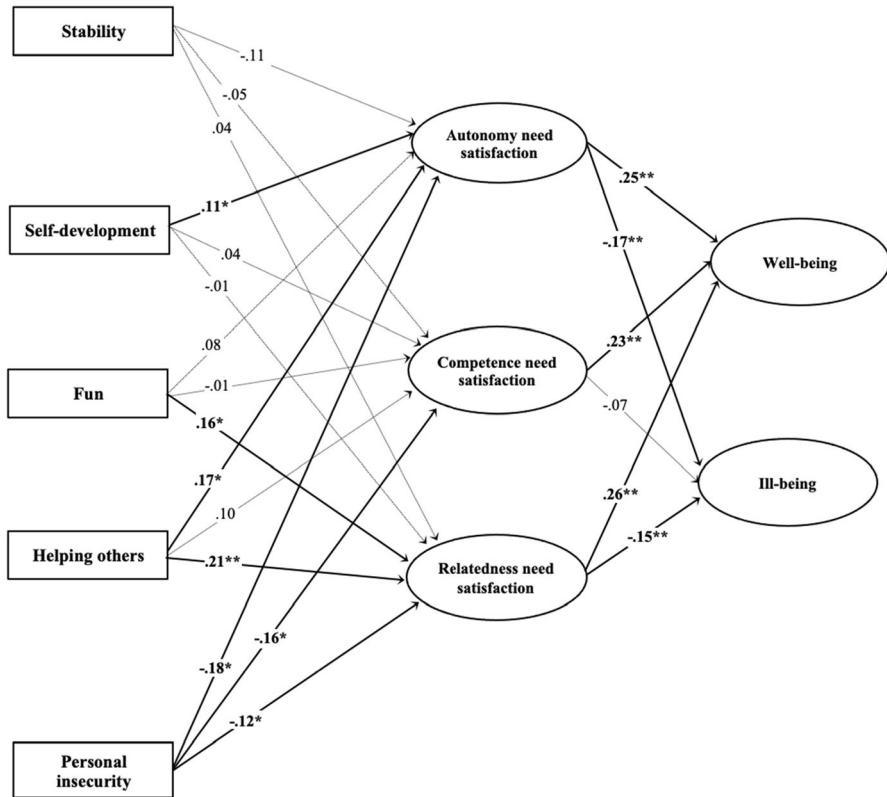


Fig. 1 The final model (Model 2) tested in Study 1 depicting the standardized path coefficients between motives for spending, the satisfaction of the three psychological needs, and psychological health outcomes (well-being and ill-being). *Note.* The paths from control variables have not been shown for simplicity of presentation. (**. Coefficients are significant at the 0.001 level; *. Coefficients are significant at the 0.05 level)

need satisfaction and frustration mediate these relationships (H1 to H3). A first model (Model 2) was tested which included indirect links from the spending motives to well-being and ill-being through autonomy satisfaction, relatedness satisfaction, competence satisfaction as well as autonomy frustration, relatedness frustration, and competence frustration (full mediation). Model 2 provided a good fit to the data, CMIN/DF = 1.47, CFI = 0.99, TLI = 0.97, RMSEA = 0.04, SRMR = 0.04, AIC = 437.65. Model 2 was then compared to a partial mediation model (Model 3), which consisted of Model 2 with the addition of direct paths from the spending motives to well-being and ill-being. This model did not provide a better fit to the data, CMIN/DF = 1.52, CFI = 0.99, TLI = 0.96, RMSEA = 0.04, SRMR = 0.04, AIC = 444.60. Thus, Model 2 was retained and is presented separately for need satisfaction and need frustration, in Figs. 1 and 2 respectively, to

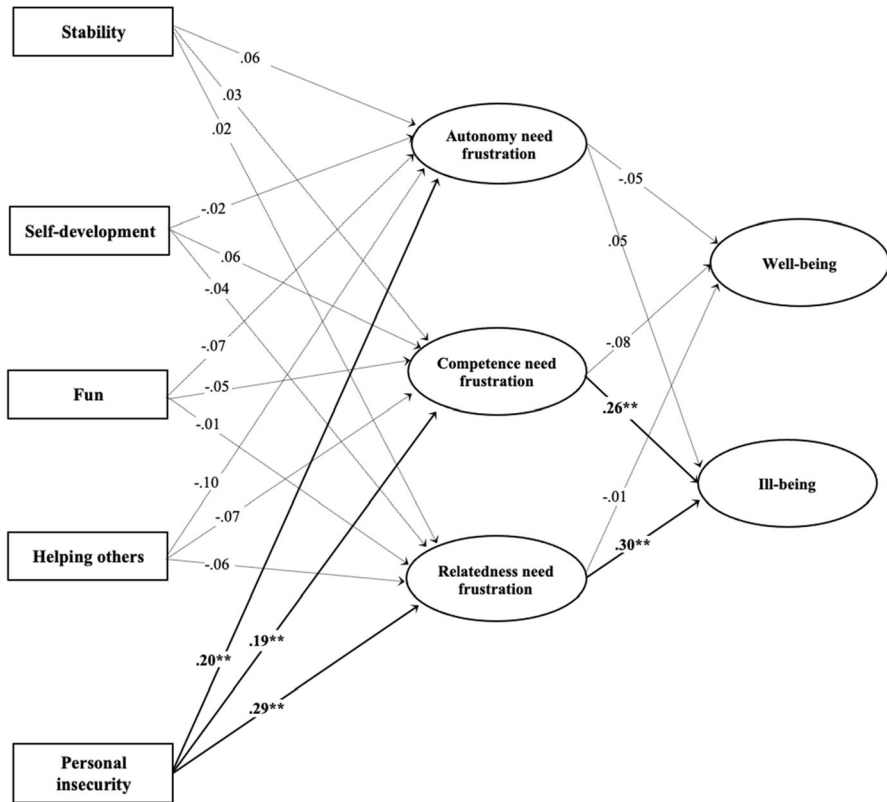


Fig. 2 The final model (Model 2) tested in Study 1 depicting the standardized path coefficients between motives for spending, the frustration of the three psychological needs and psychological health outcomes (well-being and ill-being). *Note.* The paths from control variables have not been shown for simplicity of presentation. (**. Coefficients are significant at the 0.001 level; *. Coefficients are significant at the 0.05 level)

facilitate interpretation (links from control variables are not shown for simplicity of presentation).²

In preliminary support for H1 and H2, the results indicate that the Fun motive positively predicted relatedness need satisfaction ($\beta=0.16$, $p=0.005$) and that the Self-development motive positively predicted autonomy need satisfaction ($\beta=0.11$, $p=0.047$). Moreover, the Helping others motive positively predicted relatedness ($\beta=0.21$, $p<0.001$) and autonomy ($\beta=0.17$, $p=0.004$) need satisfaction. The Personal insecurity motive negatively predicted autonomy satisfaction ($\beta=-0.18$, $p=0.003$), competence satisfaction ($\beta=-0.16$, $p=0.005$), and relatedness satisfaction ($\beta=-0.12$, $p=0.033$). The Personal insecurity motive also positively predicted autonomy

² G*Power software was utilized to estimate the statistical power attained for the analyses included in the model and the sample size. The estimated achieved power was 0.83 (family of tests=linear multiple regression; predictors=80; effect size=0.15; $\alpha=.05$; sample size=312).

frustration ($\beta=0.20$, $p<0.001$), competence frustration ($\beta=0.19$, $p<0.001$), and relatedness frustration ($\beta=0.29$, $p<0.001$). The Stability motive was unrelated to the satisfaction or frustration of the psychological needs (supporting H3). Moreover, relatedness need satisfaction positively predicted well-being ($\beta=0.26$, $p<0.001$) and negatively predicted ill-being ($\beta=-0.15$, $p<0.001$). Similarly, autonomy need satisfaction positively predicted well-being ($\beta=0.25$, $p<0.001$) and negatively predicted ill-being ($\beta=-0.17$, $p<0.001$). Competence need satisfaction positively predicts well-being ($\beta=0.23$, $p<0.001$) but was not significantly related to ill-being ($\beta=-0.07$, $p=0.153$). Competence need frustration positively predicted ill-being ($\beta=0.26$, $p<0.001$) but was unrelated to well-being ($\beta=-0.08$, $p=0.102$). Similarly, relatedness need frustration was positively related to ill-being ($\beta=0.30$, $p<0.001$) but unrelated to well-being ($\beta=-0.01$, $p=0.770$). Finally, autonomy need frustration was unrelated to well-being ($\beta=-0.05$, $p=0.298$) and ill-being ($\beta=0.05$, $p=0.373$).

To formally test the mediating role of need satisfaction and need frustration in the relationship between spending motives and psychological health, 95% confidence intervals were computed from 1000 bootstrap samples (Preacher & Hayes, 2008). In general, mediation (i.e., indirect) effects are said to be significant when confidence intervals exclude zero. The results revealed that there was a significant indirect effect of the Helping others motive on well-being ($\beta=0.06$, CI [0.03, 0.10], $p<0.05$) and ill-being ($\beta=-0.07$, CI [-0.11, -0.03], $p<0.05$) through relatedness need satisfaction. Moreover, relatedness need satisfaction also significantly mediated the relationship between the Fun motive and well-being ($\beta=0.04$, CI[0.01, 0.08], $p<0.05$) and between the Fun motive and ill-being ($\beta=-0.04$, CI[-0.08, -0.01], $p<0.05$). Finally, there was a significant indirect effect of the Personal insecurity motive on well-being through relatedness need frustration ($\beta=-0.04$, CI [-0.08, -0.01], $p<0.05$). In the relationship between the Personal insecurity motive and ill-being, autonomy frustration ($\beta=0.02$, CI [0.00, 0.06], $p<0.05$), competence frustration ($\beta=0.02$, CI [0.00, 0.05], $p<0.05$), and relatedness frustration ($\beta=0.07$, CI [0.03, 0.12], $p<0.05$) were all significant mediators. Although the self-development motive positively predicted autonomy satisfaction, there was no significant indirect effect on well-being or ill-being.

Taken together, the results partially support H1, in that the original motives of charity and leisure lead to well-being through need satisfaction. Although the motives of market value and freedom were associated with need satisfaction, there was no subsequent effects on well-being. Moreover, the original pride motive from Thibault Landry et al.'s (2016) study loaded on the Personal insecurity factor and was negatively associated with need satisfaction. Finally, H2 was supported in that the motives of social comparison, impulse, and overcoming self-doubt were significantly associated with ill-being through the mediating role of need frustration.

Method: Study 2

Recruitment and study procedure

Recruitment was accomplished through Prolific Academic, an online crowdsourcing website ($N=305$). Participants voluntarily decided to participate in the

study after seeing the baseline payment, estimated completion time and study description that was published on the Prolific Academic website. Participants are invited to click on the study link provided in the description, which directs them automatically to the survey on SurveyMonkey. Prior to beginning the questionnaire, participants are asked to read and sign the consent form. Given that this study took approximately 15 min to complete, participants received on average of 2.50\$CAN for their participation. Prolific Academic's 'country of origin' filter was used, such that only individuals born in Canada could participate. Participation involved completing a survey in which participants were asked to reflect upon three recent purchases that cost more than \$20 and to complete the Motives for Spending Scale with respect to each purchase. Specifically, participants were asked to think about and describe their most recent material purchase (defined as "a purchase in which a material good is acquired, which is usually a tangible object that is kept in your possession"), prosocial purchase (defined as "a purchase that is made to help or benefit another person"), and experiential purchase (defined as "a purchase for an event or series of events that you have lived through"). Immediately after describing each purchase, participants completed the MSS with respect to each purchase.

Sample description and demographics

The total sample included 305 individuals with an average age of 31.6 years and included 138 women (45.2%) and 167 men (54.8%). With respect to education, 49.8% held a Bachelor's degree, 19.3% held a graduate degree, 12.8% a general or vocational college degree, and 18% a high school degree or less. The salary (annual income before taxes) breakdown was the following: no salary (2.6%), below \$10,000 (10.5%), \$10,000–\$19,999 (12.1%), \$20,000–\$29,999 (9.8%), \$30,000–\$39,999 (9.5%), \$40,000–\$49,999 (14.8%), \$50,000–\$74,999 (18.7%), \$75,000–\$99,999 (11.5%), \$100,000–\$124,999 (7.9%), and \$125,000 and above (2.6%).

Measures

Motives for spending

Participants' motives for making material, prosocial, and experiential purchases were assessed using the Motives for Spending Scale (MSS). See study 1 for a full description of the MSS. For material purchases, the reliability estimates for the Stability ($\alpha=0.66$), Self-development ($\alpha=0.64$), and Personal insecurity ($\alpha=0.73$) motives were acceptable. For prosocial purchases, the reliability estimates for the Self-development ($\alpha=0.66$) and Personal insecurity ($\alpha=0.75$) motives were acceptable, but the Stability motive revealed a low reliability estimate ($\alpha=0.42$). For experimental purchases, the reliability estimates for the Stability ($\alpha=0.65$), Self-development ($\alpha=0.74$), and Personal insecurity ($\alpha=0.75$) motives were acceptable.

Results

Control variables

An inspection of Table 5, which includes correlations between all study variables, reveals that several spending motives were significantly correlated with the socio-demographic variables. For material purchases, the motive of personal insecurity was significantly correlated with age ($r=-0.12$, $p=0.043$) and salary ($r=0.20$, $p<0.001$). The motives of self-development ($r=-0.12$, $p=0.030$) and fun ($r=-0.24$, $p<0.001$) were also significantly correlated with gender (male=1, female=2). For prosocial purchases, the motive of fun was correlated with age ($r=-0.15$, $p=0.010$) and the motives of self-development ($r=0.14$, $p=0.013$) and Personal insecurity ($r=0.18$, $p=0.002$) were correlated with salary. Finally, with respect to experiential purchases, the motives of self-development ($r=0.14$, $p=0.016$) and personal insecurity ($r=0.14$, $p=0.014$) were correlated with salary. The motives of self-development ($r=-0.12$, $p=0.032$) and personal insecurity ($r=-0.14$, $p=0.018$) were also correlated with age. These associations were controlled for in main analyses (ANCOVAs) by including the control variables as covariates.

Main analyses

In order to assess how the three purchases differed with respect to the spending motives, a repeated-measures ANCOVA with Purchase (Material, Prosocial, Experiential) as the within-subjects factor was run separately for stability, self-development, fun, helping others, and personal insecurity motives.³ Figure 3 presents the estimated marginal means for the spending motives across purchase type. Moreover, Table 6 presents descriptions of material, prosocial, and experiential purchases across the different spending motives. For the motives of stability, self-development, helping others, and personal insecurity, a Huynh–Feldt correction was used as sphericity was violated. The results revealed that the purchases differed significantly with respect to the stability motive ($F(1.968, 598.364)=16.20$, $p<0.001$, partial $\eta^2=0.05$). Post hoc tests using a Bonferroni correction revealed that prosocial purchases (mean=3.36) elicited significantly higher scores on the stability motive than experiential (mean=2.97, $p<0.001$) and material purchases (mean=2.69, $p<0.001$). Experiential and material purchases were not statistically different in terms of the stability motive ($p=0.057$). With respect to the self-development motive, a repeated measures ANCOVA with age, gender, and salary entered as covariates determined that the three purchases differed significantly with respect to this motive ($F(1.671, 502.860)=17.13$, $p<0.001$, partial $\eta^2=0.05$). Specifically, material purchases elicited higher levels of the self-development motive (mean=2.53) followed by experiential (mean=2.01) and prosocial purchases

³ G*Power software was utilized to estimate the statistical power attained for the analyses conducted and the sample size. The estimated achieved power was 1.00 (family of tests=ANOVA: Repeated measures, within factors; effect size=0.25; $\alpha=.05$; sample size=305; groups=1; measurements=3).

Table 5 Study 2—intercorrelations between study variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Gender																			
2. Age	.09																		
3. Education	.16**	.14*																	
4. Salary	-.22**	.31**	.21**																
Material purchase																			
5. Stability	.10	.09	.06	-.02															
6. Self-development	-.12*	-.06	.03	.04	.40**														
7. Helping others	-.03	-.01	.02	.03	.46**	.33**													
8. Fun	-.24**	-.06	-.03	-.03	-.30**	.14*	.09												
9. Personal insecurity	-.09	-.12*	.05	.20*	.03	.43**	.18**	.12*											
Prosocial purchase																			
10. Stability	.001	-.07	.01	-.05	.08	.13*	.05	.03	.22**										
11. Self-development	-.05	-.03	.07	.14*	.30**	.48**	.34**	.02	.42**	.32**									
12. Helping others	.02	.04	-.02	-.02	.05	-.05	.08	.09	-.07	-.01	-.18**								
13. Fun	-.02	-.15**	.02	.02	.08	.24**	.20**	.13*	.20**	.23**	.40**	-.05							
14. Personal insecurity	-.04	-.08	.05	.18**	.18**	.36**	.21**	.04	.62**	.25**	.55**	-.06	.30**						
Experiential purchase																			
15. Stability	-.07	.09	.06	.02	.33**	.25**	.24**	-.03	.11	.33**	.34**	.004	.14*	.14*					
16. Self-development	-.04	-.12*	.03	.14*	.23**	.45**	.27**	.06	.45**	.26**	.71**	-.10	.37**	.49**	.32**				
17. Helping others	-.06	.10	-.03	.05	.15**	.21**	.30**	.05	.02	.18**	.15*	.19**	.09	.10	.38**	.07			
18. Fun	.02	-.01	.004	.04	-.06	-.02	-.03	.14*	.01	.01	-.01	.15**	.05	.08	-.31**	.02	.003		
19. Personal insecurity	-.01	-.14*	.05	.14*	.18**	.35**	.20**	.06	.58**	.18**	.50**	.001	.24**	.72**	.13*	.54**	.07	.09	

*Correlations are significant at the 0.05 level

**Correlations are significant at the 0.01 level

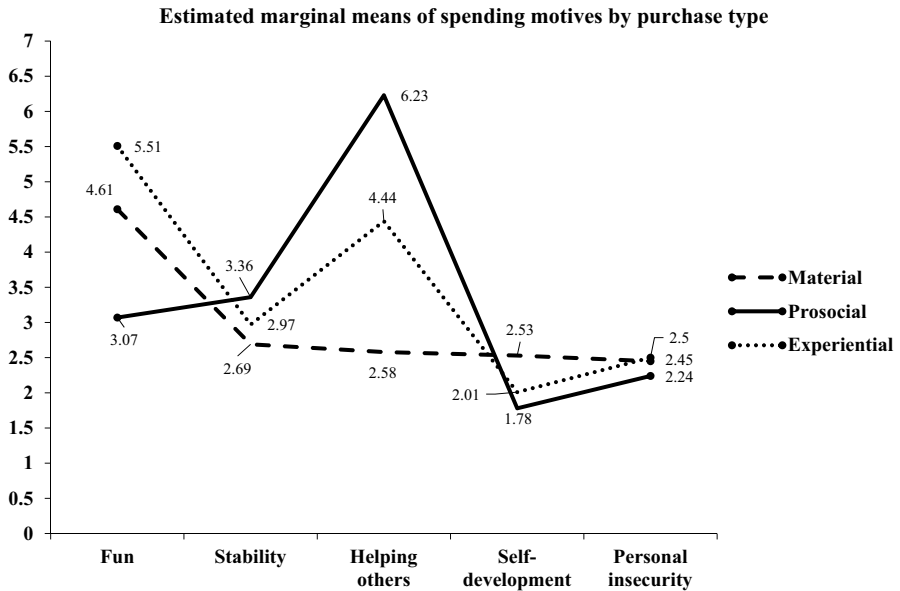


Fig. 3 The estimated marginal means for the spending motives across purchase type found in Study 2

Table 6 Study 2—examples of purchases by spending motive and purchase type

Spending motive	Purchase type		
	Material	Prosocial	Experiential
Stability	<ul style="list-style-type: none"> • Groceries • Baby stroller • Rent 	<ul style="list-style-type: none"> • Family meal • Groceries • Restaurant meal 	<ul style="list-style-type: none"> • Hospital stay • Meal for friends/family • Family vacation
Self-development	<ul style="list-style-type: none"> • Textbook • Computer • Notebook 	<ul style="list-style-type: none"> • Donation to charity • Gifts and/or meals for coworkers 	<ul style="list-style-type: none"> • Plane ticket for job interview • Restaurant meal • Trip
Fun	<ul style="list-style-type: none"> • Fitness tracker • Video games • Book 	<ul style="list-style-type: none"> • Restaurant meal • Bicycle for children • Campsite 	<ul style="list-style-type: none"> • Vacation/trip • Concert tickets • Zoo membership
Helping others	<ul style="list-style-type: none"> • Bicycle • Christmas gifts • Piano 	<ul style="list-style-type: none"> • Church donation • Lending money to friends • Donation to charity 	<ul style="list-style-type: none"> • Restaurant meal with friends • Movie tickets • Trip
Personal insecurity	<ul style="list-style-type: none"> • Custom made clothing • Cosmetics • Wine 	<ul style="list-style-type: none"> • Donation to charity • Holiday gift baskets • Lending money to friends 	<ul style="list-style-type: none"> • Vacation/trip to Hawaii • Restaurant with friends • Concert tickets

Purchase descriptions presented include purchases that received the highest scores (6=agree; 7=strongly agree) for each motive (e.g., the purchase “groceries” was provided as a material purchase that was highly motivated by a desire for Stability)

(mean = 1.78). These differences were all statistically significant ($p < 0.001$). With respect to the Fun motive (gender and age entered as covariates), results revealed that the three purchases revealed significant differences with respect to this motive ($F(2, 604) = 10.91, p < 0.001, \text{partial } \eta^2 = 0.04$). Post hoc tests revealed that the fun motive was highest for experiential purchases (mean = 5.52) followed by material (mean = 4.61) and prosocial purchases (mean = 3.07). These differences were all statistically significant ($p < 0.001$). Results also revealed that the three purchases were significantly different with respect to the helping others motive ($F(1.963, 596.633) = 382.10, p < 0.001, \text{partial } \eta^2 = 0.56$). Specifically, prosocial purchases elicited the highest level of the helping others motive (mean = 6.23) followed by experiential (mean = 4.44) and material purchases (2.58). These differences were all statistically significant ($p < 0.001$). Finally, with respect to the personal insecurity motive (age and salary entered as covariates), the results revealed that this motive also differed significantly between purchase type ($F(1.889, 570.405) = 3.63, p = 0.029, \text{partial } \eta^2 = 0.01$). Post hoc tests revealed that material (mean = 2.45, $p = 0.002$) and experiential (mean = 2.50, $p = 0.002$) purchases elicited significantly higher scores on the personal insecurity motive than prosocial purchases (mean = 2.24). Experiential and material purchases were not significantly different in terms of this motive ($p > 0.05$).

In order to determine the relative importance of the spending motives within each purchase type, a repeated measures ANOVA was conducted separately for material, prosocial and experiential purchases.⁴ First, a repeated measures ANOVA with a Huynh–Feldt correction determined that with respect to material purchases, the five spending motives revealed significant differences ($F(2.813, 846.684) = 22.73, p < 0.001, \text{partial } \eta^2 = 0.07$). Post hoc tests using a Bonferroni correction revealed that the fun motive (mean = 4.61) was significantly higher than the rest of the motives ($p < 0.001$). The motives of stability, helping others, self-development, and personal insecurity were not significantly different from each other. Second, a repeated measures ANOVA with a Huynh–Feldt correction determined that with respect to prosocial purchases, the five spending motives revealed significant differences ($F(3.144, 946.251) = 32.60, p < 0.001, \text{partial } \eta^2 = 0.10$). Post hoc tests revealed that for prosocial purchases the helping others motive was the highest, followed by stability, fun, personal insecurity, and self-development. All motives were significantly different from each other ($p < 0.001$) except for stability and fun ($p = 0.300$). Finally, a repeated measures ANOVA with a Huynh–Feldt correction determined that with respect to experiential purchases, the five spending motives revealed significant differences ($F(3.021, 909.411) = 15.16, p < 0.001, \text{partial } \eta^2 = 0.05$). Post hoc tests revealed that the highest motive for experiential purchases was fun, followed by helping others, stability, personal insecurity and self-development. All motives were significantly different from each other. Taken together, the

⁴ G*Power software was utilized to estimate the statistical power attained for the analyses conducted and the sample size. The estimated achieved power was 1.00 (family of tests = ANOVA: Repeated measures, within factors; effect size = 0.25; $\alpha = .05$; sample size = 305; groups = 1; measurements = 5).

results support H4 which indicated that there are significant differences between prosocial, experiential and material purchases with respect to the spending motives.

General discussion

The results of Study 1 suggest the existence of five main motives that may play a role in everyday spending decisions. The reasons people spend money include (but may not be limited to): to ensure their own and their loved one's well-being (Stability motive), to invest in their self-development (Self-development motive), to help others in need (Helping others motive), to participate in an enjoyable leisure activity (Fun motive) and to overcome feelings of self-doubt by attracting attention from others, often in an impulsive way (Personal insecurity motive).

This study relied on Srivastava et al.'s (2001) original ten motives for making money to determine if these same motives are present when people make actual purchases. This leaves open the possibility that there may be other reasons that motivate spending behavior that were not explored in this study. Nevertheless, the results suggest that the five motives identified may underlie people's everyday spending decisions and that they have important effects on psychological health.

When people made purchases with the intention of helping others, they were more likely to experience relatedness and autonomy need satisfaction, which in turn led to greater well-being and less ill-being. Similarly, when individuals spent money with the intent of participating in a hobby that they enjoy, this allowed them to satisfy their need for relatedness and led to elevated well-being (and less ill-being). Moreover, when people spent money to enjoy a leisure activity (Fun motive) they experienced greater well-being (and less ill-being) because it allowed them to satisfy their need for relatedness. Moreover, spending money to invest in self-development led to the satisfaction of the need for autonomy. Consistent with Thibault Landry et al. (2016), the motive of Stability was unrelated to need satisfaction or need frustration. Finally, when individuals were motivated to make purchases because they believed these would help them overcome feelings of self-doubt and allow them to appear better than others, they were less likely to satisfy their need for relatedness and consequently experienced decreased well-being. These motives were also more likely to actively thwart all three psychological needs and consequently elevate ill-being. Taken together, the results of Study 1 add to the growing body of research suggesting that people's motives for making everyday spending decisions have important consequences for well-being through their effect on psychological need satisfaction (Hill & Howell, 2014; Zhang et al., 2013).

A secondary objective of this article was to explore the relative presence of the spending motives (identified in Study 1) across different types of purchases. The results of Study 2 revealed that people are motivated to make material, prosocial and experiential purchases for different reasons. First, compared to material purchases, when people make prosocial or experiential purchases, they are significantly more likely to do so because of a desire to help someone. Moreover, compared to experiential and material purchases, individuals were also more likely to be motivated by

a desire to ensure their own and their family's well-being (Stability motive) when making prosocial purchases.

The results also revealed that experiential purchases (compared to material and prosocial ones) are significantly more likely to be motivated by a desire to participate in enjoyable leisure activities. Thus, when people make experiential purchases, their primary motivation is to carry out an activity that they enjoy. An interesting finding of Study 2 is that the primary reason people buy material things is also to participate in a hobby or enjoyable activity (albeit to a lesser extent than experiential purchases). Moreover, material purchases (compared to experiential and prosocial purchases) were significantly more likely to be motivated by a desire for self-development.

Finally, Study 2 revealed that compared to prosocial purchases, experiential and material purchases are more likely to be motivated by a desire to overcome feelings of insecurity by attracting attention to oneself and spending impulsively. Thus, purchases such as a tailor-made suit or a vacation to Hawaii may be equally likely to be motivated by a desire to gain admiration from others. This is consistent with the results of Zhang and colleagues (2013) that experiences can also be purchased for extrinsic reasons and that this prevents psychological need satisfaction. Moreover, Moldes et al. (2019) revealed that experiential and material purchases are equally likely to be used by people to display signs of wealth and social status and this was associated with decreased well-being. Similarly, Duan and Dholakia (2018) report that individuals who have a strong desire to display social status to others are equally likely to post pictures of their experiential and material purchases on social media.

Theoretical contributions and practical implications

The results of the two studies presented in this article contribute to the small body of research on what motivates people to make purchases (e.g., Zhang et al., 2013). Specifically, Study 1 extends this literature by highlighting a broader set of motives underlying general spending behavior (without limiting exploration to motives for one particular purchase type) that have important consequences for well-being. Moreover, Study 1 makes a significant contribution to the literature by implicating for the first time the role of need frustration in the association between spending motives and psychological health and by suggesting that everyday spending decisions have the potential of actively thwarting psychological needs and ultimately increasing ill-being. Researchers are thus encouraged to include measures of need frustration and ill-being when assessing the psychological consequences of spending behavior.

From a practical perspective, the vast literature on spending and happiness outlines important recommendations aimed at helping individuals derive the greatest level of happiness from their spending decisions. Evidently, a large body of evidence supports the recommendation that spending money on others (as opposed to oneself) and on experiences (rather than material things) leads to happiness (Aknin et al., 2018). Although the path between purchases, motives, need satisfaction, and well-being was not assessed directly (and in its entirety), the results corroborate

these recommendations by revealing that compared to material purchases, prosocial and experiential purchases are more likely motivated by reasons that encourage the satisfaction of psychological needs (i.e., a desire to help others and to participate in enjoyable activities). Nevertheless, the results also suggest that it is possible to consume experiences for detrimental reasons (i.e., attract attention to oneself) and to purchase material items for beneficial reasons (i.e., participate in leisure activities and invest in self-development). Thus, while a luxurious vacation to Hawaii certainly provides an excellent opportunity to spend time with friends doing fun activities (e.g., snorkeling, site seeing, etc.), it may also be undertaken for reasons such as boasting to friends about the expensive vacations one can afford. Similarly, buying the latest brand name bicycle may be used to gain the admiration of others, but it can also make someone happy by allowing them to participate in a cross-country cycling adventure with close friends. Thus, the findings point to a third important recommendation: people should reflect on the reasons why they spend money as these can potentially influence the happiness they derive from the purchases they make.

The conclusions drawn from this article should also be considered in light of the vast literature on consumer behaviour. Given the relatively narrow objectives and scope of this article, it was not possible to exhaustively review and incorporate research from this field of study. There may be some important linkages that can be made between the findings emerging from the field of consumer behaviour and the money/spending motives literature reviewed in the current article. For instance, there are some studies exploring how different motives influence consumer behaviour (e.g., Cannon & Rucker, 2020; Griskevicius & Kenrick, 2013). Although much of this research focuses more on consumer decisions as key outcome variables and less on the psychological impact of spending behavior, it would be fruitful for future studies to incorporate these two distinct but closely related streams of research.

Limitations and future research

It should be noted that a major limitation of Study 1 is that it relied on an already existing scale to assess individuals' spending motives. Although the results suggest the presence of five main spending motives, it is likely that a broader set of motives exist. People make several purchases on a monthly basis (e.g., paying bills, groceries, outings, etc.) that can be motivated for a variety of reasons. For instance, spending money on a new car may be motivated by reasons such as those highlighted in this study (e.g., attracting attention to oneself), but also for more practical reasons such as being able to get to one's job that is not accessible by public transit. Some purchases may also be motivated by simple utility related reasons, such as repairing a washing machine. Future studies could develop an exhaustive list of potential reasons for spending, administer these to a sample of participants and then use data reduction techniques to arrive at a more exhaustive list of reasons why people spend money.

The retrospective design of studies 1 and 2 constitutes another limitation as participants were asked to recall previous purchases and to report the motives they had when making the purchase. Such a design increases the risk that inaccurate

participant recollections may bias the results. Future research could test for differences in motives and psychological health by using experimental designs and collecting data after participants are randomly assigned to make actual purchases (e.g., material, experiential, prosocial). In this way, future studies could directly test all the links in the pathway from actual purchases, motives, to psychological need satisfaction (and frustration) and well-being. Another limitation is the correlational nature of Study 1 as it precludes causal inferences between spending motives, psychological need satisfaction/frustration and well-being/ill-being. Without longitudinal data, it is impossible to rule out the alternative possibility that psychological health influences need satisfaction and in turn the spending motives. Moreover, the self-reported nature of the studies increases the risk for common method bias. Nevertheless, Harman's single factor score (Harman, 1960) suggested that the results were unlikely affected by CMB. Moreover, many scholars argue that self-reports are appropriate for measuring subjective appraisals, such as the motives for spending, that are not easily observable into behavior (e.g., Chan, 2009; Conway & Lance, 2010).

A final limitation is that the recruitment for Study 1 was accomplished through convenience sampling as participants were recruited through the social and professional networks of the authors of this article. This resulted in a sample that may not be representative of the general population (e.g., a third of the sample comprised of human resource professionals) and thus limits the generalizability of the results. Nevertheless, in-depth analyses were conducted to identify any differences across the groups. The impact of these differences on the results were minimized by integrating them as control variables.

Conclusion

The current research adds to the few studies highlighting the importance of motives underlying spending behavior by revealing the effect of five main spending motives on psychological need satisfaction and frustration. When people spend money because they are motivated by a desire to help others, to participate in enjoyable leisure and to invest in self-development, they are more likely to experience well-being via psychological need satisfaction. On the other hand, making purchases for reasons such as boasting to others and to overcome feelings of insecurity is likely to lead to the active thwarting of the psychological needs and elevated ill-being is consequently experienced. Finally, evidence was found for the fact that people make prosocial, experiential and material purchases for different reasons and this provides additional insight into when and how these specific purchases provide happiness.

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