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Money buys financial security and psychological need satisfaction: testing need theory in affluence

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Abstract

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Keywords

but, security, satisfaction, buys, reexamining, being, relations, well, between, money, standing, subject, economic, not, happiness

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Running head: TESTING NEED THEORY

Money buys financial security and psychological need satisfaction:

Testing need theory in affluence

ORIGINAL RESEARCH REPORT for *Social Indicators Research*

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Abstract

The most prominent theory to explain the curvilinear relationship between income and subjective well-being (SWB) is need theory, which proposes that increased income and wealth can lead to increased well-being in poverty because money is used to satisfy basic physiological needs. The present study tests the tenets of need theory by proposing that money can buy happiness beyond poverty if the money satisfies higher-order needs. Findings indicate that in older adults (n = 1,284), as economic standing rises, so do individual perceptions of financial security (a safety need), which in turn increases overall life satisfaction. Further a path model tested the degree to which financial security and psychological need satisfaction mediated the path from economic standing to life satisfaction and demonstrated the complete mediation through higher-order needs – there was a 66% reduction in the direct link through financial security and a 34% reduction through psychological need satisfaction. Discussion focuses on how these mediation and path models extend need theory.

Money buys financial security and psychological need satisfaction: Testing need theory in affluence

"Stocks skidded Monday, with the Dow slumping nearly 778 points, in the biggest single-day point loss ever…The day's loss knocked out approximately $1.2 trillion in market value, the first post-$1 trillion day ever."

- CNN.com, 29 September 2008

On September 15, 2008, the American public witnessed staggering evidence of an economic recession with the collapse of Lehman Brothers, the first major casualty of the worldwide credit crisis (Saad, 2008). A Gallup poll conducted shortly after this massive stock market plunge found that 66% of those surveyed believed they had been hurt by the recent events, and 70% believed they would suffer financially in the long run (Jacobe, 2008). Not surprisingly, previous economic downturns have correlated with reduced financial well-being and increased financial distress (Hayo & Seifert, 2003). Further, conventional folk wisdom in Western cultures holds that money buys happiness and the desire to obtain wealth remains one of the strongest motivations for people living in modern societies (Furnham & Cheng, 2000; Diener & Oishi, 2000). Research has demonstrated that a significant correlation exists between money and subjective well-being (SWB), yet results from several studies indicate that the relationship is strongest at lower income levels and tends to decline as incomes rise (see Howell & Howell, 2008 for a review; also see Diener & Biswas-Diener, 2002; Veenhoven, 1991).

The Curvilinear Relationship between Income and SWB

Several plausible theories explain the curvilinear relationship between income and SWB (e.g., relative income theory – cf. Easterlin, 1974; adaptation level theory – cf. Brickman, Coates, & Janoff-Bulman, 1978; goal theory – cf. Diener & Lucas, 2000). In one such theory, Cummins

(2000) reviews prior research while situating his review in the context of a homeostatic theory of SWB (also see Cummins 1995, 1998). This model proposes that dimensions of personality, namely extraversion and neuroticism, determine the range of an individual's SWB. However, it is the second order determinants of SWB or internal buffers, which include perceived control, self-esteem, and optimism, that produce a person's sense of well-being. Income affects SWB via its influence on the internal buffering system. Based on this theory, Cummins predicted that poor people are made vulnerable by the direct (e.g., poor nutrition, lack of access to appropriate medical care) and indirect consequences (lacking means to handle adverse outcomes) of poverty. Cummins (2000) further argues that there is an upper limit to which income can influence levels of SWB, however the extent of this ceiling was not explicated, and a proper framework for examining the ceiling was not provided.

The most widely accepted explanation developed to explain the curvilinear relationship between income and SWB – the diminishing marginal effect of money on happiness – *need theory* is conceptually compatible to a homeostasis model while also providing a conceptual means of testing the upper limit proposed by Cummins. Extending the theoretical contributions of Maslow (1943), need theory proposes that money is most strongly – and maybe only – related to well-being when it is used to help satisfy basic needs (e.g., food, clean water). Indeed, past work has demonstrated that money is associated most strongly with well-being in poverty-stricken communities (Biswas-Diener & Diener, 2001; Diener & Lucas, 2000; Howell, Howell, & Schwabe, 2006). However, Maslow (1943) also proposed that need satisfaction advances in a hierarchical manner, beginning with the most basic physical needs and progressing toward psychological needs. Howell and Howell (2008) suggested that money satisfies certain higher-

order needs (specifically safety and social needs) if it is spent correctly. Thus, money utilized to satisfy higher-order needs should be associated with well-being in affluence.

The Impact of Financial Security and Higher-Order Needs on Subjective Well-being

In some ways analogous to Cummins's internal buffer, control, the second level of Maslow's hierarchy (1943) is defined by the desire to be free of danger, fear, and unpredictability, whether physical or psychological. Maslow considered the first three levels of the hierarchy to be "deficit needs", marked by the drive to reduce conflict and restore balance. According to Xiao and Noring (1994), financial need related to immediate consumption can be considered a lower-level need (e.g., physiological needs), and financial need related to future consumption can be viewed as a higher-level need (e.g., security needs). For these reasons we propose that the perception of security produced by one's economic standing (i.e., financial security) is an important outcome of socio-economic status (e.g., income, wealth, savings, lack of debt, etc.) that influences SWB particularly among people who have basic needs met. That is, financial security is a subjective appraisal experienced as the perception that should financial circumstances change in the future (e.g., losing a job) one will be able to meet both basic needs as well as afford purchases that one expects to be able to buy; this assessment of one's financial situation should be impacted by one's current economic situation and is likely an important mediator in the relation between wealth and subjective well-being.

Previous research suggests that an individual's subjective evaluation of their financial security may have an impact on well-being. Changes in financial status over time may influence feelings of security and be a significant determinant in individual well-being (Moghaddam, 2008). In one study, Cummins, Eckersley, Pallant, Van Vugt, and Misajon (2003) found that future security in general was reduced among adults age 36 to 45; and while they conjectured

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that they were taping into financial security, this hypothesis was not tested. Further evidence indicates that individuals experiencing various life circumstances use different criteria when determining their overall happiness, of which financial security is potentially one prominent factor, although some conflicting evidence exists. While Andrews and Withey's (1976) one-item measure of financial security was not a significant indicator of satisfaction with any life domains, Zumbo and Michalos (2000) compared financial security as a predictor of life satisfaction and found that financial security was a good predictor of satisfaction for a number of groups including students. Subsequent studies have examined financial security as one life domain contributing to overall health and satisfaction. Overall, the evidence suggests that financial security contributes to the variance explained in reported happiness and life satisfaction (see Michalos, Zumbo, & Hubley, 2000; Michalos et al., 2005). For example, Michalos, Thommasen, Read, Anderson, and Zumbo (2005) assessed determinants of health and life satisfaction and found that financial security was an important indicator. While several studies have observed financial security appeared to be a direct relation between income and SWB (e.g., Diener & Biswas-Diener, 2002) and other studies have identified a relation between financial security and life satisfaction (e.g., Michalos, 1980), the present investigation extends these two lines of research by examining financial security specifically as a mediator between income and life satisfaction from a need theory perspective.

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Furthermore, Biswas-Diener & Diener (2001) suggest that higher incomes may be positively correlated with social support, helping individuals meet the need for belongingness. Oleson (2004) found that beyond the physiological component of money (i.e., that money can buy food and shelter) there is also a psychological component that reflects an individual's attitude toward money and how money relates to well-being. Indeed, materialistic values are

often associated with decrements to higher-order needs (e.g., less self-actualization, less vitality, more depression, and more anxiety; Kasser & Ryan, 1993). Howell and Hill (2009) showed that experiential purchases (as opposed to material purchases) were more likely to increase relatedness (a third-level need) and vitality (the result of psychological need satisfaction; see Ryan & Deci, 2008), which in turn increased well-being. For these reasons we develop a path model to include financial security and psychological need satisfaction, a step not undertaken in previous work. This would further suggest that the interpretation of the curvilinear trajectory is not that money only brings happiness when it is used to buy shelter and food, but in addition, if shelter and food are satisfied, money can produce additional happiness when spent to satisfy higher-order needs. The existing body of research has tended to focus on the most basic of needs across all income groups and their relation to well-being, overlooking the subtlety of a higher-order need in more prosperous groups. This extension of need theory has yet to be fully tested and would provide an essential examination of the theory's underlying tenets.

The Present Study

Despite its wide acceptance, the validity and implications of need theory have not been fully explored. The present research examines need theory in relation to the association between life satisfaction and economic standing by: (a) first testing financial security (a higher-order psychological need) as a mediator of this relationship and (b) developing a path model to include both financial security and psychological need satisfaction as mediators. We propose that need theory can be extended beyond basic needs and hypothesize that money will be strongly related to SWB when additional income and wealth is used to satisfy individuals' higher-order *psychological* needs. Given that previous research (e.g., Howell & Howell, 2008) has shown the association between money and physiological need satisfaction is stronger for impoverished

people, the focus of the present research concerns only individuals whose basic needs are already met. Also, we agree with Kahneman, Krueger, Schkade, Schwarz, and Stone (2004) that economic standing influences this component of SWB, and therefore, emphasize the importance of the subjective cognitive assessment of life satisfaction. Finally, following the suggestion of Heady, Muffels, and Wooden (2008) and work done by Howell and Howell (2008), we use multiple indicators of economic standing, as opposed to measuring only absolute income, in order to obtain a more complete understanding of the connection between money and life satisfaction, as not all monetary measures are equally efficient at explaining variance in SWB.

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Method

Participants & Procedure

To test need theory, four different samples (N = 1,438) were recruited from different universities, social networking websites, or through snowball sampling techniques.

Participants in Samples 1 – 3 completed an online questionnaire that contained measures of satisfaction with life, financial security, income, wealth, debt, and basic demographic information. For Sample 1, 82 non-employed college students (84% female; M = 22.68 years, SD = 3.26) were recruited from the Department of Psychology at San Francisco State University. For Sample 2, we recruited 139 students who were older than typical college students (57% female; M = 28.72 years, SD = 8.18 – with 28.5% of the sample at least 30 years old) from both San Francisco State University (n = 60) and Old Dominion University (n = 79). For Sample 3, we recruited 137 working adults (i.e., non-students) from San Francisco / Oakland Bay, CA and Norfolk, VA (n = 83 for CA and n = 54 for VA; overall, 56% female; M = 49.97 years, SD = 15.48 – with 27% of the sample 60 years old or older) using snowball sampling.

Finally, we recruited 1,074 non-student adults (i.e., over 29 years old) through various social networking websites (e.g., craigslist, Facebook, etc.; 70% female; *M* = 43.62 years, *SD* = 11.50 – with 9.9% of the sample 60 years old or older). Participants from Sample 4 lived in 742 unique zip codes across the United States, Canada, and the United Kingdom. Participants in Sample 4 completed the same online survey as samples 1 – 3; however, they also completed a measure of psychological need satisfaction (i.e., satisfaction of autonomy, competence, and relatedness) in addition to the other measures. In exchange for participation, respondents were entered into a raffle where they had a 1 in 100 chance to win a gift card for various retailers or restaurants.

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Measures

Life satisfaction. Perceived global satisfaction with life was assessed by asking participants to complete the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larson, & Griffin, 1985). Participants rated five statements (e.g., "In most ways my life is close to ideal.") using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The mean of the five items formed each participant's life satisfaction score. High scores on the SWLS indicate greater satisfaction with one's life.

Financial Security. Financial security is a subjective cognitive appraisal. It can be indicated by the accumulation of material possessions or as the ability to obtain and maintain a particular standard of living (Poduska, 1992). To measure financial security, respondents completed the InCharge Financial Distress/Financial Well-Being Scale (IFDFW Scale; Prawitz et al., 2006), an 8-item measure rated on a 10-point scale (1 = *no confidence*, 10 = *high confidence*) that assesses participants' perceived level of financial security (e.g., *How confident are you that you could find the money to pay for a financial emergency that costs about*

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$1,000?). The mean of the eight items formed each participant's financial security score. Higher scores on the IFDFW scale indicate greater financial security.

Economic standing. To measure economic standing, respondents reported their real income and wealth such as net income, savings, investments, as well as unsecured debt including items related to credit card usage and credit card balances. The five items were: "What is your income after taxes are taken out for all members of your household?" "What is the amount in all your savings and money market accounts?" "What is the amount in all your investments?" "During the past year, how many of your credit cards have carried half or more of the maximum balance?" and "Of those, how many of your credit cards have carried the maximum balance (maxed out) during the past year?" All items were later standardized and used to form three variables: (1) income and wealth – the standardized average of the first three items; (2) debt – the standardized average of the last two items; (3) economic standing – the standardized average of all 5 items.

Psychological Need Satisfaction. Participants in Sample 4 also completed the Basic Need Satisfaction in Life Scale (Gagné, 2003), a 21-item questionnaire which measures three psychological needs necessary for optimal well-being: autonomy, competence, and relatedness. Examples of specific items included: (a) "I feel like I am free to decide for myself how to live my life" (autonomy), (b) "People I know tell me I am good at what I do" (competence), and (c) "I really like the people I work with" (relatedness). The mean of the twenty-one items formed each participant's psychological need satisfaction score – where higher scores indicate higher levels of psychological need satisfaction.

Results

Life Satisfaction and Financial Security and Standing by Sample

We first examined the mean life satisfaction, financial security, income and wealth, and credit card debt across the four samples. Table 1 presents the means, standard deviations, and subscripts (where means with different subscripts are significantly different at the p=.05 level) for each sample. Participants in the non-student groups (i.e., adults from Samples 3 and 4) reported significantly higher income and wealth than college students (i.e., participants in Samples 1 and 2 – see Table 1); these differences in absolute income and wealth were linked to higher levels of financial security for the two adult samples – that is, there was no differences in financial security when controlling for income and wealth, F (1, 1,364) = .734, p = .39. In addition, the only difference in life satisfaction across the groups was observed when comparing Sample 3 to the other three samples. Thus, even though the adult sample recruited through social networks was older, more geographically diverse, more financially secure, and had more household income and wealth compared to the two college samples, they were not significantly more satisfied with their lives (again see Table 1). This result supports the past five decades of social research which has demonstrated that having more money does not necessarily guarantee that one is happier and not having money does not mean one is constantly dejected; therefore in the next section we test a mediation model where individuals, compared with persons of similar ages and life circumstances, with higher standardized economic standing? (SES) will experience financial security, and ultimately, greater life satisfaction.

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Correlations among Economic and Well-Being Variables

We next examined the relationships among life satisfaction, financial security, and the economic variables within each sample, and then computed the weighted meta-analytically

combined correlations across the four samples (see Table 2). The pattern of correlations was consistent across all four samples: life satisfaction was positively correlated with financial security and the economic variables. Subsequently, we examined the inter-correlations between the economic variables. Income-wealth was negatively correlated with debt for Samples 2 (r = -.30, p < .005), 3 (r = -.30, p < .005), and 4 (r = -.21, p < .001).

Predicting Life Satisfaction from Economic Indicators

We tested a model predicting that increases to economic standing would increase life satisfaction through financial security (see Figure 1). This model extends need theory (that money leads to increased well-being through satisfaction of basic physiological needs) by proposing a mechanism through higher-order need satisfaction.

To test for mediation, Preacher and Leonardelli's (2001) four-stage criteria were applied. The first criterion (economic standing must have a significant zero-order path to life satisfaction) was tested in the first step of a hierarchical regression (see the zero-order link in Figure 1). In the second step of the hierarchical regression we tested: (a) the second criterion (economic standing must have a significant path to financial security; see Path B in Figure 1); (b) the third criterion (financial security must predict life satisfaction when controlling for economic standing; see Path C in Figure 1) and (c) the fourth criterion (the relation between economic standing and life satisfaction must shrink with the addition of financial security to the regression model; compare the zero-order link to Path A, both in Figure 1). The Sobel procedure was used to test for the statistical significance of the indirect path (criterion 4). A Z-score greater than 1.96 indicates the indirect path is significant at the p=.05 level. The magnitude of the path is examined as well. To examine the percent change in the direct path due to the mediator, total reduction effect (or

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percentage change in effect size) was computed according to Kenny, Kashy, and Bolger's (1998) procedure.

All testing results are shown in Table 3. When testing the first criterion, all four samples demonstrated a significant path from economic standing to life satisfaction. The second criterion was satisfied in all four samples as well. However, the third criterion was met only for Samples 2, 3, and 4, indicating that financial security did not mediate the relation between economic standing and life satisfaction for non-employed young college students. The fourth criterion was also met only for Samples 2, 3, and 4: (a) Path A was not significant in any of these models, (b) the Sobel Z-score was significant in all models ($Z > 1.96$), and (c) the percent reduction in effect size for the economic standing–life satisfaction link exceeded 50% for all samples, and exceeded 85% for the two non-student adult samples.

Because all four samples answered the same questions, and the mediation model was supported for the three older samples, we combined the data from the four studies in order to estimate the path coefficients for adults over the age of 24. In these older adults (n = 1,284), results indicate that as economic standing rises, so does individual financial security ($\beta = .65$, $p < .001$), which in turn increases overall life satisfaction ($\beta = .48$, $p < .001$), and finally the inclusion of financial security into the model reduces the relation between economic standing and life satisfaction ($\beta = .06$, *ns* when controlling for financial security). Therefore, this model also demonstrates a very large effect size in the mediational model (an 84% reduction in the direct link between economic standing and life satisfaction, in the predicted pattern). We also used these participants to rule out the possibility that the financial security was caused by life satisfaction (i.e., a reverse causal effect). In this mediation model we tested the possibility that economic standing predicted increased life satisfaction which then led to increased financial

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security. However, this model did not meet the four criteria for mediation. Specifically, while economic standing predicts increased life satisfaction ($\beta = .36$, $p < .001$) and life satisfaction has a significant impact on financial security ($\beta = .31$, $p < .001$), the relationship between economic standing and financial security was not attenuated significantly ($\beta = .54$, $p < .001$) in this model. These results rule out the possibility of a reverse causal effect.

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The Impact of Financial Security and Psychological Need Satisfaction on Life Satisfaction

The above four models demonstrate that financial security is very likely one, of possibility many, indirect paths by which economic standing may impact life satisfaction. However, demonstrating that a reverse causal effect is not supported does not eliminate the possibility that a spurious relationship is affecting the test of mediation; that is, a third variable (e.g., psychological need satisfaction) may cause both increased financial security and life satisfaction. Howell and Howell (2008) suggested that economic standing should affect well-being if economic choices are used to satisfy current needs, where those needs are basic in poverty and higher-order in affluence. For this reason, using the data from Sample 4, we examined the strength of two indirect paths: (a) through financial security and (b) through psychological need satisfaction. Path analysis was used to determine the direct and indirect effects (through financial security and psychological need satisfaction) of economic standing on life satisfaction. The path coefficients for the model are shown in Figure 2 (all path coefficients are significant at $p < .001$).

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First, financial security and psychological need satisfaction were positively correlated ($r = .25$). For this reason we correlated the error terms for the two variables in order to improve the model fit. Second, in this path model, economic standing does not have a direct effect on life satisfaction; that is, the path is constrained to be zero and the entire impact that economic

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standing has on life satisfaction is mediated by both financial security and psychological needs satisfaction. Third, the indirect paths from economic standing to life satisfaction through financial security and psychological need satisfaction were both significant ($Z = 12.62$ and $Z = 7.63$, respectively). However, even though both financial security and psychological need satisfaction mediated the relation between economic standing and life satisfaction, the strength of these indirect paths differed; financial security reduced the direct effect between economic standing and life satisfaction by 66% while psychological need satisfaction reduced the direct effect by 34%.

Discussion

Many past studies examining the link between money and SWB have framed their findings around need theory, yet few, if any, have used mediation models to directly test the claim that money only improves SWB in poverty. Also, current research is beginning to demonstrate that spending choices, as oppose to absolute income, affect individual's well-being. Van Boven and Gilovich (2003) first demonstrated that spending one's discretionary income on life experiences, as opposed to buying material objects, leads to increased well-being and this finding has been replicated twice since (see Howell & Hill, 2009; Nicolao, Irwin, & Goodman, 2009). In the current study we examined an extension of need theory by testing a mediation model where economic standing (increased income and wealth as well as decreased debt) should lead to greater financial security (a safety need) which should increase life satisfaction. Then in a path model, we extended this mediation model by examining the degree to which both financial security and psychological need satisfaction mediate the economic standing-life satisfaction relation.

For the younger and non-employed college student sample, there was a strong relationship between economic standing and life satisfaction, but financial security was not the mediator. However, the mediation models for the three older samples provided support for our prediction that the connection between economic standing and life satisfaction is mediated by financial security. More importantly, when using data collected from adults across the United States, Canada, and the United Kingdom. our path model demonstrated that both financial security and psychological need satisfaction mediated the path between economic standing and life satisfaction – though, financial security was the stronger mediator. Consequently, even though increased wealth and decreased debt lead to financial security and psychological need satisfaction, it is the impact economic standing has on financial security that mostly predicts the increase in life satisfaction. Thus, we corroborate previous work by Michalos and others (Michalos et al. 2000, 2005) that considered financial security as one life domain which influences a person's subjective evaluation of their life, and also extend this work by examining financial security as a mediator of the relation between income and SWB explicitly after controlling for psychological needs. Finally, the correlational analyses conducted across the four diverse samples supported Headey, Muffels, and Wooden's (2008) suggestion that combining multiple measures of income, wealth, and debt strengthen the correlation between money and SWB. We demonstrated that the relationship between money and subjective well-being is much stronger when using multiple financial measures to create an index of economic standing, a departure from the traditional use of absolute income as the sole predictor of this relationship.

How do these results extend need theory? Although the results of past correlational studies support the basic tenets of need theory, most of these previous studies have not attempted any testing of the causal links predicted by need theory – that increasing incomes of individuals

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will affect SWB via the satisfaction of needs. Also, past studies emphasized only one level of need satisfaction (basic physiological needs) at the exclusion of all other higher-order needs (e.g., financial security, relatedness satisfaction). We provide evidence that the relationship between having money and experiencing well-being is mediated most strongly by financial security, a safety need of Maslow's hierarchy, as well as higher-order psychological needs (i.e., autonomy, competence, and relatedness). Based on our findings, we propose that the emphasis of future research not be placed on *if* money can buy life satisfaction or SWB, but *when.* Of course, this may be a factor that is specific to developed countries where the issue of food and shelter are less of a threat to personal well-being; however, we clearly show that financial security is at least one path through which money increases life satisfaction – and likely the strongest.

Why are these correlational results different from past work? The correlations between life satisfaction and economic standing were stronger than those typically found between single item measures of income and subjective well-being in Western countries (see Cummins, 2000; Diener, Sandvik, Seidlitz, & Diener, 1993; Diener & Oishi, 2000; Headey et al., 2008). The difference may result from the omission of other important economic indicators in past studies. How one's financial situation or economic standing is measured (e.g., as household income, personal income, per capita income, household index, household expenditures) may be critical to understanding the relationship between one's financial situation and SWB – as not all economic indicators are equally efficient at explaining variance in SWB. Further, Headey et al. (2008) reported inter-correlations between various economic indicators (i.e., wealth, income, and consumption) and found that they were weaker than the typical inter-correlations found between various measures of SWB – indicating that measurement of multiple economic variables is necessary to fully understand one's economic standing.

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Taken together, our four samples provide strong support for the hypothesis that economic standing, when measured as an index of increased income and wealth and decreased debt, is strongly correlated with life satisfaction – explaining approximately 10% of the variance in satisfaction with life. In other words, a significant component of life satisfaction is affected by one's overall financial status and decisions, not just by their income alone. This finding suggests that results from studies relying on absolute income as the sole indicator of a person's economic standing should be interpreted with caution. We encourage future studies to measure economic standing with a multi-dimensional assessment of financial status, which includes not just income and savings, but also debt. Also, given that the data for the present research was collected during tough economic times in the United States, it is possible that the context influenced participant self-reports; however, a tough economy affects people at all levels of affluence. Therefore, the economy was considered a consistent factor across all of our samples and would not have influenced the mediational model we tested. With this in mind, future studies should examine the economic standing and well-being link in relation to the global economic climate to gain external validity. We feel that the findings presented are robust to this concern. An additional consideration may be that the findings are limited to an American population and therefore could be limited in cross-cultural generalizability. Researchers should seek to replicate our findings in other countries at various stages of economic development.

Conclusion

These finding are only the first step toward a more general reconceptualization of the income-life satisfaction relationship in terms of needs theory. If we are to better understand the complex relationship between money and well-being, and provide more stringent examinations of need theory, research must begin to explore models where *psychological* need satisfaction is

examined as a mediator of an individual's financial situation and his or her well-being. Findings from the current study provide provocative evidence that money can buy satisfaction through increased financial security and psychological need satisfaction. Thus, social researchers must begin to examine the mediating role of this and other higher-order needs as pathways through which money can buy well-being.

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Table 1

Descriptive Statistics of Life Satisfaction, Financial Security, Income and Wealth, and Debt for Samples

	Satisfaction with Life	Financial Security	Income and Wealth	Credit Card Debt
Test of significant difference	F (3, 1433) = 17.46, p < .001	F (3, 1386) = 20.55, p < .001	F (3, 1415) = 46.87, p < .001	F (3, 1403) = 2.55, p = .09
Sample 1: Non-employed students (n = 82)	4.35_b (1.40)	5.19_b (2.04)	$-.48_c$ (.63)	-.09 (1.00)
Sample 2: Older than typical college (n = 139)	4.30_b (1.32)	4.99_b (1.96)	$-.14_b$ (.74)	.11 (.97)
Sample 3: Adults - snowball sampling (n = 137)	5.29_a (1.15)	6.44_a (2.14)	$.45_a$ (.78)	-.06 (.85)
Sample 4: Adults - social networking sites (n = 1,074)	4.33_b (1.53)	6.15_a (1.98)	$.41_a$ (.84)	.14 (1.12)

Note. The standard deviations of are reported in parentheses. Income and wealth are the standardized average of household income, amount in savings, and amount in investment. Credit card debt is the standardized average of the number of credit cards which have carried half the available balance and the maximum of the available balance. Means with significant differences have different subscripts.

Table 2

Correlations between Life Satisfaction and Economic Variables for All Four Samples

Group	Financial security	Economic standing	Income-wealth	Debt
Sample 1: Non-employed students				
SWLS	.35**	.40**	.30**	-.33**
Sample 2: Older than typical college				
SWLS	.41**	.35**	.30**	-.26**
Sample 3: Adults - snowball sampling				
SWLS	.56**	.39**	.44**	-.19*
Sample 4: Adults - social networking sites				
SWLS	.51**	.36**	.37**	-.11*
Weighted meta-analytic average	.49	.36	.35	-.14

Note. The correlation between income-wealth and debt was: -.22, *ns* (for Sample 1); -.21, $p < .05$ (for Sample 2); -.30 (for Sample 3), $p < .01$; - .21 (for Sample 4) $p < .001$. All meta-analytic correlations are significant at $p < .001$.

$^{*}p < .05$ $^{**}p < .01$

Table 3

Testing Mediation of the Link between Economic Standing and Life Satisfaction through Financial Security.

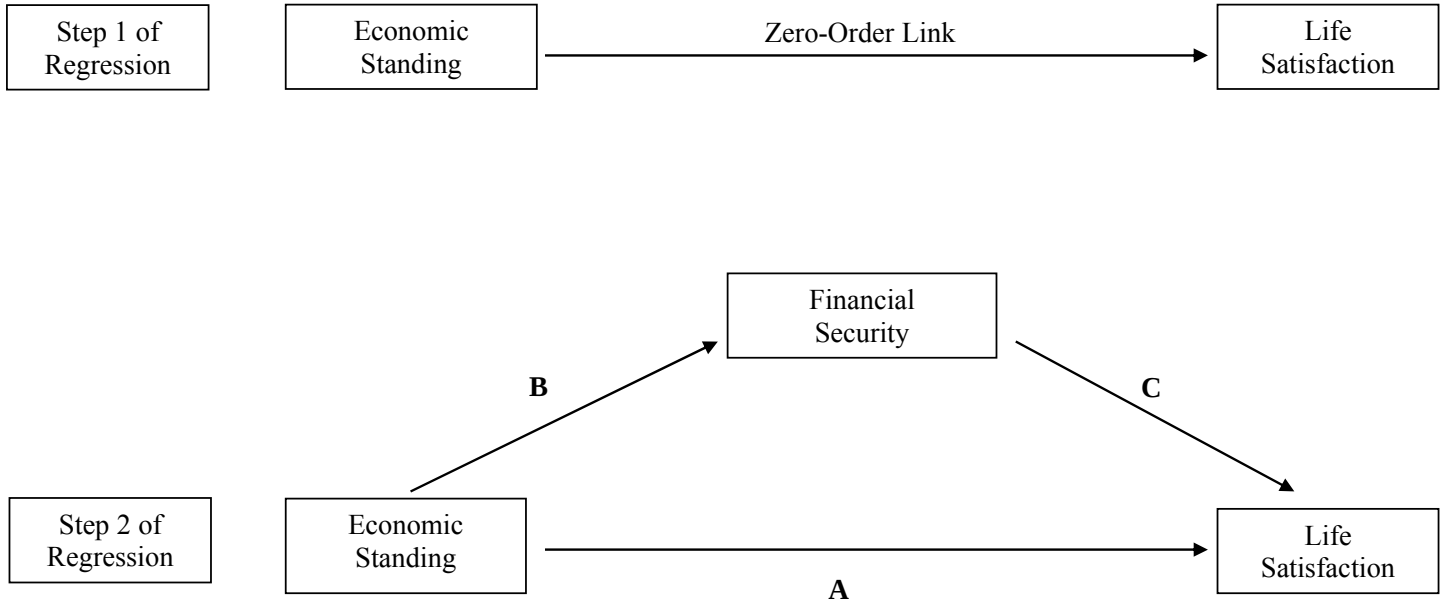
	Zero-order link	Standardized paths			Reduction in zero-order link	
		Path A	Path B	Path C	%Δ	Sobel Z-score
Sample						
Sample 1: Non-employed students	.40**	.30*	.56**	.18	25	1.41
Sample 2: Older than typical college	.35**	.17	.61**	.30**	52	2.91
Sample 3: Adults - snowball sampling	.39**	.04	.66**	.54**	91	4.92
Sample 4: Adults - social networking sites	.36**	.05	.64**	.48**	87	12.27

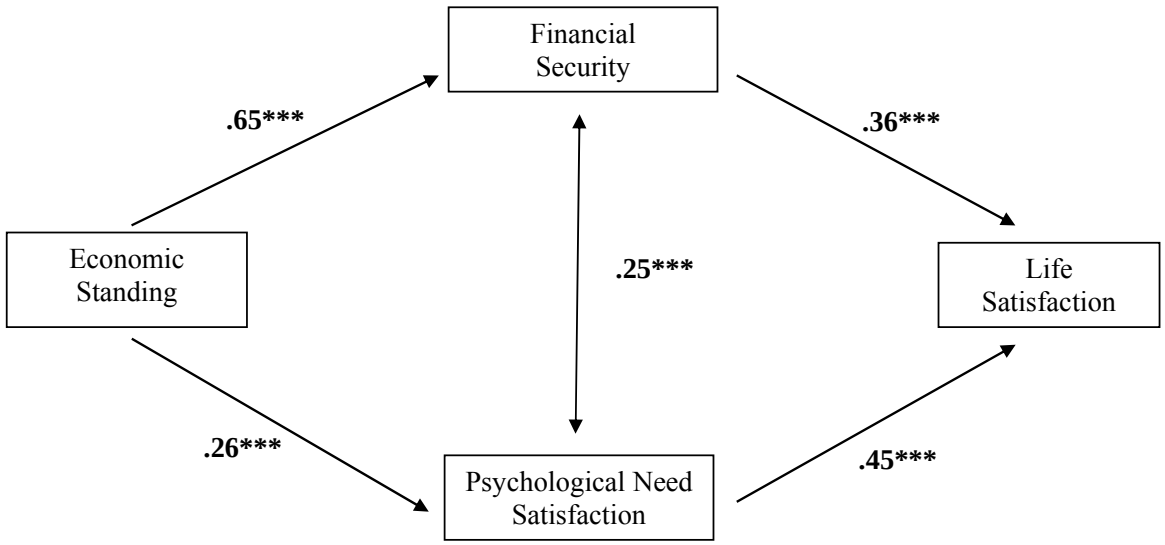
Note. Mediation effect is supported when: (a) zero-order link is significant, (b) paths B and C are significant, (c) path A is not significant, and (d) Sobel Z-test is significant (Z > 1.96). The percentage of reduction in the direct relation between trait and happiness is given by %Δ*direct link* = *bc/zero-order* (Kenny et al., 1998). The VIF for each model above was less than 1.8 for the two predictors – and though there is no accepted value to indicate multicollinearity in a model, when values exceed 10 multicollinearity may be a cause for concern.

$^{*}p < .05$; $^{**}p < .01$;

Figure 1. The proposed mediational model of economic standing, financial security, and well-being.

Figure 2. The combined the data from the four studies (n = 1,020) for all adults over the age of 24. The regression coefficient in parentheses is the zero-order link.


Step 1 of Regression
Economic Standing
Zero-Order Link
Life Satisfaction
Financial Security
B
C
Step 2 of Regression
Economic Standing
Life Satisfaction
A


Financial Security
.65***
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Economic Standing
.25***
Life Satisfaction
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Psychological Need Satisfaction