

Perception vs Reality of Financial Situation: The Emotional Role of Locus of Control

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This study examines how locus of control and emotions influence the divergence in perception and reality of individuals' financial health. The findings show that comfortable emotions mediate the positive association between internal locus of control and perception-reality divergence, while uncomfortable emotions mediate the inverse effect. For individuals with a higher external locus of control, results show a negative relationship with comfortable emotions and a positive link with uncomfortable emotions. Although no direct relationship was found between external locus of control and the tendency to rate one's financial situation higher than it is objectively, emotions act as mediators, causing these individuals to perceive their financial situation as worse than objective measures suggest. These findings, which have implications for financial therapists, planners, and counselors, reveal how locus of control, emotional states, and other demographic characteristics interact in shaping financial perceptions, offering insights into psychological and financial decision-making processes.

Keywords: divergence in financial well-being measures; emotions; life-cycle hypothesis; locus of control

INTRODUCTION

When a patient goes to the physician's office for a consultation, the physician often asks them questions about their health and well-being. A patient's response would indicate how they perceive their health to be. After checking the patient's vitals, the physician can ascertain what the indicators of their health show. However, there is the possibility that the patient's perception of their health may not align with the indicators that the physician has observed. For example, the patient might say they are well, even when the indicators show otherwise, and vice versa. Like medical status, individuals' perceptions of their financial health and well-being may not align with objective indicators of their financial health and well-being. Netemeyer et al. (2018) explain that perceived financial well-being is a subjective assessment of an individual's financial situation and confidence in their ability to achieve future financial goals. Due to this subjective nature of perceived financial well-being, it may not align with objective indicators of financial well-being, indicating a possible divergence.

A potential mechanism contributing to this discrepancy in perceived and objective indicators of financial well-being is psychological factors –like locus of control and emotional states, which this current study explores. Locus of control, as introduced by Rotter (1966), is the degree of control to which an individual believes their life outcomes are a result of their actions (internal) or other factors like the actions of others, luck, or fate (external). Locus of control has been found in the literature to influence subjective well-being (Kesavayuth et al., 2022; Pu et al., 2017), perceived financial well-being (Sumarwan & Hira, 1993; Wan Nawang et al., 2024), and financial behavior (Britt-Lutter et al., 2013; Buccioli & Trucchi, 2021; Chujan et al., 2022), highlighting its significance in understanding financial behavior, financial well-being, and potentially the divergence in perceived and objective indicators of financial well-being.

Whether comfortable or uncomfortable, emotions could also explain the divergence in perception and reality of financial situations. Emotions involve physiological arousal, cognitive appraisals, and behavioral tendencies (Fredrickson, 2001; Gross, 2014; Lazarus, 1991). Essentially, emotions happen through interactions between internal evaluation (through cognition), bodily states, and situational contexts. These emotions influence perceived financial well-being and overall life satisfaction (Cohn et al., 2009; Fredrickson et al., 2008; Olajide et al., 2023). Based on Rotter's (1966) concept of locus of control, emotions can act as a bridge between locus of control and the divergence in perception and reality of financial situation by influencing how individuals process and interpret their financial situation. For individuals with an internal locus of control, while experiencing comfortable emotions might strengthen their confidence in their ability to influence their financial situation and possibly result in rating their financial situation higher than it is objectively, experiencing uncomfortable emotions might weaken this belief and cause them to rate their financial situation lower than it is objectively. In contrast, for individuals with an external locus of control, experiencing uncomfortable emotions might reinforce a lack of control over their financial outcomes and cause them to rate their financial situation even less than objective indicators suggest. However, comfortable emotions for individuals with an

external locus of control might challenge their belief in external factors controlling their financial outcomes and possibly cause them to rate their financial situation higher. The combined pathways explained point to a potential mediating role of emotions on the relationship between locus of control and the divergence in financial well-being measures and inform the research question this present study aims to answer.

Emotions can be broadly experienced as *comfortable* (e.g., joy, gratitude, pride) or *uncomfortable* (e.g., fear, shame, anxiety), and these valences play an important role in how individuals appraise and respond to financial circumstances. Recent research highlights that attitudes toward emotions, whether they are seen as controllable and useful or uncontrollable and disruptive, are critical predictors of emotion regulation success (Ford & Gross, 2019). Individuals who view emotions as manageable and meaningful are more likely to engage in adaptive strategies such as reappraisal. In contrast, those who see emotions as overwhelming or unhelpful tend to rely on avoidance or suppression, often with poorer outcomes (Petrova et al., 2024). Introducing the distinction between comfortable and uncomfortable emotions, therefore, underscores the importance of identifying how emotions influence perceptions of financial well-being and how beliefs about these emotions shape regulation efforts and subsequent financial decision-making.

Financial professionals like therapists, counselors, and planners working with clients could benefit from these evidence-based insights into how locus of control and emotions interact to influence financial well-being and discrepancies in how their clients may perceive their financial situation compared to objective indicators. These professionals can tailor interventions to help clients address cognitive biases and emotional barriers and offer more personalized and practical support. The findings from this study hold important implications for both individuals and financial professionals. They highlight how emotions and beliefs about control over financial outcomes can shape perceptions of financial well-being, sometimes diverging from objective indicators. Drawing on data from the Health and Retirement Study (HRS), we examine the associations between locus of control, emotions, and subjective assessments of financial status. Our results provide insight into how older adults perceive their financial positions in later-life, particularly those no longer in the labor force. This is a critical population, as their financial perceptions and behaviors are not only influenced by locus of control and emotional factors but also by perceived consumption needs (De Nardi et al., 2016; Hurd & Rohwedder, 2013). A misalignment between perceived and objective financial well-being may lead to either underestimation or overestimation of retirement resources, corresponding increases in financial anxiety (Lusardi & Mitchell, 2014; Poterba, 2014). Situating these findings within the framework of the Life Cycle Hypothesis (LCH), as postulated by Modigliani & Brumberg (1954), further underscores that discrepancies between perception and reality are shaped not only by psychological factors but also by stage-specific financial strategies and constraints.

CONCEPTUAL REVIEW AND HYPOTHESES DEVELOPMENT

The perceptions that one has about their financial situation and decision-making are often influenced by psychological factors. To understand the role of emotions in the relationship between locus of control and the divergence between perceived and objective financial situations, this study used Rotter's (1966) concept of locus of control and extant literature to explain how these divergences can occur.

Locus of Control, Financial Behaviors, and Financial Perception

Locus of control (LoC) refers to an individual's belief regarding the extent to which they can control events in their life (Rotter, 1966). There are two types of locus of control: internal and external. Internal locus of control is when a person feels they can shape and influence the outcomes in their life. Conversely, individuals with an external locus of control attribute outcomes to external forces such as luck or fate.

A personal finance study by Ng et al. (2006) shows that individuals with an internal locus of control, especially in the workplace, are more likely to exhibit self-regulated behaviors when it comes to financial decision-making. Similarly, Cobb-Clark (2015) found that people with an internal locus of control in the labor market tend to manage their finances effectively, experience greater job stability, and earn higher wages. These individuals are also more likely to experience higher financial literacy and better financial management practices, including saving (Cobb-Clark et al., 2016). On the other hand, people with an external locus of control are more likely to experience financial stress, poor financial planning, and increasing debt. Perry and Morris (2005) explain that these individuals are less inclined to seek financial education and tend to engage in impulsive spending, leading to higher financial stress and a lower sense of financial well-being. Results have shown that those who report an external locus of control are more likely to experience higher levels of financial stress and negative perceptions of their financial status due to feelings of helplessness (Prawitz et al., 2006).

As a concept, the use of locus of control is not new, and a few studies have used this conceptual framework to examine its association with one's financial behaviors (Grable et al., 2015; Norvilitis et al., 2003; Ullah & Yusheng, 2020). Additionally, findings show that locus of control is associated with one's financial and non-financial proclivities (Onkvisit & Shaw, 1987; Prawitz & Cohart, 2016; Shim et al., 2010;). However, these studies have not fully explored the emotional aspects of the relationship between locus of control and decision-making. Emotional states play a significant role in financial decisions (Fenton-O'Creevy et al., 2011; Lerner et al., 2015). However, in the personal finance field, studies have primarily examined the locus of control as a mediator to explain how individuals perceive their financial situations and have not thoroughly examined how comfortable and uncomfortable emotions mediate the link between locus of control and financial perceptions—limiting our understanding of its relationship with emotions and financial perception biases.

Furthermore, although studies have linked locus of control (internal and external) to financial behavior and decision-making (Cobb-Clark et al., 2016; Prawitz et al., 2006; Ullah & Yusheng, 2020) as earlier stated, prior studies have not sufficiently addressed how these misalignment in perceptions and reality of financial situations have emerged, or the role of locus of control as an important contributing factor through emotional states. This current study contributes to the literature on locus of control by showing that it not only influences financial behavior directly, but also the emotional and perceptual filters with which individuals interpret their financial reality. This is particularly important as individuals might make decisions like spending, debt management, retirement planning, or investment based on their perceptions of their financial health. These individuals may make misinformed decisions if their perception of their financial situation does not align with their financial reality.

The Role of Emotions in Financial Outcomes

When coupled with locus of control, emotions play a crucial role in one's financial behavior and decision-making (Lerner et al., 2015). Emotions can be classified into two categories: comfortable and uncomfortable. Comfortable emotions are the extent to which a person experiences pleasurable emotions such as joy, enthusiasm, and excitement (Watson et al., 1988). Higher levels of comfortable emotions are associated with energy, confidence, and optimism. These comfortable emotions can boost financial self-efficacy, often leading to more accurate, and sometimes optimistic, perceptions of financial well-being (Grable & Roszkowski, 2008; Lerner et al., 2013; Taylor & Brown, 1988). Conversely, uncomfortable emotions, such as fear, guilt, anger, and anxiety, can have a different effect. Common uncomfortable emotions, such as anxiety and stress, can lead to avoidance behaviors and distorted perceptions of financial situations (Gathergood, 2012). Financial inertia, risk aversion, and poor financial decision-making are all associated with uncomfortable emotions (Haushofer & Fehr, 2014; Loewenstein et al., 2001; Shapiro & Burchell, 2012).

Perceived versus Objective Financial Well-Being

Existing literature has shown that although objective financial well-being and perceived financial well-being are related, they are not the same. A study by Tenney and Kalenkoski (2019) investigated the association between objective financial well-being (operationalized through financial ratios) and perceived financial well-being (measured using financial satisfaction). Their study found a positive association between perceived financial well-being and two measures of objective financial well-being: investment and liquidity ratios. Garrett and James (2013) previously found similar results. Netemeyer et al.'s (2018) study also confirms these findings. Their study showed that perceived financial well-being is an individual's assessment of their current and future financial security, and it is shaped by emotions, expectations, and financial behavior, not just objective indicators like income, savings, or debt levels. More specifically, the findings by Netemeyer et al. (2018) highlight that how a person feels about their personal finances does not always align with how well-off they are financially, pointing to the need to test the influence of psychosocial factors like locus of control and emotions.

Demographic and Socioeconomic Factors

Aside from the aforementioned psychosocial factors, demographic and socioeconomic factors also influence financial well-being (perceived, objective, and divergence). For instance, age, being a man, and being married are positively associated with perceived and objective financial well-being (Hansen et al., 2008; Joo & Grable, 2004; Woodyard & Robb, 2016). Regarding the divergence in perceived and objective financial well-being, Olajide et al. (2023) showed that income, net worth, health status, being a man, being White, and being married are all associated with rating one's financial situation higher than it is objectively.

Locus of Control, Emotions, and Financial Perception-Reality Divergence

Cognitive behavioral theory (CBT), as explained by Beck (1976), further explains this interrelationship between locus of control, emotions, and financial perception bias. This theory explains that cognition drives emotions, which in turn influence behavior and how individuals interpret financial situations compared to what objective measures show.

In the personal finance and psychology literature, no study has shown a direct link between locus of control, emotions, and divergence in perceived and objective financial situations. However, studies have shown or created possible pathways to link these variables. Specifically, the relationship between locus of control and emotions (Fenton-O'Creevy et al., 2011), emotions and divergence in financial perception and reality (Lerner et al., 2015), as well as locus of control and misalignment in financial perceptions (Norvilitis et al., 2003), has been established. For example, Georgescu et al. (2019) found that individuals with an internal locus of control often experience higher self-efficacy, which fosters comfortable emotions and leads to optimistic perceptions (Chiang et al., 2019), including financial perceptions. However, when faced with financial difficulties, those with an internal locus of control may experience stress and self-blame, leading to underestimations of their financial situation (Rotter, 1990) or overestimations of their financial security (Lerner et al., 2015). In contrast, individuals with an external locus of control are more susceptible to uncomfortable emotions such as helplessness and anxiety, contributing to a greater divergence between perceived and actual financial status (Friedline & Freeman, 2016). These individuals may also experience unwarranted optimism, leading to overestimating their financial health (Sheehy-Skeffington & Rea, 2017).

This divergence between an individual's perception and the reality of their financial situation, health, or knowledge has practical consequences for financial behavior, making this study important. For instance, Balasubramnian and Sargent (2020), while examining the impact of inflated perceptions of financial literacy (rating one's financial literacy higher than it is objectively) on financial decision-making, found that this discrepancy can lead to sub-optimal financial behaviors like irresponsible debt behavior, inability to manage expenses well, under saving, and overtly increased risk-taking. Drawing from Balasubramnian and

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Sargent's (2020) study, not only can this inflated perception cause suboptimal financial decision-making, but an inflated perception of one's financial situation can also cause an individual to avoid necessary financial planning because they do not see a need for it, since they are satisfied with their situation. Those who underestimate their financial health might also face some challenges with financial decisions. These individuals may experience much financial stress or make overtly conservative choices like investing in only money market accounts or leaving all their money in a savings account out of fear because they perceive their financial health to be worse than it actually is. Their study highlights the consequences that misalignment in perception and reality can cause for individuals' financial decisions. It supports the need to understand factors that influence this discrepancy, including psychosocial factors like locus of control and emotional states that this study explores.

Furthermore, given that the sample for this current study consists of older adults either at the pre-retirement stage or even in retirement, this misalignment in financial perceptions and reality may have serious consequences for these individuals because of the stage they are in their life cycle. The life cycle hypothesis explains that individuals aim to maximize life satisfaction by smoothing consumption throughout their lifetime, subject to their income and resources (Modigliani, 1966). These individuals can do this by saving and accumulating assets while working, and decumulating these assets in retirement. Suppose these older individuals rate their financial situation less than it really is. In that case, it may cause anxiety and stress, which could, in turn, lead to aggressive saving just before retirement and overly conservative decumulation during retirement. For older individuals who believe they are doing better than financial indicators show, it could cause overspending or inadequate preparation for longevity risk.

These previous findings suggest a possible interrelationship between locus of control, emotions, and a divergence in the perception and reality of individuals' financial situation. This is a gap this study seeks to fill. Given Rotter's (1966) concept of locus of control and the extensive literature reviewed, this study tests the following hypotheses:

- H1:** Internal locus of control is positively associated with comfortable emotions.
- H2:** Internal locus of control is negatively associated with uncomfortable emotions.
- H3:** External locus of control is negatively associated with comfortable emotions.
- H4:** External locus of control is positively associated with uncomfortable emotions.

Direct Effects with Divergence in Perception and Reality of Financial Situation

H5: A belief in internal factors controlling one's life outcomes is positively related to rating one's financial situation higher than it is objectively.

H6: A belief in external factors controlling one's life outcomes is negatively related to rating one's financial situation higher than it is objectively.

H7: Comfortable emotions are positively related to rating one's financial situation higher than it is objectively.

H8: Uncomfortable emotions are negatively related to rating one's financial situation higher than it is objectively.

Mediating Effects

H9: Comfortable emotions mediate a positive association between internal locus of control and the divergence in perception and reality of one's financial situation.

H10: Comfortable emotions mediate a negative association between external locus of control and the divergence in perception and reality of one's financial situation.

H11: Uncomfortable emotions mediate a negative association between internal locus of control and the divergence in perception and reality of one's financial situation.

H12: Uncomfortable emotions mediate a negative association between external locus of control and the divergence in perception and reality of one's financial situation.

METHODOLOGY**Data and Sample**

This study uses data from the 2020 wave of the Health and Retirement Study (HRS). The Health and Retirement Study (HRS) is a nationally representative biennial survey of U.S. adults aged 50 and older, sponsored by the National Institute on Aging and conducted by the University of Michigan. It collects extensive information on health, finances, demographics, and psychosocial factors, with oversamples of minority and older populations to ensure representativeness. In addition to the main Core interview, a rotating subset of respondents complete the Leave-Behind (LB) Psychosocial and Lifestyle Questionnaire, a self-administered module that includes measures of locus of control, affect, and financial satisfaction. To link psychosocial and financial information, we merged the 2020 HRS Core/LB files with the RAND HRS Fat File 2020 and the RAND Longitudinal File, using the household and person identifiers (HHID and PN, combined as hhidpn) that are consistent across datasets. After recording financial satisfaction and dropping missing values, 4,161

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cases remained. Excluding respondents with missing values on the three calculated financial ratios (liquidity, investment, debt-to-asset) reduced the sample to 3,946. Adding demographic and socioeconomic covariates (age, gender, race, education, marital status, health, retirement status, income, and net worth) resulted in a final analytic sample of 3,658 respondents. Full Information Maximum Likelihood (FIML) was used to handle scattered item-level missing data among respondents.

Measurement

Model

This study uses a two-step regression model. In Step 1, financial satisfaction (a measure of perceived financial situation) is the dependent variable, while financial ratios (a measure of objective financial situation) are the explanatory variables. The three financial ratios included in this study are liquidity, investment, and debt-to-asset ratios. Using the “SURE” package in R, the surrogate residuals from this first regression are extracted to represent the divergence in subjective and objective financial well-being.

Based on the ordinal nature of financial satisfaction, the following ordered probit model is estimated in the first step of the regression:

$$FS_i^* = \beta_0 + \beta X_i + \varepsilon$$

$$FS_i = 1 \text{ if } FS_i^* \leq \mu_1 \text{ (not at all satisfied)}$$

$$FS_i = 2 \text{ if } \mu_1 < FS_i^* \leq \mu_2$$

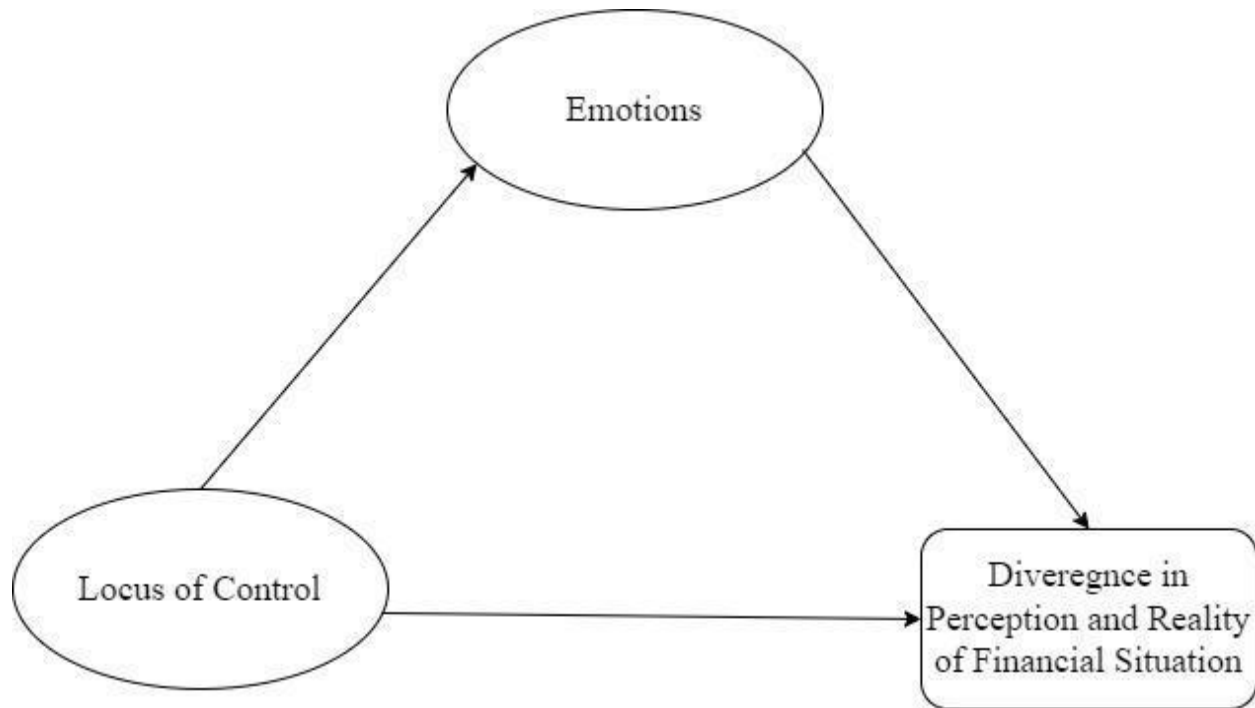
$$FS_i = 3 \text{ if } \mu_2 < FS_i^* \leq \mu_3$$

$$FS_i = 4 \text{ if } \mu_3 < FS_i^* \leq \mu_4$$

$$FS_{it} = 5 \text{ if } \mu_4 < FS_{it}^* \text{ (completely satisfied)}$$

where FS_i^* is a latent measure of the financial satisfaction of an individual i , and FS_i is the observed financial satisfaction of consumer i . β is a vector of coefficients showing the relation between the financial ratios and the latent variable, and X_i is a matrix of the independent variables representing liquidity, investment, and debt to asset ratios.

Four Structural Equation Models (SEMs) are estimated using the Lavaan package in R to examine the mediating role of emotions (comfortable and uncomfortable) in the relationship between locus of control (internal and external) and the divergence in perceived and objective financial well-being in Step 2. In this second step, the outcome variable is the divergence in perceived and objective financial situation, as measured by the surrogate residuals from Step 1. External and internal locus of controls are the main explanatory variables, with comfortable and uncomfortable emotions as the mediators. To estimate the significance of the indirect effects, bootstrapping is employed with 1000 iterations. Covariates included in the model include gender, age, ethnicity, education level, marital status, health status, retirement status, household income, and net worth. The estimated mediation model is presented in Figure 1.

Figure 1*Estimated Partial Mediation Model*

Note. Emotions include uncomfortable and comfortable. Locus of control includes internal and external locus of control.

The hypothesized model was a partial mediation model, including direct paths from internal and external locus of control to perception-reality divergence and indirect paths through comfortable and uncomfortable emotions.

Outcome Variable

The dependent variable in the initial stage of the regression is financial satisfaction. Financial satisfaction is used to represent perceived financial situation, and is measured based on the response to the following question: “How satisfied are you with your present financial situation?” Responses ranged from 1 (completely satisfied) to 5 (not at all satisfied) and were reverse-coded so that 1 indicates “not at all satisfied” and 5 indicates “completely satisfied.” The surrogate residuals derived from Step 1 measure the divergence in perceived and objective financial situations in Step 2. This variable is continuous and serves as the outcome variable in the second step of the regression.

Explanatory Variables

Financial Ratios. In the initial step of the two-step regression, three financial ratios are employed as the explanatory variables to evaluate consumers' objective financial situation. These ratios were selected based on previous empirical work by DeVaney (1993), who posited that three primary financial ratios are key to individuals' well-being: liquidity, solvency, and investment ratios. These ratios have also been used and validated by Garrett and James (2013) and Tenney and Kalenkoski (2019), who used these ratios to test older Americans' financial well-being using the HRS dataset. Based on this premise, the ratios included in the model are liquidity, investment, and debt-to-asset, with detailed information about how each ratio is calculated provided in Table 1.

Table 1

Financial Ratios Breakdown

Ratio	Formula	Information Used
Liquidity	Liquid assets / income	Checking, savings, and money market accounts; CDs; savings bonds; Treasury bills; total household income
Investment	Investment assets / total assets	Equities, investment trusts, IRAs, Keogh accounts, bonds, and bond funds; total assets
Debt-to-Asset	Debts / assets	Mortgages, credit cards, medical, and other debt; assets

Locus of Controls. Locus of control, which includes internal and external locus of control, serves as the main explanatory variable in the second step of the regression model and is operationalized as two different constructs in the model. Internal and external locus of control variables measure an individual's perception of control over life events through a set of statements with answers ranging from strongly disagree (1) to strongly agree (3). Internal locus of control (mastery) captures the belief in personal autonomy and the ability to influence outcomes. It is assessed using five statements: (1) "I can do just about anything I really set my mind to," (2) "When I really want to do something, I usually find a way to succeed at it," (3) "Whether or not I am able to get what I want is in my own hands," (4) "My future depends on me," and (5) "I do the things I want to do." These statements form the indicators for the internal locus of control construct. External locus of control reflects the belief that outside forces dictate life circumstances, and is also measured through five statements: (1) "I often feel helpless in dealing with problems in life," (2) "Other people determine most of what I can and cannot do," (3) "What happens in my life is often beyond my control," (4) "I have little control over things," and (5) "There is no way I can solve my

problems." External locus of control is also operationalized as a latent construct with the aforementioned statements as indicators.

Mediators

Comfortable and uncomfortable emotions are the mediators in the second step of the regression and are measured as two different multi-item latent constructs in the model. Uncomfortable emotions contained 13 indicators, while comfortable emotions comprised 12 indicators derived from the Positive and Negative Affect Schedule Expanded Form (PANAS_X) (Watson & Clark, 1994). Specifically, respondents were asked to rank on a scale of 1 (very much) to 5 (not at all) to what degree 25 adjectives described their emotions: 13 comfortable emotions (joyful, enthusiastic, content, proud, energetic, peaceful, inspired, grateful, hopeful, excited, cheerful, confident, and loving) and 12 uncomfortable emotions (sad, anxious, frustrated, guilty, ashamed, irritated, lonely, hopeless, depressed, stressed, angry, and fatigued).

The ranking of the emotions was reverse-coded to where 1 represents "not at all" and 5 represents "very much," allowing for a more precise measurement of agreement with each emotion, where higher values reflected stronger levels of the emotion. While constructing two latent variables for uncomfortable and comfortable emotions, this study applied parceling to reduce the number of measurement items (Little, 2024). Parceling was conducted using the balanced method since this approach provided the best model fit and parameter estimates and is recommended for constructs with more indicators (Weijters & Baumgartner, 2022). In this approach, items with the highest and lowest factor loadings were paired to create parcels with comparable average loadings, which improved reliability and model stability. In this study, the parceling procedure was implemented in two stages. In the first stage, we used factor loadings to create preliminary groups of comfortable and uncomfortable affect items, pairing the lowest-loading items with the highest-loading items. In the second stage, we balanced these preliminary groups by again pairing groups with the highest and lowest loadings. This two-step process ensured that each final parcel contained a mix of higher and lower-loading indicators, resulting in three balanced parcels for comfortable affect and three balanced parcels for uncomfortable affect (see Table 2).

Table 2

Big Five Personality, Adjectives, and Parcels

Emotions	Adjectives	Parcels
Comfortable Emotions	Enthusiastic, inspired, interested, hopeful, excited, proud, content, happy, active, determined, attentive, alert, calm	Parcel 1: enthusiastic, calm, interested, and attentive Parcel 2: excited, active, proud, happy, and content Parcel 3: hopeful, determined, inspired, and alert
Uncomfortable Emotions	Nervous, distressed, sad, frustrated, upset, scared, afraid, jittery, bored, hostile, guilty, ashamed	Parcel 1: upset, jittery, nervous, and ashamed Parcel 2: frustrated, bored, distressed, and guilty Parcel 3: scared, afraid, sad, and hostile

Covariates. This model incorporates several demographic variables: age, retirement status, education level, marital status, gender, race, household income, net worth, and health status. Age is treated as a continuous variable. Retirement status is a dummy variable, where 1 indicates retired individuals and 0 represents those not retired. Education level is categorized into two groups: those with a college degree and those without, with the latter coded as 0. Marital status is accounted for by assigning 1 to married or partnered individuals and 0 otherwise. Gender is represented by a dummy variable, with men coded as 1 and women as 0. Race is also dichotomized, taking a value of 1 for White individuals and 0 for Black/African American, Hispanic, or Other. Household income is a continuous variable encompassing earnings, pension and annuity payments, Social Security and disability benefits, unemployment and workers' compensation, and other government transfers from the previous year. Net worth is determined by subtracting total debts, including mortgages, home equity loans, and other non-mortgage debts, from total wealth, which comprises assets such as real estate, vehicles, businesses, retirement accounts, stocks, mutual funds, bonds, certificates of deposit, treasury bills, and savings accounts. Health status is measured as a categorical variable, where respondents rate their perceived health on a scale from 1 (poor) to 5 (excellent), with poor health as the reference category.

RESULTS

Descriptive Statistics

The descriptive statistics for the sample are presented in Tables 3 and 4. This sample has a higher proportion of women (57.7%) than men (42.3%). The sample is mainly White (74.7%), while the remaining 25.3% are Black/African American, Hispanic, or belong to other racial groups. Most participants are married (63.4%) and do not have a college degree (68.6%). Additionally, a large share of the sample is retired (72.4%), indicating that the population predominantly consists of older individuals who are no longer active in the workforce.

On average, respondents report a moderate level of financial satisfaction ($M = 3.582/5$), suggesting that while some respondents may feel secure, others experience financial concerns. The mean liquidity ratio (1.093) and debt-to-asset ratio (0.702) on a scale from 0 to 1 show the variations in financial stability across the sample. However, the investment ratio averages 0.258, indicating that respondents have a lower proportion of their assets in investments.

Regarding emotion parcels, most respondents experience high levels of comfortable emotions, ranging from 3.514 to 3.647 for the three parcels. In contrast, the parcels for uncomfortable emotions have lower means, ranging from 1.654 to 1.931 on a 5-point scale. This suggests that most respondents experience more comfortable emotions, such as happiness and pride, than uncomfortable emotions, like sadness or frustration.

Locus of control is divided into internal and external control measures. Respondents tend to report higher internal control, with means ranging from 2.554 to 2.675, compared to external controls, with means ranging from 1.266 to 1.421 on a scale from 1 to 3. This indicates that most respondents feel they control their circumstances rather than outside forces influencing their life outcomes.

Regarding health status, respondents generally report good health ($M = 3.224/5$), aligning with their average age of 70.245. The average income of the sample is \$84,200, and the average net worth of the sample is \$697,320. Surrogate residuals reflect the divergence in perception and reality of the respondents' financial situation, with a mean of 3.381, indicating that respondents generally perceive their financial situation more positively than their real financial ratios suggest.

Table 3

Descriptive Statistics of Categorical Variables

Variables	Proportion of the Sample	Standard Error
Gender		
Men	0.577	0.008
Women	0.423	0.008
Race		
White	0.253	0.007
Black/African American, Hispanic, and Other	0.747	0.007
Marital Status		
Married	0.365	0.008
Single	0.634	0.008
Education		
No College Degree	0.686	0.008
College Degree	0.314	0.008
Retirement Status		
Not Retired	0.275	0.007
Retired	0.724	0.007

Note. $N = 3,658$ observations

Table 4*Descriptive Statistics of Continuous and Ordinal Variables*

Variable	Mean	Standard Error
Financial Satisfaction	3.582	0.017
Liquidity Ratio	1.093	0.119
Investment Ratio	0.258	0.004
Debt to Asset Ratio	0.702	0.081
Comfortable Emotions 1	3.647	0.014
Comfortable Emotions 2	3.514	0.015
Comfortable Emotions 3	3.606	0.015
Uncomfortable Emotions 1	1.698	0.011
Uncomfortable Emotions 2	1.931	0.012
Uncomfortable Emotions 3	1.654	0.012
External Control 1	1.414	0.011
External Control 2	1.290	0.010
External Control 3	1.421	0.011
External Control 4	1.340	0.010
External Control 5	1.266	0.009
Internal Control 1	2.620	0.011
Internal Control 2	2.675	0.010
Internal Control 3	2.554	0.011
Internal Control 4	2.607	0.011
Internal Control 5	2.588	0.011
Health Status	3.224	0.016
Age	70.245	0.160
Income (\$10,000)	8.420	0.199
Net Worth (\$10,000)	69.732	2.211
Surrogate Residuals	3.381	0.030

Note. $N = 3,658$ observations

Structural Model Results

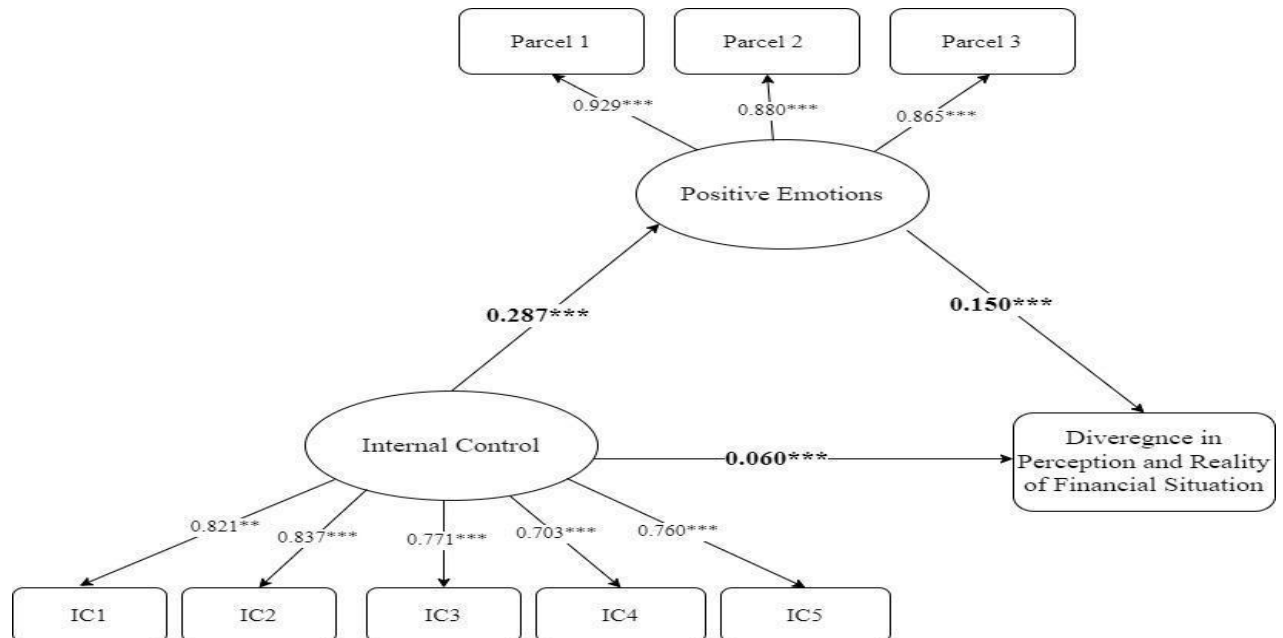
The structural mediation model results testing the relationship between locus of control, emotions, and divergence in perception and reality of financial well-being are presented in Figures 2, 3, 4, 5, and Table 5. Significant and positive loadings above 0.30 were observed for all the models examined, reflecting that the indicator items reliably measured the constructs (Brown, 2015). The fit indices, such as the CFI = 0.918, TLI = 0.907, RMSEA = 0.057, and SRMR = 0.075, reflect an acceptable fit to the data (Little, 2024).

Figures 2 and 3 show evidence supporting H₁, H₂, H₅, H₇, H₈, H₉, and H₁₁. The results indicate that having a higher internal locus of control is associated positively with experiencing more comfortable emotions ($\beta = 0.287, p < .001$), rating their financial situation higher than their objective financial indicators suggest ($\beta = 0.060, p < .001$), and associated negatively with experiencing uncomfortable emotions ($\beta = -0.186, p < .001$), thereby supporting Hypotheses 1, 2, and 5. Also, as hypothesized, while comfortable emotional states are positively related to a higher divergence ($\beta = 0.150, p < .001$), uncomfortable emotional states are negatively associated with a higher divergence ($\beta = -0.160, p < .001$). These findings suggest that individuals who experience more comfortable emotions tend to rate their financial well-being higher than what objective financial indicators suggest. In contrast, those who experience greater uncomfortable emotions tend to perceive their financial situation as less than objective measures indicate.

Turning to the mediating effects of emotions (comfortable and uncomfortable) on the relationship between internal locus of control and the divergence in perceived and objective financial health, results show that while comfortable emotions mediate a positive association between internal locus of control and the divergence in the perception and reality of the financial situation of the respondents, uncomfortable emotions mediate a negative association among these variables. These results explain that individuals who have a stronger belief that they are in control of their life outcomes are more likely to experience comfortable emotions, and in turn, rate their financial situation higher than it is objectively. Conversely, individuals with a higher internal locus of control are less likely to experience uncomfortable emotions, and as a result, are less likely to rate their financial situation better than it is objectively.

Figure 2

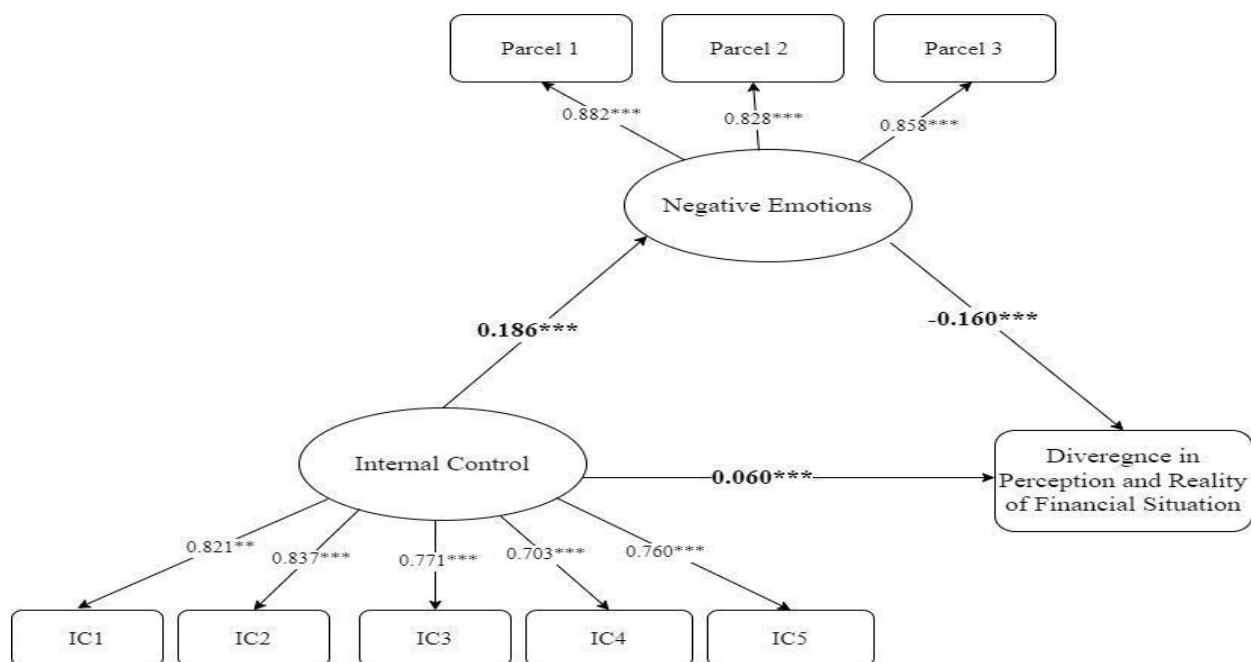
Structural Model Showing the Mediation Paths for Internal Locus of Control, Comfortable Emotions, and the Divergence in the Perception and Reality of Financial Situation



Note. Standardized results are provided. Model fit: RMSEA = 0.057, SRMR = 0.075, CFI = 0.918, TLI = 0.907. *** $p < .001$; ** $p < .01$; * $p < .05$. $N = 3,658$.

Figure 3

Structural Model Showing the Mediation Paths for Internal Locus of Control, Uncomfortable Emotions, and the Divergence in the Perception and Reality of their Financial Situation



Note. Standardized results are provided. Model fit: RMSEA = 0.057, SRMR = 0.075, CFI = 0.918, TLI = 0.907. *** $p < .001$; ** $p < .01$; * $p < .05$. $N = 3,658$.

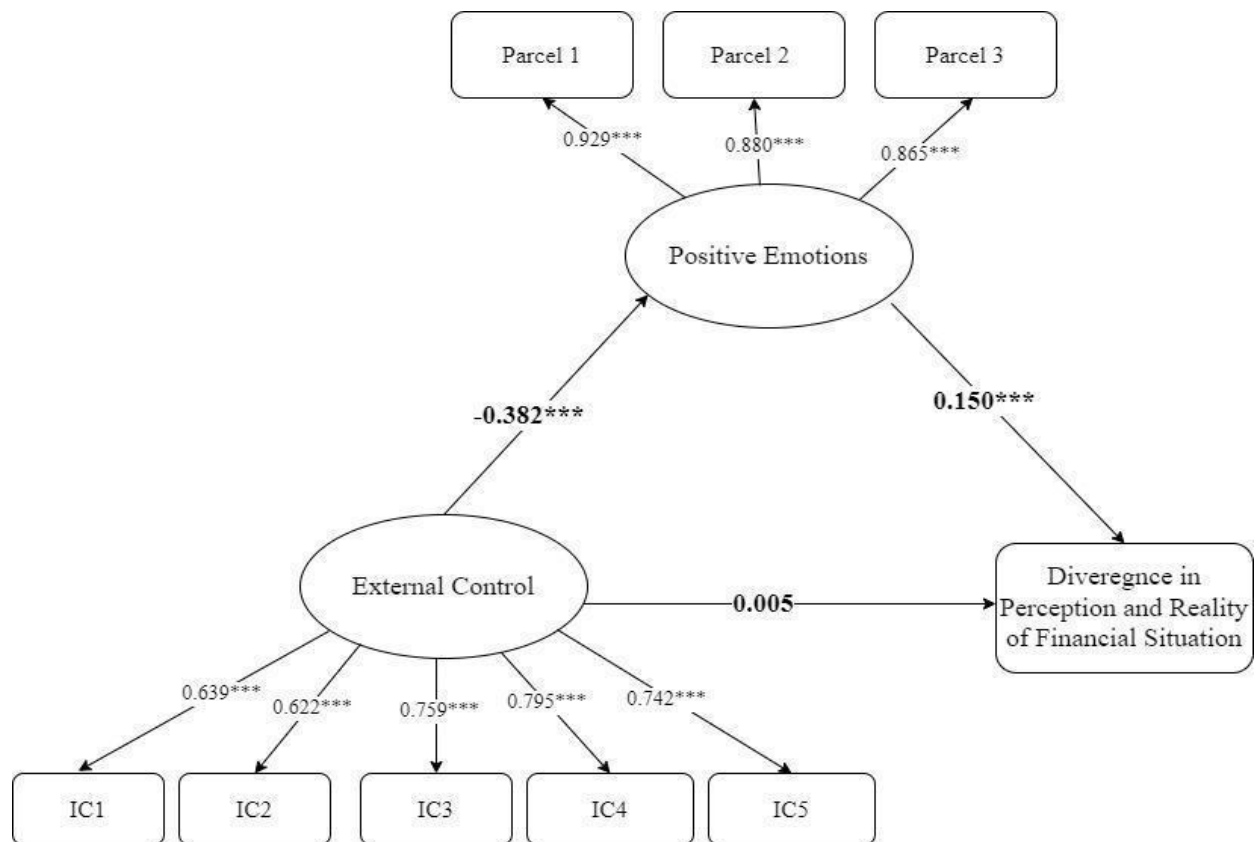
Figures 4 and 5 illustrate results from testing H3, H4, H6, H10, and H12. Precisely, while a higher external locus of control is related negatively to experiencing comfortable emotions ($\beta = -0.382$, $p < .001$), it is positively associated with experiencing uncomfortable emotions ($\beta = 0.361$, $p < .001$). Interestingly, empirical results did not support a direct relationship between having a higher external locus of control and the divergence in perception and reality of one's financial situation, thus supporting H3 and H4 only.

Focusing on the role of emotions as mediators in the relationship between external locus of control and the gap between perceived and objective financial situations, the findings confirm the mediating role of emotions and provide empirical support for H10 and H12. Notably, both uncomfortable and comfortable emotions mediate a negative association between having a higher external locus of control and the divergence in perceived and objective indicators of financial health. These findings indicate that regardless of the respondents' emotional state, a belief that external forces are responsible for their life outcomes increases the likelihood of these individuals perceiving their financial situation to be worse than objective indicators show. Furthermore, since there is no empirical evidence to support a direct relationship between having a higher external locus of control and rating one's financial situation differently from objective indicators (H6), this reveals that ranking

highly on the external locus of control scale influences the possibility of a gap in perceiving one's financial situation differently from reality through emotions.

Figure 4

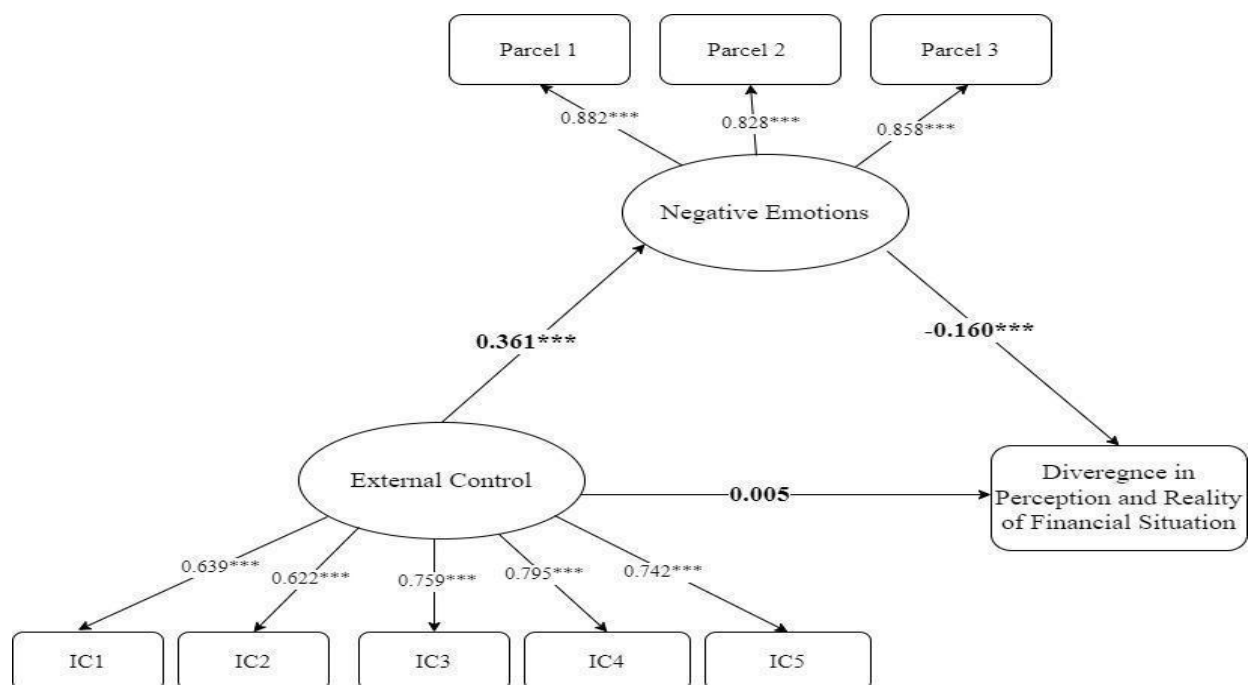
Structural Model Showing the Mediation Paths for External Locus of Control, Comfortable Emotions, and the Divergence in the Perception and Reality of Financial Situation



Note. Standardized results are provided. Model fit: RMSEA = 0.057, SRMR = 0.075, CFI = 0.918, TLI = 0.907. $^{***}p < .001$; $^{**}p < .01$; $^{*}p < .05$. $N = 3,658$.

Figure 5

Structural Model Showing the Mediation Paths for External Locus of Control, Uncomfortable Emotions, and the Divergence in the Perception and Reality of Financial Situation



Note. Standardized results are provided. Model fit: RMSEA = 0.057, SRMR = 0.075, CFI = 0.918, TLI = 0.907. *** $p < .001$; ** $p < .01$; * $p < .05$. $N = 3,658$.

Beyond the aforementioned variables measured, covariates, including demographic and socioeconomic characteristics, also play a role in explaining the divergence between perception and reality of the financial situation of individuals. Age ($\beta = 0.167, p < .001$), marital status ($\beta = 0.089, p < .001$), net worth ($\beta = 0.168, p < .001$), education ($\beta = 0.056, p < .05$), race ($\beta = 0.068, p < .001$), retirement status ($\beta = 0.043, p < .05$), and health status ($\beta = 0.124, p < .001$) are all positively associated with perception bias, suggesting that older, married, wealthier, educated, White, retired, and healthier individuals tend to overestimate their financial situation compared to what objective indicators show. Interestingly, the empirical results show no statistical evidence for income and gender predicting financial perception biases.

Table 5

Structural Model for Effects of Covariates on the Divergence in Perception and Reality of Financial Situation

Outcome/Predictor	Estimate	Std. Error
Age	0.167***	0.004
Male (Ref = Female)	-0.020	0.059
Married (Ref = Unmarried)	0.089***	0.073
Income (\$10,000)	0.009	0.006
Net Worth	0.168***	0.000
College Degree (Ref = No college degree)	0.056**	0.071
White (Ref = Nonwhite)	0.068***	0.072
Retired (Ref = Not retired)	0.043*	0.079
Health Status	0.124***	0.033

Note. Covariates are included in the model using the full partial method. Standardized results are provided. Model fit: RMSEA = 0.057, SRMR = 0.075, CFI = 0.918, TLI = 0.907. *** $p < .001$; ** $p < .01$; * $p < .05$. $N = 3,658$.

DISCUSSION

This study adds to the existing literature on divergences in one's financial perception and reality and how emotions are associated with these perceptions. Overall, the findings support the central hypothesis that both locus of control and emotions, particularly mediating variables, play a crucial role in shaping the divergence in perception and reality of one's financial situation. To our knowledge, this is the first study that examines how locus of control influences these divergences through emotions. These findings provide a unique opportunity to gain insight into understanding how financial services and mental health professionals can assist individuals to reframe their financial situations considering their clients' emotional state for those in their later-life stages.

As predicted, individuals with a stronger internal locus of control reported higher levels of comfortable emotions (H₁) and lower levels of uncomfortable emotions (H₂). This aligns with existing literature suggesting that individuals who believe they control their outcomes are more likely to experience greater emotional well-being. Similarly, those with

a higher external locus of control exhibited fewer comfortable emotions (H₃) and greater uncomfortable emotions (H₄), reinforcing the view that reliance on external forces (e.g., fate, luck, or powerful others) is associated with emotional distress and a diminished sense of agency. Additionally, internal locus of control was significantly associated with a tendency to overestimate one's financial situation (H₅). Our findings did not support the idea that those who reported an external locus of control would rate their financial situation higher than it is objectively (H₆) outside of emotions. This lack of evidence for H₆ suggests that simply believing in external factors does not, in itself, result in overly optimistic financial perceptions. Instead, it may contribute to more pessimistic assessments, especially when filtered through emotional states.

As expected, both comfortable (H₇) and uncomfortable emotions (H₈) were significantly related to divergence in financial perception. Comfortable emotions were linked with a tendency to rate financial health more favorably than objective indicators suggest. In contrast, uncomfortable emotions contributed to more pessimistic self-assessments, even when objective measures did not support these views. These findings provide additional support regarding the importance of emotional states in developing one's perception of one's finances. Also, the study confirmed the mediating role of emotions in the relationship between locus of control and financial perception-reality divergence. Specifically, comfortable emotions mediated the positive association between internal locus of control and financial overestimation (H₉), while also mediating the relationship between external locus of control and perception-reality divergence (H₁₀). Additionally, uncomfortable emotions mediated a negative association between internal locus of control and perception-reality divergence (H₁₁), and similarly, mediated the negative association for those with an external locus of control (H₁₂). These mediation effects highlight the nuanced ways in which emotional experiences bridge cognitive beliefs (i.e., locus of control) and perceptual biases.

A notable finding of this study is that White, married individuals, and individuals with higher net worth are more likely to perceive their financial well-being to be better than objective measures indicate. This finding opens a broader discussion on sociocultural interpretation. These individuals are often from socially dominant groups and have historically experienced various forms of affirmation of their agency and social values throughout their lives, including institutional and structural affirmation, and have benefited from structural advantages (Huotari, 2024; Sherraden, 2016). This affirmation and reinforcement they have received could boost both their emotional resilience and financial confidence, possibly to the point of inflating their perceptions of their financial situation compared to what objective indicators show. Therefore, the "resilience" observed may partly be due to accumulated social advantages and privilege. On the other hand, individuals from underserved or marginalized communities may not have received the affirmations and reinforcement socially and institutionally, and their assessments of their financial well-being may incorporate these discrimination and systemic barriers (Asante-Muhammad, 2019; Shapiro, 2017). This points to the fact that divergence in perception and reality of one's financial situation may not just be about emotions or locus of control, but also as a result of marginalization and social advantage, opening up an area for future research exploration.

It is also important to note potential differences for those from collectivist groups. In collectivist groups, agency is often expressed through interdependence and shared responsibility rather than individual control, meaning that externally oriented responses may reflect cultural alignment rather than psychological maladaptation. Likewise, an internal locus of control may not always predict positive outcomes among populations shaped by systemic marginalization if structural barriers constrain opportunity (Levenson, 1981). Thus, the perceived adaptiveness of an internal locus of control is context-dependent, and cultural humility requires recognizing that resilience and well-being may also emerge through collective efficacy, relational ties, and acknowledgment of systemic forces. Findings from this study show that when examined together, emotional states do not just accompany financial judgments, they actively shape them. For individuals with an internal locus of control, emotions may reinforce a sense of optimism and self-efficacy, even to the point of inflating financial perceptions. In contrast, those with an external locus of control may experience emotional states that lead to underestimating their financial health, despite the reality of their objective financial situations. These findings are important as these feelings can shape how those in later-life stages may plan and over, or under, consume their resources.

IMPLICATIONS

Based on the empirical results, there are meaningful implications for financial therapists, financial services providers, and academics. First, financial therapists have a unique advantage in applying these findings in their practice as they are trained in how to address the psychological and emotional aspects of financial beliefs and behaviors. Therapists can use these results to help clients understand how their locus of control type and emotions can lead to divergence in their clients' perceptions of their objective financial situation. Therapists can tailor treatment plans to help clients explore the underlying reasons for their beliefs and how emotions such as anxiety or over-optimistic feelings can distort their clients' perceptions of their financial situation. Treatment plans can help clients develop more balanced and healthy behaviors, offsetting their overly optimistic or pessimistic views of their financial situation (Klontz et al., 2005; Rotter, 1966). For example, therapists can reinforce healthy confidence for clients who report having an internal locus of control while challenging overly optimistic perceptions that may lead to financial overextension. Conversely, for clients with an external locus of control, therapy can focus on building agency and reframing negative emotional responses that lead to financial underestimation or avoidance (Peirce et al., 1996). Archuleta et al., (2015) suggests the use of cognitive-behavioral therapy (CBT), narrative therapy, or mindfulness-based approaches in addressing the interplay of emotions and control beliefs. Therapists can also adopt a dual strategy: first validating clients' lived experiences and sense of well-being and then introducing reflective inquiry that highlights potential risks in a supportive, nonjudgmental manner (Klontz et al., 2015). This integrative approach affirms subjective financial narratives while simultaneously promoting strategies that enhance long-term resilience and reduce exposure to financial insecurity (Brüggen et al., 2017).

Additionally, therapists can use nervous system regulation interventions to help clients. Financial stress can activate the sympathetic nervous system, resulting in lower attention levels and limited problem-solving capacity. These factors can contribute to a client's feelings of helplessness around money management (Sweet et al., 2013). To offset this, nervous system regulation interventions such as mindfulness and somatic therapies could help clients increase their financial self-efficacy by reducing stress reactivity and improving emotional regulation. Studies have found that mindfulness practices can decrease physiological stress responses and enhance executive functioning (Hölzel et al., 2011; Tang et al., 2015). As a result, clients can make intentional financial decisions instead of reacting from a place of fear or anxiety. Similarly, somatic approaches emphasizing body awareness can restore a sense of safety and agency, allowing clients to tolerate financial uncertainty and engage more actively in planning behaviors (Payne et al. 2015). By improving nervous system regulations, these interventions could empower clients to approach financial challenges with increased clarity and financial self-efficacy, creating a stronger internal sense of financial control.

Beyond these therapeutic applications, practical interventions can also help clients shift toward more empowering financial self-perceptions. Cognitive-behavioral financial exercises may be used to challenge distorted money beliefs and reinforce healthier perceptions of control (Archuleta et al., 2015). Visualization tools, such as comparing objective financial ratios with self-assessments, can make divergences more salient and support recalibration (Netemeyer et al., 2018). Small, achievable financial goals also strengthen confidence and internal locus of control. Narrative therapy approaches (Klontz et al., 2005), mindfulness practices (Hölzel et al., 2011; Tang et al., 2015), and somatic regulation techniques (Payne et al., 2015) further provide clients with ways to reduce stress, reframe financial identity, and engage more intentionally with financial decisions. Group-based peer interventions can also normalize financial challenges, reduce shame, and leverage collective efficacy, particularly for clients from underserved populations (Thomas, 2018). Collectively, these approaches empower clients to align perception more closely with reality while cultivating resilience and healthier financial behaviors.

Developing or adapting assessments that consider clients' financial wellness in conjunction with their emotions in the moment could provide additional insights. To the author's knowledge, this type of scale does not currently exist, but there are two existing scales that focus on emotions that can help clients document and process their emotions around money in real time. First, the Emotional Scale™, which is described as "a structured way to measure emotional energy, identify how you feel, and know where to aim for noticeable and sustainable emotional improvement- using logic and your own innate senses, you can shift out of heavy feelings, release resistance, find stability, and move towards alignment- gently and easily" (Richardson, n.d.). This scale is not the only emotion scale that exists, but the creators have developed a case study on money and emotions that practitioners could potentially implement with their clients. Although designed for children, the Momentary Emotion Assessment could be adapted to design a measurement to capture emotions and financial wellness in real time. The assessment is described as a "tool that researchers and educators could use to understand momentary emotions and how they

change, and also to capture the effects of interventions designed to improve students' experiences at school. The tool will also provide students with individual reports and in-the-moment feedback on how to improve their emotional experiences" (Project Flourish, n.d.). If adapted and validated, this tool could help clients when working with a therapist or financial professional by documenting and processing emotions as they experience these feelings. The use of this type of assessment can help professionals and clients gain a more nuanced understanding about the emotions clients experience, which could improve the recommendations for treatment plans. Additionally, this could be particularly helpful to clients with distorted views to counter these emotions more quickly.

For financial planners, it is important to recognize and understand the interplay of emotions and locus of control as it pertains to their clients' views on their financial behaviors, especially for those in their later-life cycle. This is critical as ignoring or avoiding these factors could delay implementation of financial planning recommendations. Additionally, recommendations may not be appropriate if they are not inclusive of clients' psychological factors. It is imperative that planners understand and recognize the subjective lens through which clients interpret their financial reality. For instance, planners may encounter clients who overestimate their financial health due to elevated comfortable emotions and a strong internal locus of control. This could lead to overconfidence in investment or spending decisions (Lusardi & Mitchell, 2014). On the other hand, some clients may underestimate their financial situation due to uncomfortable emotions and externalized control, resulting in increased financial anxiety or conservative financial behaviors (Loibl et al., 2011). When considered within the LCH framework, findings highlight potential implications specific to later-life financial planning, where perception–reality divergences may lead to increased risks (Modigliani & Brumberg, 1954; Hurd & Rohwedder, 2013). Planners who can recognize these characteristics can enhance their communication strategies by coupling these skills with data visualization. By doing so, clients can better understand their objective financial situation, which may be contrary to their emotional perceptions. Also, including financial well-being assessments and brief psychological screeners could help planners better gauge emotional and cognitive influences (Netemeyer et al., 2018). By doing so, planners can create a collaborative, empathetic approach, which can help clients develop a more realistic perception of their financial situations while simultaneously increasing rapport with clients. Adopting this approach could ultimately increase adherence to financial recommendations. Additionally, planners can create safe spaces for clients to be vulnerable about their financial situations (Thomas, 2018). These factors, coupled together, can help clients better estimate their retirement needs while also increasing feelings of comfort in this stage of their lives.

Limitations

There are limitations to this study that should be noted. First, findings cannot be applied to all age groups. Although the Health and Retirement Survey is a robust dataset that includes psychological and financial variables, its age restriction limits this study. To participate in the HRS panel, respondents must be over 50. Therefore, findings should not be used to describe younger populations. This study could be replicated in future studies with younger populations to examine if these findings are the same in these groups across their various life stages. Additionally, future studies should test this relationship over more extended time periods and across demographics to understand differences that can occur at different time periods across various identities in the sample. Since the data is self-reported, financial information such as net worth may be underreported or overreported due to errors in net worth calculations, cognitive distortions, or memory bias. This is particularly important since respondents may not have used more objective measures to estimate their financial situation but instead relied on faulty memories or distorted emotional responses.

CONCLUSION

This study highlights the crucial role of locus of control and emotions in shaping the divergence between individuals' perceived and actual financial health. The findings demonstrate that comfortable emotions reinforce the tendency for those with an internal locus of control to overestimate their financial situation, while comfortable emotions contribute to a more pessimistic perception. For individuals with a higher external locus of control, the results indicate a negative relationship with comfortable emotions and a positive link with uncomfortable emotions, ultimately leading them to perceive their financial situation as worse than objective measures suggest. While no direct relationship was found between external locus of control and overestimation of financial health, emotions serve as key mediators in shaping financial perceptions. These insights have meaningful implications for financial therapists, planners, and counselors, emphasizing the need to consider psychological and emotional factors in later-life financial decision-making and well-being.

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