

# How to Prevent Unhelpful Personality Traits from Evolving into Unhelpful Financial Behaviors: The Benefits of Future Clarity

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*Many organizations have implemented programs to improve the financial behavior of impending retirees and other vulnerable demographics. These programs are predicated on the assumption that financial behavior is indeed modifiable. Yet, many enduring traits, such as emotional instability, could promote financial anxiety and provoke imprudent financial behaviors, limiting the utility of these programs. This study, however, tests the possibility that future clarity—the degree to which individuals perceive their future as vivid and certain—could diminish the extent to which emotional instability coincides with financial anxiety and imprudent financial behavior. Specifically, 1,516 participants over age 50 completed a questionnaire that gauges emotional instability, future clarity, financial anxiety, and financial behaviors. Future clarity did indeed diminish the extent to which emotional stability was related to financial anxiety but not financial behavior. Thus, programs that are designed to improve financial literacy should also help individuals clarify their future career and life aspirations.*

*Keywords: emotional instability; financial anxiety; financial behavior; future clarity; personality.*

## INTRODUCTION

Government agencies, tertiary institutions, charitable associations, and commercial businesses have implemented a raft of initiatives to improve the capacity of individuals, such as retirees or impending retirees, to manage their finances. For example, the Australian Securities and Investments Commission launched a website—[www.moneysmart.gov.au](http://www.moneysmart.gov.au)— that presents advice on how people can earn, manage, and invest their money judiciously. The website imparts advice about salary packaging, credit scores, reward schemes, Ponzi schemes, hedge funds, income protection, and a host of other topics. The aim of this website and similar initiatives is to improve the financial choices and financial security of impending retirees, young adults, and other communities.

Despite the proliferation of similar initiatives, research indicates the benefits of these programs are often modest or even negligible (Duflo & Saez, 2003; Mandell & Klein,

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2009). After attending one program, participants seldom implemented their intention to modify their financial behavior and to contribute more funds to their pensions (e.g., Choi, Laibson, Madrian, & Metrick, 2005). To explain these limitations, several accounts have been proposed. One compelling possibility is that financial behaviors—such as the degree to which individuals diversify their investments or save money—depends appreciably on characteristics that are immutable rather than modifiable, such as specific genes (Kuhnen & Chiao, 2009), or trait anxiety (e.g., Sages, Britt, & Cumbie, 2013).

Because trait anxiety specifically, and emotional instability generally, tend to be stable over time rather than malleable (e.g., Cummins, 2010; Steunenberg, Twisk, Beekman, Deeg, & Kerkhof, 2005), to improve the financial behavior of individuals researchers should seek opportunities to diminish the impact of these traits on financial choices. The present study was designed to achieve this goal. In particular, as this study demonstrated, when individuals perceive their future as certain and vivid, called future clarity (McElwee & Haugh, 2010), emotional instability is not as likely to impinge on the financial behavior of individuals. That is, the future, when perceived as certain and vivid, seems closer in time (McElwee & Haugh, 2010). Individuals will orient their attention more toward their future goals over their immediate needs. They will not react impulsively to immediate adversities, and thus will not spend money recklessly. Instead, they may sacrifice their pleasure to accrue future savings.

### **The Benefits of Financial Literacy**

Because of many trends in modern society—such as the instability of industries, corporations, and jobs (Sennett, 2006), the deregulation of financial services (Mandell & Klein, 2009), and the proliferation of novel, and often risky, investment products (Mandell & Klein, 2009)—the financial landscape has become increasingly hard to negotiate. Yet, although greater knowledge is needed to manage these intricacies, financial literacy, defined as the extent to which people know how to earn, manage, and invest money (for measures, see Braunstein & Welch, 2002), is often limited. For example, in the Netherlands, only about 20 to 30% of adults understand the key distinction and relative benefits of bonds and stocks (Van Rooij, Lusardi, & Alessie, 2011).

In response to these trends, many scholars and commentators have underscored the importance of financial education to retirees, impending retirees, young adults, and other vulnerable segments (Braunstein & Welch, 2002; Greenspan, 2005; Hilgert, Hogarth, & Beverly, 2003). Research corroborates this approach - people who excel on tests of financial literacy are more likely to have saved money for the future, diversified their investments, formulated a retirement plan, paid their bills and credit balance on time, as well as monitored their expenses (Hilgert & Hogarth, 2002; Hilgert et al., 2003).

### **The Limitations to Financial Education**

Nevertheless, some research implies that attempts to augment financial literacy might not improve financial behavior. First, after the capacity of individuals to plan carefully, to eschew unwarranted risks, and to demonstrate advanced numeracy skills are controlled statistically, the relationship between financial literacy and financial behavior dissipates (Sabri & Juen, 2014; see also Soll, Keeney, & Larrick, 2013). Second,

although some research indicates that financial literacy improves financial behavior rather than vice versa (Elliehausen, Staten, & Lundquist, 2003), other research challenges this perspective. As Mandell and Klein (2009) demonstrated, high school students who attended a course on financial management were not significantly more likely to report judicious financial behaviors, such as paying their credit card in full or maintaining enough money in their check account (see also Duflo & Saez, 2003, in which the effects of financial education were ambiguous).

Two broad accounts have been proposed to explain the observation that financial education might not always improve financial behavior. First, after individuals receive financial education, they might intend to adapt their behavior. However, for a variety of reasons, these intentions do not always translate to behavior (for a meta-analysis, see Cooke & Sheeran, 2004). Choi, Laibson, Madrian, and Metrick (2005) reported findings that corroborate this assumption. In their study, some participants were encouraged to contribute money to pensions or superannuation. Many of these participants intended to observe this advice but, subsequently, did not contribute additional money to these funds.

Second, several enduring, and perhaps immutable, traits could increase the likelihood of imprudent financial behaviors. Financial education programs may not be able to shift these traits and, therefore, cannot prevent these behaviors. Consistent with this premise, Kuhnen and Chiao (2009) showed that one allele of the dopamine D4 receptor gene and two alleles of the serotonin transporter gene increased the likelihood of risky investment decisions by 25% and 28% respectively. These findings indicate that financial behavior can be partly ascribed to genetic variation (for compatible findings, see Johnson & Krueger, 2006).

One trait that could explain some of this genetic variation is neuroticism or emotional instability. Research indicates that emotional instability in general, or trait anxiety in particular, might coincide with some imprudent financial behaviors. For example, as Sages and colleagues (2013) showed, people who reported elevated levels of trait anxiety are more likely to reach the maximum limit on their credit cards, to be unable to pay their bills, and to spend more money than they earn. Likewise, individuals who report emotional instability—coupled with a low self-esteem, low self-efficacy, and an external locus of control—are more likely to experience financial strain (Judge, Hurst, & Simon, 2009). Similarly, disposable income is lower in people who cannot readily conceal or regulate unpleasant emotions (Côté, Gyurak, & Levenson, 2010).

Several accounts can explain the association between emotional instability and imprudent financial behaviors. First, some facets of emotional instability, such as dejection, increase the propensity of individuals to experience anxiety about their finances (Shapiro & Burchell, 2012)—presumably because unpleasant mood states bias memory, attention, and appraisals towards unfavorable information, such as pessimistic financial forecasts (Forgas, 1995). When people experience this financial anxiety, they shun, rather than contemplate, financial concerns and financial information (Shapiro & Burchell, 2012) and demonstrate a reluctance to seek advice or guidance from financial advisors (Grable, Heo, & Rabbani, 2015).

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Alternatively, emotional instability might diminish the extent to which individuals prioritize their future needs. Specifically, when individuals feel anxious and vulnerable, they do not feel adequately empowered to shape their destiny. Hence, they often perceive their life now as dissociated from their identity in the future (Joshi & Fast, 2013). Because of this dissociation from the future, these individuals are not as inclined to delay gratification, diminishing their propensity to save and compromising their financial position, as research corroborates (e.g., Ersner-Hershfield, Garton, Ballard, Samanez-Larkin, & Knutson, 2009; Bryan & Hershfield, 2013; Lewis & Oyserman, 2015).

These findings, taken together, suggest that emotional instability might foster imprudent financial behavior. Because research indicates that emotional instability tends to persist, rather than subside, over time (Cummins, 2010; Steunenberg et al., 2005), these observations imply that education programs cannot alone preclude imprudent financial behaviors.

### **The Role of Future Clarity**

Recent studies indicate that future clarity (McElwee & Haugh, 2010)—the extent to which individuals perceive their future as vivid and certain—could mitigate this effect of emotional instability on financial behavior. Specifically, the future, when perceived as vivid and certain, seems closer in time and thus more pressing and significant (McElwee & Haugh, 2010). Consequently, to decide which courses of action to pursue, these individuals are more likely to prioritize the future implications of these choices (Moss, Wilson, Irons, & Naivalu, in press). They are more willing to sacrifice their pleasure now to benefit their future (Moss, Skinner, Alexi, & Wilson, in press). They are not as inclined to shun circumstances that evoke anxiety, such as their finances, diminishing the likelihood of imprudent financial behavior.

Research has indeed demonstrated that perceptions or deliberations about the future could affect financial behavior. For example, as Mooney, Earl, Mooney, and Bateman (2017) showed, individuals who primarily direct their attention to the future rather than to unpleasant events in the past or present (called a balanced temporal perspective), tend to plan their retirement more carefully (see also Earl, Bednall, & Muratore, 2015). Furthermore, as Stawski, Hershey, and Jacobs-Lawson (2007) revealed, after people clarify their financial goals, they also plan their retirement more judiciously and save more effectively. These findings, however, do not indicate that future clarity will improve financial behavior. People who often contemplate their future are not more likely to experience future clarity, as McElwee and Haugh (2010) demonstrated. Furthermore, people who have clarified their financial goals are not necessarily more confident they will achieve specific life goals and, therefore, might not experience future clarity (McElwee & Haugh, 2010).

### **The Role of Inhibition**

Besides future clarity, more enduring traits could also enhance the capacity of individuals to embrace, rather than shun, anxieties about their finances. One trait is the capacity of individuals to inhibit responses that are habitual but unsuitable in the circumstances. Specifically, Frederick (2005) developed an instrument, called the

cognitive reflection test, that assesses the degree to which individuals can inhibit an apparent but misleading answer to puzzles (see also Hoppe & Kusterer, 2011; Toplak, 2011). People who thrive on this instrument tend to prefer larger, future rewards to modest, immediate rewards (Frederick, 2005). They might, therefore, be more willing to accept unpleasant emotions now, such as anxiety, to enhance their life in the future.

### **The Present Study**

To reiterate, emotional instability might provoke anxieties about personal finances and unhelpful financial behaviors. However, when future clarity and the capacity to inhibit habitual but unsuitable responses is elevated, emotional instability might not be as likely to bias the cognitions and choices of individuals. According to this premise, the following hypotheses are proposed:

Hypothesis 1: As future clarity increases, the positive association between emotional instability and financial anxiety might diminish.

Hypothesis 2: As future clarity increases, the positive association between emotional instability and unhelpful financial behaviors might decrease.

Hypothesis 3: As performance on the cognitive reflection test improves, the positive association between emotional instability and financial anxiety might diminish.

Hypothesis 4: As performance on the cognitive reflection test improves, the positive association between emotional instability and unhelpful financial behaviors might decrease.

To assess these hypotheses, a sample of individuals age 50 or over completed a questionnaire. The questionnaire included measures of emotional stability, financial anxiety, unhelpful financial behaviors, and future clarity, as well as the cognitive reflection test. To operationalize unhelpful financial behaviors, we included a measure of financial preparation (Hershey & Mowen, 2000). Thus, unhelpful financial behaviors were operationalized as limited attempts to plan and save for life after retirement.

## **METHOD**

### **Participants and Procedure**

The participants were recruited by Online Research Unit, a company that helps researchers collect data from particular segments of the community. Specifically, the company has attracted 350 000 members—residents of Australia who are willing to participate in research. The panel are representative of the Australian population of adults on many characteristics, such as income and education. For this study, a random sample of members who were over 50 years of age were invited to complete the questionnaire. This age was chosen because the study was embedded within a broader research project that was designed to explore the financial behaviors and beliefs of people who have retired, have contemplated retirement, or have considered their life after retirement.

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Participants were invited to click a link that activates a survey on Qualtrics and informed the aim of this project is to understand how opinions and attitudes towards finances and similar topics vary over time in individuals who have retired or may soon retire. The final sample was comprised of 715 men, 795 women, 4 individuals who indicated their gender was *other*, and 2 individuals who did not specify their gender. Participants were aged 62.9 on average, with a standard deviation of 8.5, ranging from 50 to 90. Approximately 44.8% had attained a Bachelor or postgraduate degree.

### **Measures**

The questionnaire was comprised of questions that assess emotional stability, financial anxiety, financial preparation, future clarity, and cognitive reflection. These questions were embedded within a larger survey that also assessed existing assets and liabilities, mental health, physical health, social connectedness, and locus of control. The survey ended with questions about gender, age, and education. Participants entered their precise age, and selected their highest level of education from an array of options, ranging from high school to doctoral degrees.

**Emotional instability.** The emotional instability questions gauge the degree to which individuals are susceptible to negative emotions, such as anxiety or anger. In particular, these questions were derived from the mini-International Personality Item Pool (Donnellan, Oswald, Baird, & Lucas, 2006), in which four items represent each of the five personality traits: emotional instability, extraversion, conscientiousness, agreeableness, and openness to experience. In this study, only emotional instability was included in the analysis. One of the items includes “I have frequent mood swings.” Participants specified the extent to which they agree or disagree with each statement on a 5-point scale. Test-retest correlations over nine months exceeded .62 for each subscale (Donnellan et al., 2006). Confirmatory factor analysis also substantiated the five factors: CFI=0.88 and RMSE= 0.07 (Donnellan et al., 2006).

**Financial anxiety.** The financial anxiety questions gauge the degree to which individuals experience symptoms of anxiety when they contemplate their financial situation. The scale, validated by Archuleta, Dale, and Spann (2013), comprises seven items, such as “My muscles feel tense because of worries about my financial situation.” The items were designed to gauge symptoms of generalized anxiety disorder. Participants indicated the extent to which they agree or disagree with each statement on a 7-point scale. This scale generates a high Cronbach’s alpha at .94 and is positively associated with financial satisfaction (Archuleta et al., 2013).

**Financial preparation.** The financial preparation questions assess the degree to which participants consider the amount of money they need to retire and, therefore, have saved enough to retire comfortably. The scale, developed by Hershey and Mowen (2000), comprises six items including “I know how much money I will need to comfortably retire.” Participants specified the extent to which they agree or disagree with each statement on a 7-point scale. Hershey and Mowen (2000) reported a Cronbach’s alpha value of .79; in addition, they showed that financial preparation was positively associated with financial knowledge.

**Future clarity.** Participants completed the future clarity subscale (McElwee & Haugh, 2010). This subscale, comprising five items, gauges the degree to which individuals perceive their future as vivid and certain. A typical item is “Images of myself in the future are very hazy, and not clear at all” (reverse scored). Participants indicated the extent to which they agree or disagree with each statement on a 6-point scale. As evidence of validity, this subscale is positively related to positive states including positive affect, optimism, and meaning in life (McElwee & Haugh, 2010).

**Cognitive reflection test.** Participants also completed the cognitive reflection test—a test that assesses the capacity of individuals to inhibit an apparent but misleading answer to puzzles (Frederick, 2005). The test comprises three items. For example, one item is “A bat and ball cost \$1.10. The bat costs \$1.00 more than the ball. How much does the ball cost?” Many participants initially assume the ball costs 10 cents. Yet, if individuals can inhibit this answer, they would recognize the bat would then cost \$1.10 and hence the bat and ball combined would cost \$1.20. Instead, the ball must cost only 5 cents. As evidence of validity, Frederick (2005) showed that performance on the cognitive reflection test predicts the tendency of individuals to prefer large rewards in the future to smaller rewards now. Furthermore, individuals who excel on this test are less susceptible to other cognitive biases, such as the gambler’s fallacy and the sunk cost fallacy (Hoppe & Kusterer, 2011; Oechssler, Roider, & Schmitz, 2009; Toplak, 2011). In addition, Baron, Scott, Fincher, and Metz (2015) state the Cronbach’s alpha is high for a test that comprises three items, usually approaching or exceeding 0.6.

## RESULTS

Table 1 presents the mean, standard deviation, and possible range of each measure, as well as the correlation between every pair of measures. For the cognitive reflection test, the number of correct responses that each participant selected were summed. For the remaining measures, the responses of each participant were averaged across the items. Cronbach’s alpha of each measure appear in the diagonals and exceeded 0.7.

A moderated regression analysis was conducted to ascertain whether future clarity moderates the association between emotional instability and financial anxiety. The criterion was financial anxiety, and the predictors were age, gender, education, emotional instability, future clarity, and the interaction between emotional instability and future clarity. To compute this interaction, emotional instability and future clarity were first standardized and then multiplied together. A significant interaction indicates that future clarity does affect the association between emotional instability and financial anxiety (Aiken & West, 1991). In addition, another moderated regression analysis was conducted that was identical, except the criterion was financial preparation.

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Table 1

*Descriptive Statistics Associated with Study Variables*

	Mean	SD	Range	1	2	3	4	5
1 Emotional instability	2.65	0.82	1-5	.72				
2 Financial anxiety	2.67	1.56	1-7	.52**	.96			
3 Financial preparation	3.79	1.82	1-7	-.28**	-.45**	.95		
4 Future clarity	3.63	1.21	1-6	-.47**	-.49**	.44**	.88	
5 Cognitive reflection	0.77	0.93	0-3	-.10**	-.14**	.11**	.07*	.70

*Note.* Range refers to possible, rather than actual, range. Cronbach's alpha values appear in 5 the diagonals.

\*  $p < .05$ , \*\*  $p < .01$

Table 2 presents the standardized  $\beta$  values and t values these analyses generated. As this table shows, the interaction between future clarity and emotional instability was significant when the criterion was financial anxiety but not when the criterion was financial preparation.

Figure 1 presents the association between emotional instability and financial anxiety at both above average ( $z=1$ ) and below average ( $z=-1$ ) future clarity. To generate this figure, we derived an equation from the standardized  $\beta$  values that relates future clarity and emotional instability to financial anxiety, as Aiken and West (1991) recommended. As Figure 1 and simple slopes analysis shows, when future clarity is below average, emotional instability is positively associated with financial anxiety. However, when future clarity is above average, emotional instability is no longer associated with financial anxiety.

The final pair of analyses was identical, except the moderator was performance on the cognitive reflection test instead of future clarity. Table 3 presents the standardized  $\beta$  values and t values that emanated from these analyses. In this instance, the interaction between performance on the cognitive reflection test and emotional instability was significant when the criterion was financial anxiety but not when the criterion was financial preparation. As Figure 2 and simple slopes analysis shows, when performance on the cognitive reflection test was above average, the positive association between emotional instability and financial anxiety was not as pronounced.

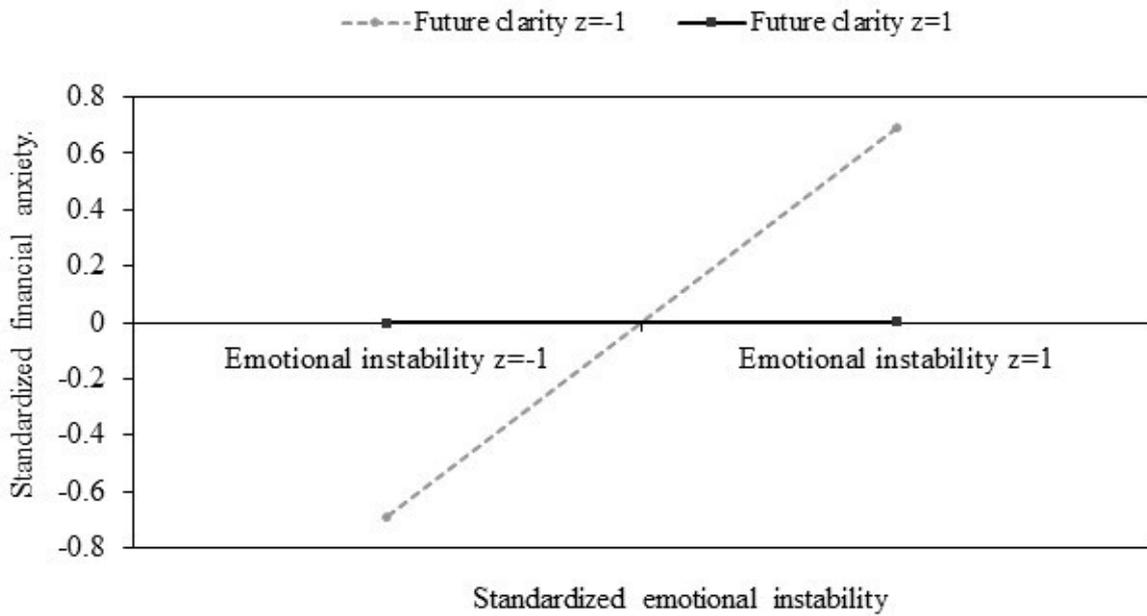
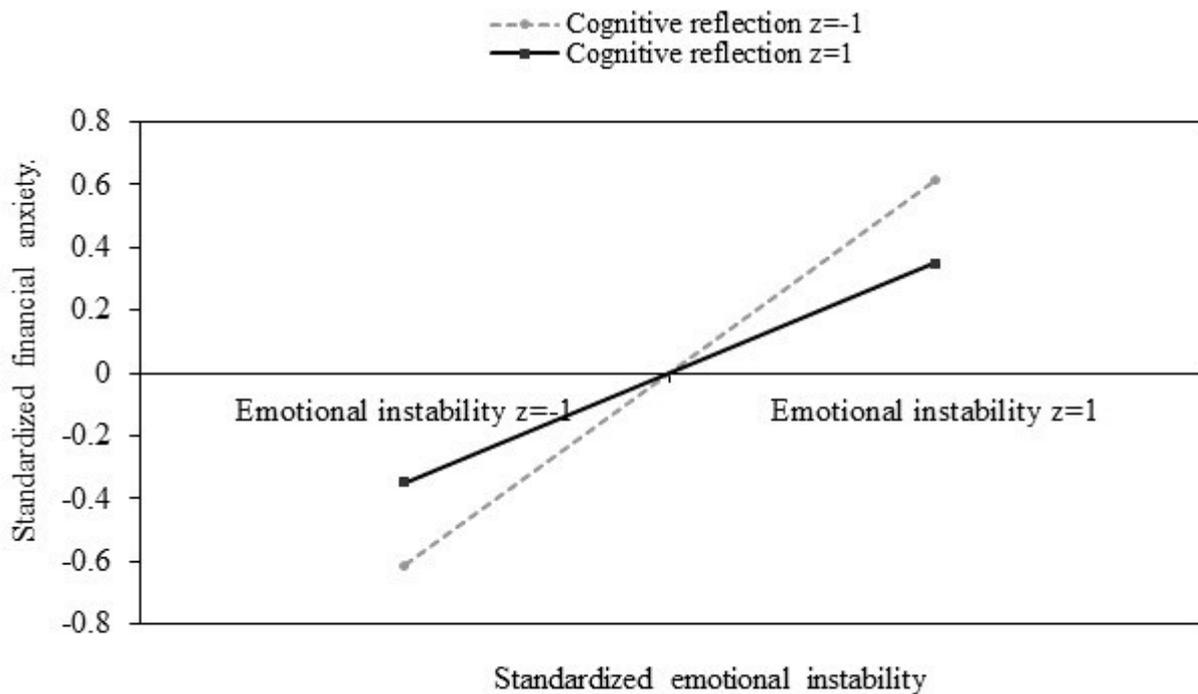


Figure 1. Schematic Illustration of the Moderating Effect of Future Clarity on the Association between Emotional Instability and Financial Anxiety

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*Figure 2.* Schematic Illustration of the Moderating Effect of Cognitive Reflection on the Association between Emotional Instability and Financial Anxiety

Table 2

*Output of the Analysis that Examined Whether Future Clarity Moderates the Association between Emotional Instability and Financial Anxiety*

Predictor	<u>Financial anxiety</u>		<u>Financial preparation</u>	
	Standardized $\beta$ values	t values	Standardized $\beta$ values	t values
Constant		11.30***	0.55	
Age	-0.15	-7.03***	0.12	5.09***
Male	0.00	0.03	-0.06	-2.81**
Education	0.01	0.42	0.17	7.55***
Future clarity	-0.30	-12.69***	0.37	14.62***
Emotional instability	0.35	14.62***	-0.07	-2.70**
Future clarity x Emotional instability	-0.05	-2.19*	-0.02	-0.76
R <sup>2</sup>		.37***		.26***

*Note.* For male, 0 denoted women or intersex and 1 denoted men.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

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Table 3

*Output of the Analysis that Examined Whether Cognitive Reflection Moderates the Association between Emotional Instability and Financial Anxiety.*

Predictor	<u>Financial anxiety</u>		<u>Financial preparation</u>	
		Standardized t values $\beta$ values		Standardized t values $\beta$ values
Constant		7.13***		6.035***
Age	-0.17	-7.70***	0.14	5.664***
Male	-0.01	-0.64	-0.06	-2.387*
Education	-0.02	-0.68	0.21	8.694***
Cognitive reflection	-0.09	-3.85***	0.04	1.705
Emotional instability	0.48	21.71***	-0.23	-9.371***
Cognitive reflection x Instability	-0.05	-2.14*	0.05	1.887
R <sup>2</sup>		.31***		.16***

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### DISCUSSION

Emotional instability increases the likelihood of imprudent financial behaviors (Côté, et al., 2010; Judge et al., 2009; Sages et al., 2013). In particular, if people often experience significant anxiety or similar affective states, they tend to bias their attention, memory, or appraisals towards adverse information, amplifying concerns and anxieties about their finances (Shapiro & Burchell, 2012). Because of this anxiety, these individuals may be reluctant to contemplate and address their financial challenges (Grable et al., 2015). They may not, for example, prepare and save adequately before they retire.

Nevertheless, if individuals experience future clarity (McElwee & Haugh, 2010), this sequence of events is not as likely to unfold. Specifically, when individuals perceive their future as vivid and certain, they are more inclined to delay gratification, diminishing their sensitivity to unpleasant emotions such as anxiety (Moss, Skinner, et al., in press). Consequently, emotional stability should not be as likely to guide the attention, memory,

or choices of individuals—and thus should not translate into financial anxiety or imprudent financial behaviors. The findings partly support this premise. When individuals reported future clarity, the association between emotional instability and financial anxiety subsided. This finding is compatible with the proposition that future clarity might diminish the effect of unpleasant emotions.

Yet, future clarity did not moderate the association between emotional instability and financial planning. Arguably, a subset of participants might be more likely to plan their finances carefully whenever their future seems hazy and uncertain. That is, in response to this uncertainty, and the concomitant sensitivity to anxiety (Moss, Skinner, et al., in press), these individuals may become more inclined to plan their life as a means to preclude this uncertainty. Careful planning is a strategy that some individuals apply to cope with unpleasant emotions (Carver, Scheier, & Weintraub, 1989). Hence, in these individuals, future uncertainty, rather than clarity, may diminish the association between emotional instability and financial planning—nullifying Hypothesis 2. In addition, performance on the cognitive reflection test also diminished the relationship between emotional instability and financial anxiety. As this finding implies, if individuals can inhibit their habitual but unsuitable responses, they might be able to accept the anxiety that financial planning could elicit.

Future research, however, should address the limitations of this study. First, future clarity might be a consequence, rather than a cause, of the tempered association between emotional instability and financial anxiety. That is, if individuals can ameliorate their financial anxiety, they might feel more willing to contemplate their future, promoting future clarity. Consequently, future research should explore whether programs that help individuals explore their strengths, values, opportunities, and aspirations—an initiative that could promote future clarity—do indeed decrease the relationship between emotional instability and financial anxiety.

Second, future research should also test whether the benefits of future clarity generalize to other demographics, such as young individuals or disadvantaged communities. One possibility is that, because many young individuals or disadvantaged communities cannot as readily shape their future trajectories, they may experience limited future clarity more frequently. Consequently, they may become more habituated, and thus less sensitive, to this limited clarity. Future clarity, therefore, may not moderate the association between emotional instability and financial anxiety in these individuals. Consequently, this study should be replicated with younger individuals and in deprived communities.

In short, this study shows that future clarity and performance on the cognitive reflection test moderate the association between emotional instability and financial anxiety. These findings could be applied to enhance the existing attempts of governments, universities, charities, and businesses to encourage financial planning. In particular, before promulgating knowledge about financial planning, these organizations should introduce practices that enhance the future clarity of individuals. To illustrate, these organizations might develop software that matches the strengths, resources, and passions of individuals to the jobs, roles, and activities that are likely to burgeon in the future (see Ross, 2016). The software could then depict these jobs, roles, and activities as vividly as possible—perhaps with videos that simulate these positions of the future. After

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individuals utilize this software, they may perceive their future as more certain and vivid. Once their future clarity escalates, these individuals may be more willing to contemplate their financial needs as their financial anxiety subsides—a possibility that awaits further research.

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