2011 Oustanding AFCPE® Conference Paper: Development and Validation of a Financial Self-Efficacy Scale

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This study developed a 6-item Financial Self-Efficacy Scale for use by researchers, educators, counselors, and advisors. Bandura's concept of self-efficacy and Prochaska's Transtheoretical Model of Behavior Change provided the theoretical framework. Scale items were adapted from Schwarzer and Jerusalem's (1995) General Self-Efficacy Scale. Psychometrics were measured using a sample of 726 university employees. Alpha reliability was .76. One-way ANOVA compared self-efficacy scores to respondents' assessment of their investment sophistication. Factor analysis resulted in a coherent factor with loadings ranging from .574 to .759. In addition to providing researchers with a means to measure behavioral aspects of financial management, a financial self-efficacy scale can help educators and counselors better understand, guide, and motivate their students and clients.

Key Words: scale, self-efficacy, stages of change, Transtheoretical Model

Introduction

As the role of psychological factors in financial decisions has become widely acknowledged, consumer educators recognize that simply providing more financial education may not be sufficient to improve financial capability (Schuchardt et al., 2009). Behavioral economists have demonstrated that information and education alone are not sufficient to induce behavior change (Gilovich, Griffin, & Kahneman, 2002; Thaler & Sunstein, 2008; Zweig, 2007).

It is becoming more widely accepted that many consumers lack self-control or exhibit behavioral biases that education alone does not sufficiently address (Zweig, 2007). Recent findings from behavioral economics highlight the importance of understanding the context in which financial choices are made. Additional tools are needed to help counselors and educators assist consumers in recognizing their own behavioral biases. A major factor influencing consumer behavior is the feeling of self-efficacy which is "having the confidence in one's ability to deal with a situation without being overwhelmed" (Hira, 2010, p. 15). Although there are a couple of widely accepted psychological measures of general self-efficacy, no reliable and valid measure specific to financial behavior exists. As self-efficacy expert Bandura (2006) stated, "there is no all-purpose measure of perceived self-efficacy" (p. 307). Self-efficacy measures need to be domain specific. The current study developed and tested the reliability and validity of a Financial Self-Efficacy Scale.

Self-efficacy refers to a sense of personal agency, the belief that one can achieve and succeed at a given task and is related to self-confidence, motivation, optimism, and the belief that one can cope with a variety of life's challenges (Bandura, 1997, 2006). People with high levels of self-efficacy believe that they can perform well at a specified task. Although a person may possess a high level of general self-efficacy, this belief may vary considerably, depending on the task to be accomplished (Bandura, 2006). For example, a person may possess a high level of self-efficacy in their profession yet be unable to lose excess body weight.

A recent compilation of financial planning and counseling scales (Grable, Archuleta, & Nazarinia, 2010) suggested a need for a financial self-efficacy scale. In their more than 300 page chapter devoted to financial attitude and behavior measures, only two items designed to measure financial self-efficacy were identified, both used in a study of teens (Danes & Haberman, 2007). The two items can be used to measure a "person's feeling of being able to deal effectively with a situation" (Danes & Haberman, 2007, p. 52). No reliability assessment was reported; validity was established by verifying differences between genders.

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Another indication of the need for psychometric scales relating to personal financial management comes from the report of the NEFE Quarter Century project which gathered financial literacy experts to review the past 25 years of research and outline an agenda for the future. Among the eight competencies identified by the team "as a basis for building a strong foundation for sustainable financial well-being" is "understanding personal beliefs and attitudes" (Hira, 2010, p. 10). One of the Quarter Century Project teams (Xiao et al., 2010) concluded that "financial behaviors are affected by a large number of internal factors such as personality, individual psychology and cognition, family history, and environment" (Hira, 2010, p. 11). The development of a financial self-efficacy scale will help consumers and the professionals who serve them to identify pathways and barriers to productive personal financial management.

The purpose of the current research was to develop a measure of financial self-efficacy and establish the validity and reliability of scores by comparing to related established measures within the context of the Transtheoretical Model (TTM) of Behavior Change. As the importance of behavioral factors becomes more widely recognized in influencing financial decisions and actions (Gilovich et al., 2002; Montier, 2007; Thaler & Sunstein, 2008; Zweig, 2007), such a measure will be useful to financial researchers, educators, advisors, and counselors. As Durban (2010) states, "the importance of behavioral research outcomes in understanding societal issues and providing public policy recommendations is both evident and necessary" (p. v). An assessment of financial self-efficacy will benefit researchers as they explore reasons why some persons are successful at managing their personal finances while others who have similar demographic and economic characteristics are not. Similarly, a short, easy to administer and score financial self-efficacy measure will be helpful to educators, counselor, and advisors who work directly with clients.

Review of Literature and Theoretical Framework

Psychologists have long recognized that external variables and internal beliefs influence behavior. Being able to understand consumer beliefs regarding their financial self-efficacy could assist educators and counselors in moving individuals closer to making financial decisions that would be not only in their own self-interest but beneficial for the economy as well.

Bandura (1977, 1986, 1997) defined self-efficacy as a person's belief in their ability to succeed at specific tasks. One's perception of self-efficacy plays an important role in how one approaches challenges. The concept of self-efficacy is a central tenant of Bandura's social cognitive theory. According to Bandura (1997), persons with high levels of self-efficacy who have confidence in their ability to accomplish a task are more likely to accept rather than avoid a challenge and more likely to succeed.

Bandura's (1977, 1986, 1997) theory of self-efficacy offers implications for motivation. Self-efficacy is a belief in one's ability to produce desired results. Perceived self-efficacy reflects an optimistic belief in one's ability to succeed. Individuals with high levels of self-efficacy believe that they can accomplish difficult tasks and cope with adversity. Self-efficacy facilitates goal-setting, effort investment, persistence in the face of barriers, and recovery from setbacks. Self-efficacy can be regarded as a positive resistance resource factor. Self-efficacy is related to motivation and behavior and thus, is relevant to behavior change. The adage "knowing and not doing is equal to not doing" applies to consumer capability and behavior change. According to social cognitive theory, learners will be more likely to attempt, to persist, and to succeed at activities and tasks when they possess a strong sense of self-efficacy (Bandura, 1977, 1986, 1997). Failure to succeed at a task may be due, at least in part, to low levels of this sense of self-efficacy.

Self-efficacy refers to the assessments a person makes about her ability to activate the mental resources, motivation, and actions necessary to accomplish a specific task (Gist & Mitchell, 1992). Bandura and Wood (1989) maintained that self-efficacy is related to feelings of personal control and suggest that low self-efficacy may cause a person to focus on potential failure rather than possible success. Research has shown that self-efficacy influences a number of employment-related behaviors and attitudes, including goal aspiration, commitment, and performance (Gist, 1987), which may apply to personal finances as well.

Within the past decade, consumer researchers have embraced the study of behavioral aspects of consumption and financial management (Hira, 2010). Numerous researchers (i.e., Seiling & Shockey, 2006; Xiao et al., 2004) have grounded their studies in Prochaska's Transtheoretical Model (TTM) of Behavior Change. The TTM is based on the constructs of self-efficacy, decisional balance, and the process of behavior change (Prochaska, Norcross, & DiClemente, 1994).

As an example of recent interest in applying self-efficacy in the consumer field, Kinard and Webster (2010) measured self-efficacy of adolescents regarding unhealthy consumption behaviors using a 17-item general self-efficacy scale. The researchers found that self-efficacy "is a weak predictor of risk behaviors viewed positively by peer groups" (p. 39-40). However, Kinard and Webster concluded that the lack of significance for self-efficacy in their study may be due to the use of a general scale rather than a specific measure. They recommend comparing the validity of general self-efficacy measures to "context-specific measures" (p. 40). An additional concern they identified is the extensive length of the measure they used (17 items).

Tokunaga (1993) investigated whether theory and research in consumer behavior, psychology, and substance abuse can distinguish between consumers who do or do not use consumer credit effectively. The goal of his study was to develop an integrative profile of people with credit-related problems, with a focus on the additional predictive ability of psychological variables. Among other psychological factors, credit abusers had lower self-efficacy and greater anxiety concerning their finances than successful credit users. Tokunaga (1993) concluded that psychological variables such as self-efficacy significantly increase the ability to distinguish between prudent and unhealthy credit users. Tokunaga (1993) also found that data on psychological variables can help predict who is likely to have credit problems.

Engleberg (2007) studied the link between economic self-efficacy (confidence in being able to cope with a rapidly changing economy) and money attitudes among young adults. The research revealed a link between economic self-efficacy and saving, as well as positive economic attitudes. Being able to discriminate between low and high levels of economic self-efficacy suggest that the interaction between psychological factors and economic self-efficacy can help young adults cope with rapid economic change (Engleberg, 2007).

One attempt to develop a financial self-efficacy scale (Dietz, Carrozza, & Ritchey, 2003) proved less than successful, perhaps because it contained only three items based on the Pearlin global mastery scale, which does not specifically measure self-efficacy. The researchers concluded that, contrary to their hypothesis, using their 3-item measure, gender was not related to the use of private retirement plans. Dulebohn and Murray (2007) studied investment decision-making behavior in retirement plans with a sample of higher education employees. They measured respondents' perceptions of self-efficacy using four items specific to investment and retirement planning. Dulebohn and Murray concluded with a recommendation for boosting investment self-efficacy in addition to providing more investment education.

Schwarzer and Jerusalem (1995) developed a general self-efficacy scale that has been validated in 30 countries. They also provided guidance and encouragement for researchers to adapt their measure for specific concerns such as health by noting that self-efficacy has a recognized beneficial influence on health behavior and status. Grembowski et al. (1993) extended the research linking positive health behaviors to self-efficacy with a study of older adults, concluding that high self-efficacy is linked to better health. Their study also concluded that interventions designed to increase self-efficacy can also improve health.

Clearly there is a need for a concise measure of financial self-efficacy for use by consumer researchers, educators, counselors, and advisors. Consumer educators and researchers concur that there is a need for more attention to psychological aspects of consumer behavior (Durban, 2010; Grable et al., 2010; Hira, 2010; Xiao et al., 2010). The current study extends the relationship between self-efficacy and physical health established by Grembowski et al. (1993) to financial health by adapting Schwarzer and Jerusalem's (1995) general self-efficacy scale to include personal finances.

Research Purpose and Rationale

The purpose of this study was to develop a measure of self-efficacy specific to financial behavior. A financial self-efficacy scale has the potential to help educators and counselors better understand, guide, and motivate their students and clients. In a research context, a financial self-efficacy measure can be valuable to investigators desiring to measure behavioral aspects of personal financial management. For example, when evaluating financial education program effectiveness, it would be valuable to know the self-efficacy levels of participants. A program may be very successful in motivating behavior change with subjects who start with high levels of financial self-efficacy, yet the same curriculum may fail to achieve its objectives with learners with low financial self-efficacy.

Methods

The instrument developed for the current study is based on the 10-item General Self-Efficacy Scale (GSES)

(Schwarzer & Jerusalem, 1995). Their uni-dimensional scale has been validated in 30 countries with Cronbach's alphas ranging from .76 to .90. Criterion-related validity for the GSES was documented in studies which found positive correlations with favorable emotions, optimism, and satisfaction with work. Negative correlations with depression, anxiety, stress and burnout, as well as health complaints were confirmed (Schwarzer & Jerusalem, 1995). Because the GSES is a general measure, it does not assess specific behavior; thus, it is necessary to add items that relate to the particular concept being measured (Bandura, 2006).

The financial self-efficacy scale was modeled directly on the GSES and Schwarzer's (2010) health self-efficacy scale by incorporating specific references to financial management in six of the original 10 statements. Four of the original GSES items were retained. Statements addressed how respondents manage certain financial problems and how they cope with setbacks. Subjects were instructed to respond to each statement using a Likert-type scale: 1 = not true at all, 2 = hardly true, 3 = moderately true, and 4 = exactly true. All items are listed in the Appendix.

The general self-efficacy items were scored from 1= not at all true, to 4 = exactly true; the financial statements were reverse scored so that a higher score corresponds to a higher level of perceived self-efficacy. Total scores on all ten items can range from 10 to 40; scores on the six financial self-efficacy statements can range from 6 to 24. According to Schwarzer and Jerusalem (1995), it is equally appropriate to sum the responses to obtain a total score or to calculate a mean score.

Data were collected online in November 2009 using Survey Monkey from employees of a large state university as part of a larger study of financial planning. The study was approved by the university's Institutional Review Board. The Human Resources Office provided current email addresses of employees and sent a notification letter through campus mail informing employees of the study and encouraging their participation.

Internal consistency reliability was measured using Cronbach's alpha. A number of methods were used to assess the validity of the Financial Self-Efficacy Scale (FSES). To assess criterion-related validity, responses to the FSES were correlated with the Retirement Personality Type (RPT) measure, a self-perception measure of investment sophistication and financial confidence (Employee Benefit Research Institute [EBRI], 2000). The Retirement Confidence Survey (EBRI, 1999) describes the five RPTs: *Planners* are disciplined savers who are willing to take investment risks and also have estimated how much they need for a comfortable retirement. *Savers* are similar to planners in that they are saving for retirement, but they are less willing to take investment risks. *Strugglers* think planning for retirement takes too much time and that if they just save some money they will be comfortable. *Impulsives* believe a comfortable retirement is possible but only about half are saving for retirement. *Deniers* feel it is pointless to plan for retirement because it is too far away and/or planning takes too much time and effort. Deniers avoid financial risks and are likely to be older and lower income (EBRI, 1999).

One-way analysis of variance (ANOVA) was also used to assess validity. In general, ANOVA is used to examine the relationship between multiple independent (classification) variables and a dependent variable (FSES). It was hypothesized that the more sophisticated and self-confident the investor, the higher the FSES score. A second hypothesis was that planners and savers would score higher on the FSES than strugglers, impulsives, and deniers.

As part of the validation process, factor analysis was used to determine the extent to which financial self-efficacy is similar to or different from general self-efficacy. Factor analysis is a statistical method to analyze relationships (correlations) among variables and to explain the common underlying constructs or factors (Kim & Mueller, 1978). Factor analysis condenses a large number of variables into a smaller number of factors or constructs. The correlations between the individual variables indicate shared or separate factors, thus helping to verify the conceptualization of the construct. The factor analysis used principal components analysis with varimax rotation and Kaiser normalization.

Results

Surveys were sent to 1,720 university employees; 726 responses were received for a response rate of 42.2%. As shown in Table 1, men constituted 54.6% of the sample. Most respondents (79.3%) were married with household incomes of $50,000 or more. Respondent ages ranged from 23 to 84 with a mean of 47.2 years and a median of 48. Reflecting university employee composition, there was little ethnic diversity and three quarters of respondents had earned graduate degrees. The most common Retirement Personality Type (RPT) was planner (53.1%), followed

Table 1. Demographic Characteristics

Variable	*n*	%
Gender		
Men	335	54.6
Women	278	45.4
Marital status		
Married	47	79.3
Living together/partnered	22	3.6
Widowed	6	1.0
Divorced	37	6.0
Separated	6	1.0
Never married	56	9.1
Age		
Less than 45	248	40.9
45-54	160	26.4
55-65	179	29.5
Over 65	19	3.1
Ethnic group	1	
American Indian/Alaskan Native	12	0.2
Asian/Pacific Islander	4	2.0
Black/African-American	13	0.7
Hispanic/Latino	576	2.1
White or Caucasian	7	94.0
Other		1.1

Variable	*n*	%
Education		
Some college/technical training	18	2.9
Bachelor's degree	132	21.4
Master's degree	202	32.8
Ph.D./professional degree	264	42.9
Retirement planning type		
Denier	47	7.9
Struggler	25	4.2
Impulsive	83	13.9
Saver	125	20.9
Planner	317	53.1
Type of investor		
Sophisticated	47	6.3
Average	222	29.9
Simple	306	41.2
I know nothing	167	22.5
Household income		
Less than $25,000	8	1.3
$25,000 to less than $50,000	106	17.5
$50,000 to less than $75,000	141	23.3
$75,000 to less than $100,000	138	22.8
$100,000 or more	213	35.2

by saver (20.9%), impulsive (13.90%), denier (7.7%), and struggler (4.1%). Despite the high proportion of planners and savers in the sample, when asked how sophisticated they considered their investments skills, only 6.3% of respondents considered themselves sophisticated; 29.9% rated themselves as average. The largest group (41.2%) identified themselves as having only a very basic knowledge of investing while more than one fifth (22.5%) admitted that they know nothing about investing. About half of the respondents (49.3%) were very confident in their ability to manage their investments in retirement while 13.6% were confident. About one fourth (23.4%) were not too confident, 10.3% were not at all confident, while 3.4% were not sure.

Scores on the six financial self-efficacy items ranged from 6 to 24 with a mean score of 17.0 and Cronbach's alpha reliability of .76. The Pearson *r* correlation between the six financial self-efficacy items and the four general self-efficacy items was .373 ($p < .001$). This low correlation indicates that the financial self-efficacy and general self-efficacy items were measuring different constructs.

Table 2. One-Way Analysis of Variance for Retirement Personality Type and Financial Self-efficacy

Source	*df*	*SS*	*MS*	*F*
Between groups	4	1496.701	374.175	39.862**
Within groups	589	5528.830	9.387	
Total	593	7025.530		

**$p < .01$.

Table 3. Factor Analysis: Initial Component Matrix

	Component 1	Component 2
Hard time solving financial challenge	0.741	
Progress toward my financial goals	0.675	0.351
Stick to spending plan	0.633	0.344
Coping with unexpected events (GSE)	-0.624	0.104
Lack confidence in managing finances	0.624	
Use credit for unexpected expenses	0.599	0.273
Worry about money in retirement	0.577	0.122
Solve difficult problems (GSE)	-0.334	0.708
Solve most problems (GSE)	-0.395	0.658
Remain calm (GSE)	-0.410	0.513

Note. GSE = general self-efficacy.

Table 4. Factor Analysis: Rotated Component Matrix

	Factor 1: Financial self-efficacy	Factor 2: General self-efficacy
Progress toward my financial goals	0.759	
Stick to spending plan	0.719	
Hard time solving financial challenge	0.697	-0.260
Use credit for unexpected expenses	0.658	
Lack confidence in managing finances	0.592	-0.207
Worry about money in retirement	0.574	-0.134
Coping with unexpected events (GSE)	-0.521	0.358
Solve difficult problems (GSE)		0.783
Solve most problems (GSE)		0.763
Remain calm (GSE)	-0.154	0.638

Note. GSE = general self-efficacy.

A one-way ANOVA compared self-efficacy scores to respondents' assessment of their perceived level of investment sophistication. As anticipated, there is a clear relationship with "sophisticated" investors scoring 19.3 on financial self-efficacy, "average" investors scoring 18.5, "simple" investors scoring at the overall mean of 17.0, and "know nothings" scoring 15.0. The ANOVA was significant ($p < .01$).

Financial self-efficacy scores were expected to correlate with level of confidence in being able to manage money to last for their lifetime (in retirement) as measured with a 4-point confidence scale. Financial self-efficacy mean scores ranged from 13.5 for those "not at all confident" to 20.2 for the "very confident." The ANOVA was significant ($p < .01$).

Mean financial self-efficacy scores for the five Retirement Personality Types were: deniers (15.4), impulsives (14.0), strugglers (14.7), savers (17.4) and planners (18.4). The deniers had the largest standard deviation (3.85). The overall ANOVA was significant ($p < .01$), with planners and savers scoring above the financial self-efficacy mean while strugglers, impulsives, and deniers scored below the mean of 17.0 (see Table 2). With the exception of the deniers, the financial self-efficacy scores progressed as expected with planners scoring highest. Strugglers, impulsives and deniers all scored lower than planners and savers. The mean FSES scores for planners and savers were each significantly different from the other four RPTs.

As further evidence of the criterion-related validity of the scale, mean financial self-efficacy scores increased with educational level as follows: some college (15.4), bachelor's degree (16.6), master's degree (16.8), and doctorate or professional degree (17.9). The one-way ANOVA was significant ($p < .01$). The Pearson r correlation between financial self-efficacy and age (.084) was positive and significant ($p < .04$) as was risk tolerance (.366; $p < .01$).

The factor analysis used principal components analysis with varimax rotation. The initial matrix of the factor analysis is presented in Table 3. The four GSES items were negatively correlated with the financial self-efficacy statements. The total variance explained by component one is 29.9% with 18.6% explained by component two.

The rotated component matrix which resulted in two distinct factors is shown in Table 4. The rotation converged in three iterations using varimax rotation with Kaiser normalization. The six financial self-efficacy items were all strongly correlated with each other, with factor loadings ranging from .574 (worry about money in retirement) to .759 (progress toward goals). The four general self-efficacy items constituted the second factor. The factor loadings for three of the general self-efficacy statements ranged from .638 to .783; the fourth general self-efficacy item (coping with unexpected events) had a factor loading of .358 with the general items and -.521 with the financial statements. Half (51%) of the total variance in self-efficacy scores was explained by the two factor solution.

Discussion and Implications

Validity measures the degree to which an indicator measures what it is designed to measure. In reality it is not the instrument that is validated, but the measurement in relation to the purpose for which it was designed. "Strictly speaking, one does not assess the validity of an indicator, but rather the use to which it is being put" (Carmines & Zeller, 1979, p. 12). Establishing reliability and validity is a matter of degree rather than an all or nothing decision. Comparisons to the GSES and RPT confirmed the criterion related validity of the Financial Self-Efficacy Scale (FSES) and supported the conceptual link to the TTM.

Based on the current study, the 6-item FSES demonstrates a high alpha reliability of .76, criterion-related and construct validity, and, as demonstrated by the factor analysis, the FSES is uni-dimensional, specifically measuring financial psychometric properties. According to the factor analysis, financial self-efficacy is different from general self-efficacy as measured by the GSES. The Pearson r correlation of .373 between the six financial self-efficacy items, and the four general self-efficacy items indicates that the two measures are moderately, positively related but that financial self-efficacy is different from general self-efficacy. The 6-item FSES overcomes the dual problems identified by Kinard and Webster (2010) of lacking concept specificity and being too long. The FSES is short and thus quick and easy to administer and score.

Nonetheless, no research is without limitations. Because the FSES was tested and validated with a small sample of very well educated, mostly Caucasian subjects from one region of the country, further testing is needed to see if the psychometric properties are sustained with more diverse audiences. Because the larger study from which the data were obtained focused on retirement planning, item six, "I worry about running out of money in retirement" was very appropriate. However, with a younger sample a more

suitable statement might be "I worry about money" or "I worry about having enough money." The FSES will benefit from further research with more diverse populations.

Following the recommendation of Schwarzer and Jerusalem (1995), there is no specific cutoff score for assessing self-efficacy, but the mean financial self-efficacy score for the six items is 17. So, until further testing establishes more specific benchmarks, scores can be conceptualized as near the mean (16-18) and above or below the mean.

The FSES can be used with adults in education, counseling, and research applications. If desired, the four GSES items can be used to help students or clients assess and compare their levels of both financial and general self-efficacy. Due to the references to spending plans, credit use, and concern about retirement, the scale is intended to be used with adults. A similar scale could be developed for use with adolescents.

Financial counselors and advisors can use the FSES to assess the extent to which their clients are likely to need supplemental support, encouragement, and attention to accomplish financial tasks. Counselors and educators might ask clients and students to answer the RPT questions in addition to the FSES to provide a more robust picture of psychometrics related to financial management. As described by the EBRI (1999), planners and savers are taking appropriate actions to plan for future financial security while strugglers, impulsives and deniers are behind where they need to be to ensure later life financial security. Essentially, planners and savers are at the action and maintenance stages in the TTM, while deniers, impulsives, and strugglers represent the precontemplation, contemplation, and preparation stages.

As conceptualized by the TTM, clients or students with low levels of financial self-efficacy are likely to need extra help, support, and reminders to accomplish tasks and achieve goals. In contrast, a counselor or advisor can have greater confidence that a client with a financial self-efficacy score higher than the mean of 17 will readily follow through on assigned tasks. Clients with low financial self-efficacy may require more of the counselor's time and attention. For example, when a low financial self-efficacy client nods their head in agreement that they will accomplish an assigned task, the counselor may want to follow up with a reminder phone call or email to encourage completion of the task.

For researchers, the FSES is well suited to program evaluation purposes. In addition to assessing knowledge and actions, a researcher can measure participant self-efficacy as well. For educational programs with multiple sessions, an educator could have participants fill out the measure as a pre-test and again at the end of the program to assess whether perceived financial self-efficacy improved as a result of the education. Consumers who lack the confidence that they can implement recommended financial tasks will need some role modeling and confidence building in addition to financial capability education.

Fostering higher levels of financial capability for Americans will take more than delivering effective educational programs (Hira, 2010). Especially during and after the great recession of 2007-2009, many Americans who lost employment or experienced problems paying their mortgage may lack the resources to implement recommended financial planning strategies. The psychological impact of the recession and lingering aftermath may also have reduced perceptions of financial self-efficacy. While it is too late to go back to the boom years of 2004-07 to assess financial self-efficacy prior to the great recession, collecting longitudinal data in the future could provide insight into how the collective consumer psyche is affected by economic booms and busts.

Persons with high levels of general self-efficacy have been shown to be more successful than those with low self-efficacy in coping with adverse circumstances (Park & Folkman, 1997). Consumer educators and counselors can use the FSES with students and clients to gain insight into some of the psychological processes that affect their ability to accomplish financial goals. Research is needed to determine the relationship between financial self-efficacy and coping skills for dealing with financial challenges and stress. Research in the health and exercise fields has demonstrated that self-efficacy can be boosted to encourage health promoting behaviors (Grembowski et al., 1993). Similar research is needed to determine the most effective strategies for fostering higher levels of financial self-efficacy (Schuchardt et al., 2009).

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Appendix

Original items adapted from GSES

Please respond to the following statements using these response categories:

1 = Exactly true 2 = Moderately true
3 = Hardly true 4 = Not at all true

(Items 1, 5, 8 and 10 are reverse-scored.)

1. I can always manage to solve difficult problems if I try hard enough. (R)
2. It is hard to stick to my spending plan when unexpected expenses arise.
3. It is challenging to make progress toward my financial goals.
4. When unexpected expenses occur I usually have to use credit.
5. I am confident that I could deal efficiently with unexpected events. (R)
6. When faced with a financial challenge, I have a hard time figuring out a solution.
7. I lack confidence in my ability to manage my finances.
8. I can solve most problems if I invest the necessary effort. (R)
9. I worry about running out of money in retirement.
10. I can remain calm when facing difficulties because I can rely on my coping abilities. (R)

The Financial Self-Efficacy Scale (FSES)

Please respond to the following statements using these response categories:

1 = Exactly true 2 = Moderately true
3 = Hardly true 4 = Not at all true

1. It is hard to stick to my spending plan when unexpected expenses arise.
2. It is challenging to make progress toward my financial goals.
3. When unexpected expenses occur I usually have to use credit.
4. When faced with a financial challenge, I have a hard time figuring out a solution.
5. I lack confidence in my ability to manage my finances.
6. I worry about running out of money in retirement.

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