

# The Sentimental Savings Study: Using Financial Psychology to Increase Personal Savings

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## Executive Summary

- Previous research has demonstrated that financial behaviors, such as saving behaviors, are heavily influenced by emotion. This study sought to determine what effect engaging people emotionally using a sentimental item would have on their saving behaviors.
- A double-blind, randomized experiment was conducted comparing a financial psychology session to a financial education session. A total of 102 subjects participated in the three stages of the study, providing pre-session, post-session, and three-week follow-up data.
- Immediately after the session, the group that received the financial psychology session showed statistically significant increases in their readiness to save, confidence in their ability to save more, financial satisfaction, and financial health.
- At the three-week follow-up, the financial psychology group reported a 73 percent increase in their rates of savings from pre-session while the financial education group reported a 22 percent increase in their rates of savings rates during the same period.

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approved by the Creighton University Institutional Review Board. The preliminary results released to the public in relation to this study incorrectly stated a 67 percent increase in savings for the sentimental savings, or SS group. This final reporting of all results contains the correct figure of 73 percent.

**SINCE 2007**, the American Psychological Association (APA) has conducted a yearly *Stress in America™* survey. Each year, money has been identified as a top source of stress in the lives of three out of four Americans, above issues such as work, health, and family.<sup>1</sup> The poor financial health of Americans makes this stress no surprise. For example, savings rates in the United States reached a low of -0.5 percent in 2005<sup>2</sup>, several years

before the Great Recession. This had been the lowest savings rate seen since the Great Depression.<sup>3</sup> As of March 2019, savings rates increased to 6.5 percent<sup>4</sup> but were still much lower than the 10 percent to 15 percent typically recommended by financial planners (Dalton, Dalton, and Oakley, 2014).

It has been argued that the primary financial behavioral problems in America are overspending and a lack of savings, behaviors that are well known to be problematic and are not solely the result of a lack of financial literacy (Klontz and Klontz 2009). Traditional financial education programs have focused on financial literacy (i.e., financial knowledge) and have failed to bring about significant behavior change (Fernandes, Lynch, and Netemeyer 2014). Thus, there is a need for improved approaches to financial interventions. This study sought to examine the effectiveness of a financial psychology-based session designed to increase personal savings.

### Financial Education

Financial education efforts aim to provide practical financial information to help people “take control of their circumstances, improve their quality of life, and ensure a more stable future for themselves and their family,” according to the National Endowment for Financial Education.<sup>5</sup> However, research on the effectiveness of financial education programs has shown mixed results (Martin 2007). This can be explained, in part, by inconsistent measurements and definitional frameworks for financial literacy, inconsistent educational topics, and a variety of program delivery methods (Huston 2010; Remund 2010).

At best, financial education efforts have achieved marginal success in improving savings behaviors of Americans. A meta-analysis examining 201 studies on financial education interventions aimed to improve financial

behaviors found that such efforts explained just 0.1 percent of the variance in financial behaviors (Fernandes, Lynch, and Netemeyer 2014). Miller, Reichelstein, Salas, and Zia (2015) examined 188 papers on interventions aimed to increase financial knowledge, skills, attitudes, and behaviors, and found financial education influenced some behaviors (e.g., savings and record keeping) though not others (e.g., loan defaults).

Miller, Reichelstein, Salas, and Zia (2015) also found that savings behavior was the single most targeted behavior among the studies analyzed within their meta-analysis. Based on their findings, Miller et al. (2015) concluded that indicative rather than definitive evidence existed to suggest financial education was positively associated with savings behavior. Although the relationship was not statistically significant, Miller et al. (2015) noted that a positive relationship between more intense (i.e., longer) treatment exposures and savings behavior was found up to about 15 hours, at which point the relationship reversed. However, Fernandes, Lynch, and Netemeyer (2014) noted that more rigorous study designs, such as the use of instrumental variables and truly randomized experiments, generally led to smaller effect sizes of financial literacy on financial behaviors.

### Theoretical Framework

**The transtheoretical model of change.** Given these inconsistent results, a more effective framework for financial education is needed. The transtheoretical model (TTM) of change provides a useful basis for such a framework. It categorizes behavior change into six stages, all requiring different intervention techniques to be successful (Prochaska, Norcross, and DiClemente 1994). For instance, those in the precontemplation stage (i.e., not intending behavior change

within at least the next six months) may be more affected by an emphasis on the benefits of saving (e.g., linking savings to values and future goals), while those in the contemplation stage (i.e., intending behavior change within six months) may be more affected by an emphasis on decreasing the negative aspects of savings (e.g., learning to live comfortably within one’s means and save). Because any participant group arguably contains individuals from various stages, it is important to employ a variety of techniques, rather than only financial education, to increase the probability that each participant will be exposed to a message that matches her needs and, subsequently, will be more likely to experience a positive change in her financial literacy and financial behaviors.

**Traditional financial education programs have focused on financial literacy and have failed to bring about significant behavior change.**

**Experiential financial therapy, personal nostalgia, and emotional activation.** The experiential financial psychology approach used in this study incorporated personal nostalgia to evoke emotional activation. Psychological research commonly employs emotion activation to induce certain feeling states in participants (Izard 1993). Emotion activation involves eliciting either a positive or negative emotion through some sort of outside stimulation. Emotion activation can be achieved through the use of physical stimuli (Strack, Martin, and Stepper 1988; Meagher, Arnau, and Rhudy 2001). Emotion

activation can also be achieved through the use of psychological stimuli, such as cuing, to retrieve memories from one's past (Izard 1993) and asking one to recall implicit preconscious thoughts into consciousness (Kihlstrom 1990).

With regard to personal finance, experiential financial therapy has been noted to be a psychological approach that has "a strong emotional component" that "offers clients the opportunity to increase awareness of their feelings and sensations" (Klontz, Klontz, and Tharp 2016, p. 103). Experiential financial therapy uses a variety of techniques designed to facilitate emotional activation, including art therapy, exploring a client's money scripts, and working with a client's past experiences to help them make better choices in the present (Klontz, Klontz, and Tharp 2016).

One method for linking someone to their past and facilitating emotional activation is through exposure to personally meaningful objects (Belk 1988; Wallendorf and Arnould 1991). Meaningful objects are often integral to identity, and they may be used by adults to evoke significant emotions from childhood (Belk 1988; Sirgy 1982). This desire to reconnect with the past may also be useful in promoting future action, such as savings behaviors, as nostalgic items allow people to "bask in the glory of the past in the hope that some of it will magically rub off" (Belk 1988, p. 149).

### Present Study and Research Hypotheses

This study aimed to assess the effectiveness of two approaches to increase savings behavior: (1) a session that employed traditional didactic instruction in personal finance, referred to as the financial education (FE) condition; and (2) a session that used experiential financial therapy methods and a personal nostalgic item to maximize emotional engagement referred to as the sentimental savings (SS) condition.

Data were collected to analyze changes in participants' savings rates as well as related financial beliefs and behaviors immediately following the session and at a three-week follow-up. It was hypothesized that the educational efforts in both sessions would increase the savings rates of all participants, but when compared to those in the traditional teaching method condition, participants exposed to the SS condition would report significantly more positive changes following the session. In particular, the following hypotheses were investigated:

*H1:* Participants in the SS condition will report significantly greater improvements than those in the FE condition in their savings beliefs (e.g., perceived importance of saving, confidence in ability to save, motivation to save, and readiness to change savings behaviors) both immediately following the session and at the three-week follow-up.

*H2:* Participants in the SS condition will report significantly greater improvements than those in the FE condition in their financial stress, knowledge, and satisfaction both immediately following the session and at the three-week follow-up.

*H3:* Participants in the SS condition will report significantly greater improvements than those in the FE condition in their financial behaviors (e.g., savings rates) three weeks following the session.

*H4:* Participants in the SS condition will report significantly greater emotional attachment to their sentimental items immediately following the session.

### Method

The approaches studied were administered in sessions that averaged 40 to 80 minutes. The double-blind characteristics of this study were: (1) participants were unaware of the number of conditions in the study; (2) participants were unaware of whether they were in a control or experimental condition; (3)

facilitators were unaware of the number of conditions in the study; (4) facilitators were unaware of whether they were teaching the control or experimental condition; (5) facilitators were told to stay within the bounds of the curriculum and script given to them, and were instructed to give their presentation with maximum effort toward effectiveness, defined as doing their best to educate and engage participants; and (6) facilitators did not have any direct knowledge of the content of the curriculum being presented in conditions other than their own.

Facilitators included a licensed psychologist and a Ph.D. candidate in personal financial planning. Participants completed a basic demographics questionnaire with questions regarding age, gender, educational attainment, marital status, employment status, income, and net worth.

### Independent Variables

**Sentimental savings session (experimental condition).** The SS session was delivered by a 29-year-old licensed psychologist. Prior to showing up on site, each participant assigned to the SS condition was asked to bring a sentimental item (e.g., a nostalgic or valued item from the past) or a photograph of this item to the presentation session. The SS session involved a scripted, 40-slide PowerPoint presentation. As part of the presentation, participants engaged in several multimodal, experiential exercises designed to help them: (1) recall, in detail, how and where they received their sentimental item; (2) identify the feelings and values they have attached to their sentimental item; (3) identify their top savings goals; and (4) identify how similar feelings and values linked to their sentimental item can be applied to enhance their motivation to save. This approach drew from a variety of experiential financial therapy methods (Klontz, Klontz, and

Tharp 2016; Klontz, Bivens, Klontz, Wada, and Kahler 2008), including guided visualization and creating visual representations of savings goals using art supplies, using personal nostalgia to assist with emotional activation and linking past experiences to the present, and an exploration of money scripts. The SS sessions ranged in length from 73 to 105 minutes ( $M = 83.2$  minutes).

**Financial education session (control condition).** The FE condition was delivered by a 28-year-old Ph.D. candidate in personal financial planning. It consisted of a scripted 27-slide PowerPoint presentation on: (1) the financial planning process as defined by CFP Board’s Standards of Professional Conduct<sup>6</sup>; (2) the importance of savings and statistics regarding the unpreparedness of American households to fund retirement and come up with funds in the event of a financial shock; (3) the time value of money (e.g., compound interest); (4) healthy savings goals and ratios commonly used within personal finance literature as objective indicators of financial well-being; and (5) various savings vehicles (e.g., CDs, money market accounts, cash).

Prior to distributing the post-test assessments, participants were given an opportunity to ask questions about any of the topics covered in the presentation. The FE sessions ranged in length from 30 to 45 minutes ( $M = 40$  minutes). Presentation lengths varied in part based on the number of questions asked by the participants. The financial education sessions were somewhat shorter than the SS sessions due to the interactive exercises included in the SS condition.

**Dependent Variables**

**Importance of savings and confidence in ability to save.** Several psychological components have been found to be associated with a person’s motivation to change behavior. These include the degree to which the individual

**Table 1: Matrix for Identification of Readiness to Save Stages**

<b>Question 1: Do you seriously intend to save more in the next six months?</b>	No	Yes	Yes
<b>Question 2: Do you plan to save more in the next 30 days?</b>	No	No	Yes
<b>Stage</b>	Pre-contemplation	Contemplation	Action

believes that the change is important and the degree to which he or she has confidence in his or her ability to change (Miller and Rollnick 2002). Based on motivational interviewing, two questions were included to assess the perceived importance of saving and confidence in one’s ability to save, scored on a scale of 0–10.

**Motivation to save.** The trans-theoretical model of change (TTM) (Prochaska, Norcross, and DiClemente 1994) is considered a primary model for understanding how and when individuals change behaviors toward healthier habits. Based on the TTM and existing research around measuring healthy change in other areas (Andres, Saldaña, and Gomez-Benito 2009; Spiller, Scaglia, Meneghini, and Vanzo 2009), a four-item “motivation to save” scale was comprised for this study, adapted from scales used to assess motivation for change around exercise behaviors (Bess, Rakowski, and Rossi 1992).

These items consist of pro-statements in favor of saving measured on a 6-point Likert-type scale where 1 = strongly disagree, and 6 = strongly agree. The motivation to save scale was: (1) *I would feel less stressed if I saved regularly*; (2) *I would feel more confident if I saved regularly*; (3) *I would sleep more soundly if I saved regularly*; and (4) *I would feel good about myself if I kept my commitment to save regularly*. The motivation to save scale showed good internal consistency at pre-test ( $\alpha = 0.88$ ).

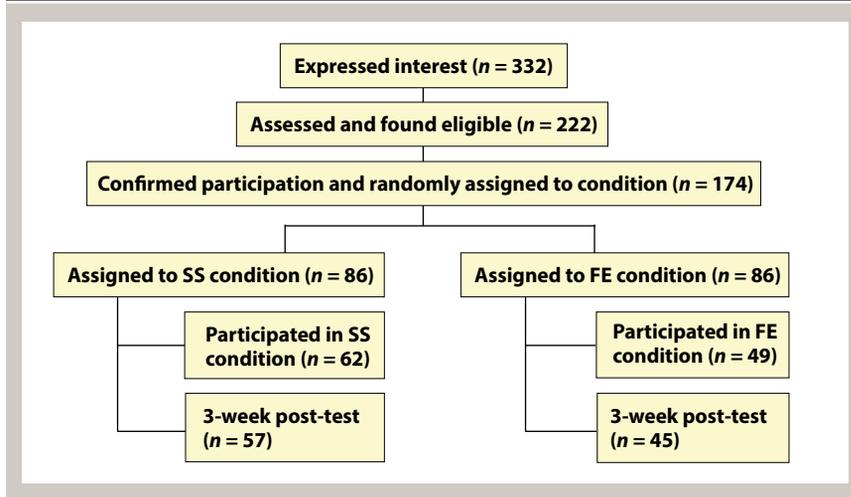
**Readiness to save.** Stages of change around readiness to save was measured according to TTM stage identification matrix adapted from Kerkmann (1998). Based on participants’ responses to

two yes/no questions (Do you seriously intend to save more in the next six months? Do you plan to save more in the next 30 days?), participants were classified as being in the precontemplative, contemplative, or action stages of change, representing increasing levels of readiness for change. Table 1 provides a matrix for how respondents were classified.

**Financial stress, financial knowledge, and financial satisfaction.** Financial stress, financial knowledge, and financial satisfaction were measured on three separate 10-point-stair-step questions, which have been used in previous research (Joo and Grable 2004; Klontz, Sullivan, Seay, and Canale 2015).

**Savings behaviors.** Savings behaviors were measured prior to the sessions and at the three-week follow-up. Savings behaviors were measured in three ways. First, participants were asked to report their current savings percentage as a percentage of gross earnings before the session and at the three-week follow-up. Second, the projected annualized savings in dollars based on this percentage of gross income that was computed before the session and at three-week follow-up.

Third, questions drawn from Global Financial Health scale of the Klontz-Britt Financial Health Scale (K-BFHS) were used to measure savings behaviors (Britt, Klontz, Tibbetts, and Leitz 2015). These four questions were rated on a 6-point Likert-type scale, where 1 = strongly disagree and 6 = strongly agree and included: (1) I am saving for goals such as a car, a house, etc.; (2) I make regular contributions to my personal or company retirement savings plan(s); (3) The way I manage money is consistent

**Figure 1:** Study Enrollment Flow Chart and Sample Retention

with my values, goals, and dreams; and (4) I am taking the steps necessary to meet my financial goals. The savings health scale showed acceptable internal consistency at pre-test ( $\alpha = 0.72$ ).

**Nostalgic item.** Participants in the SS condition were asked to rate their level of emotional attachment to their nostalgic item on a 1–10 Likert-type scale, where 1 = not at all, and 10 = extremely.

**Participant rating of session acceptability.** To evaluate the acceptability of the teaching methods, a measure of participant rating of session acceptability was included post-session. This used a 6-point Likert-type scale investigating participants' agreement with the following statements, where 1 = strongly disagree, and 6 = strongly agree: (1) I enjoyed this presentation; (2) I thought this session provided valuable information about savings; and (3) I would recommend this session to a friend. The session acceptability scale showed excellent internal consistency at ( $\alpha = 0.95$ ).

## Participants

Participants were recruited through online and social media advertisements inviting them to take part in a study involving savings. In an attempt to get a more geographically representative sample, five

cities were chosen as implementation sites with a target of 20 to 30 participants in each location: Boston (19 participants); Atlanta (26 participants); Dallas (24 participants); Austin (17 participants); and Seattle (25 participants).

Participants were randomly assigned in equal numbers to one of two sessions (the FE or SS condition) before they came on site, and the times were staggered so that participants from different groups did not encounter each other. Screening criteria necessitated that participants be employed and between the ages of 22 and 54. Participants assigned to the experimental condition (SS condition) were asked to think about a sentimental item they have saved from their past and to bring it, or a picture of it, to the study site.

Figure 1 shows the study enrollment flow chart and sample retention. A total of 111 subjects participated in the study. They were randomly assigned to either the FE or the SS group. Forty-nine individuals participated in the FE group and 62 participated in the SS group. A total of 102 subjects completed the three-week follow-up survey and were included in the subsequent analyses. The nine subjects who dropped out did not appear to differ significantly from the group as a whole (five were from

the SS group, four from the FE group, six were females and three males, their average age was 43, and dropouts occurred in all five locations).

## Procedures

Hotel conference rooms were secured in the cities of Dallas, Austin, Seattle, Boston, and Atlanta. Participants were recruited through a combination of online and social media advertisements inviting them to take part in a study involving a 60-minute financial education session focused on saving. The advertisement copy read:

*Want to get paid to learn how to save more money? If you are currently employed in or around [Atlanta, Austin, Boston, Dallas, or Seattle] and between the ages of 22 and 54, you qualify to be selected for a study about how to save more money for your future. Eligible participants who are selected will receive \$50 as compensation for their time and participation in the saving money study.*

Participants were asked to answer survey questions at three points in time: (1) before the session; (2) immediately after the session; and (3) three weeks after the session (electronically submitted via Survey Monkey). The first survey included non-identifying basic demographic information and questions on savings motivations, stages of change, financial stress, financial satisfaction, financial knowledge, and current savings behaviors.

Following the session, participants completed a second survey repeating the questions on savings motivation, stages of change, financial stress, financial satisfaction, financial knowledge, and questions rating the acceptability of the session. Three weeks following the session, participants answered questions related to their current savings behavior as well as the repeating questions on savings motivation, stages of change, financial stress, financial satisfaction, and financial knowledge.

**Table 2: Demographic and Pre-Session Data for Total Sample, SS and FE Groups**

		Total (n = 102)	SS (n = 57)	FE (n = 45)	Statistics
<b>Age</b>	Mean (SD)	38 (10.033)	37.41 (8.94)	39.82 (11.234)	$t(98) = 1.162, p = 0.249$
	Range	23–63	24–55	23–63	
<b>Gender</b>	Female	67 (66%)	37 (65%)	30 (67%)	$\chi^2(1, N = 102) = 0.034, p = 0.853$
	Male	35 (34%)	20 (35%)	15 (33%)	
<b>Income</b>	Mean (SD)	\$64,210 (\$33,716)	\$59,640 (\$30,988)	\$70,000 (\$36,412)	$t(100) = 1.552, p = 0.124$
	Median	\$57,000	\$55,000	\$65,000	
	Range	\$5k–\$200k	\$5k–\$150k	\$6k–\$200k	
<b>Net Worth</b>	Mean (SD)	\$159,692 (\$251,239)	\$126,273 (\$210,634)	\$203,455 (\$293,089)	$t(95) = 1.445, p = 0.153$
	Median	\$56,000	\$50,000	\$83,500	
	Range	–\$45k–\$1.25 mil	\$0–\$1.2 mil	–\$45k–\$1.25 mil	
<b>Savings Percentage</b>	Mean (SD)	11.94% (12.32)	10.051% (14.789)	8.567% (8.187)	$t(98) = -0.602, p = 0.549$
	Median	10%	6%	5%	
	Range	0%–75%	0%–75%	0%–30%	
<b>Marital Status</b>	Married	36	17 (30%)	19 (42%)	$\chi^2(4, N = 102) = 2.607, p = 0.626$
	Cohabiting	19	11 (19%)	8 (18%)	
	Never Married	32	19 (33%)	13 (29%)	
	Separated	4	2 (4%)	2 (4%)	
	Divorced	11	8 (14%)	3 (7%)	
<b>Employment</b>	Full-time	85 (83%)	49 (86%)	36 (80%)	$\chi^2(1, N = 102) = 0.644, p = 0.422$
	< Full-time	17 (17%)	8 (14%)	9 (20%)	
<b>Ethnicity</b>	White	56 (55%)	35 (61%)	21 (47%)	$\chi^2(5, N = 102) = 4.189, p = 0.523$
	Black	20 (20%)	10 (18%)	10 (22%)	
	Asian	10 (10%)	4 (7%)	6 (13%)	
	Mixed	8 (8%)	5 (9%)	3 (7%)	
	Hispanic	7 (7%)	3 (5%)	4 (9%)	
<b>Education</b>	High School	2 (2%)	1 (2%)	1 (2%)	$\chi^2(5, N = 111) = 4.158, p = 0.527$
	Some College	15 (15%)	5 (9%)	10 (22%)	
	Associate's	5 (5%)	3 (5%)	2 (4%)	
	Bachelor's	53 (52%)	31 (54%)	22 (49%)	
	Master's	25 (24%)	15 (26%)	10 (22%)	
	Doctorate	2 (2%)	2 (4%)	0	

**Table 3: Dependent Measure Scores at Pre-Session**

	SS Group (n = 57)	FE Group (n = 45)	Statistics
<b>Importance</b>	9.00 (1.118)	9.20 (1.217)	$t(100) = 0.863, p = 0.390$
<b>Confidence</b>	7.35 (2.233)	7.16 (2.335)	$t(100) = -0.430, p = 0.668$
<b>Motivation</b>	4.794 (0.921)	4.806 (1.099)	$t(100) = 0.058, p = 0.953$
<b>Readiness</b>	1.72 (0.590)	1.60 (0.668)	$t(100) = -0.942, p = 0.348$
<b>Stress</b>	6.21 (2.396)	7.02 (2.050)	$t(100) = 1.809, p = 0.074$
<b>Knowledge</b>	6.68 (1.863)	6.76 (1.433)	$t(100) = 0.212, p = 0.832$
<b>Satisfaction</b>	4.81 (2.100)	4.69 (2.420)	$t(109) = -0.259, p = 0.793$
<b>\$ Health</b>	4.246 (1.074)	4.128 (1.52)	$t(100) = -0.533, p = 0.595$

Each participant was contacted the night before the session to confirm their attendance. When they arrived on site, participants were prompted to self-assign an ID (i.e., the first name of his or her childhood best friend and the name of the street on which they lived as child) upon registration. The use of a self-assigned ID ensured that

pre-, post-, and follow-up surveys were linked to the individual while ensuring their anonymity, and participants were prompted to include their ID when they completed the three-week follow-up survey electronically. No identifying information was collected or linked to the research protocols.

Each participant was given a \$30 gift

card after they turned in their questionnaires following the session and another \$20 gift card following the return of their follow-up survey. At the completion of the follow-up survey, participants were provided an email address to which they could send confirmation of their completion of the follow-up survey and receive the additional \$20 gift card.

**Table 4: Means and Standard Deviations at Pre, Post, and Follow-up**

	Sentimental Savings Group (n = 57)			Fin Ed Group (n = 45)		
	Pre	Post	Follow-up	Pre	Post	Follow-up
<b>Importance</b>	9.05 (1.05)	9.29 (0.97)	9.04 (1.08)	9.23 (1.22)	9.45 (0.901)	9.16 (1.14)
<b>Confidence</b>	7.37 (2.25)	8.29 (1.85)*	7.38 (1.95)*	7.14 (2.36)	7.61 (2.180)	7.61 (2.06)
<b>Motivation</b>	4.81 (0.92)	5.02 (0.94)	4.92 (0.80)	4.80 (1.11)	5.15 (1.01)*	4.83 (1.15)
<b>Readiness</b>	1.71 (0.59)	1.87 (0.38)*	1.77 (0.47)	1.59 (0.69)	1.64 (0.69)	1.61 (0.69)
<b>Stress</b>	6.25 (2.4)	6.54 (2.2)	6.25 (2.44)	7.07 (2.05)	7.11 (2.264)	6.27 (2.36)*
<b>Knowledge</b>	6.73 (1.84)	6.88 (1.87)	6.98 (1.90)	6.70 (1.41)	6.98 (1.355)	6.68 (1.58)
<b>Satisfaction</b>	4.82 (2.12)	5.39 (2.22)*	4.46 (2.28)*	4.61 (2.39)	5.11 (2.432)*	4.86 (2.32)
<b>Savings Rates</b>	10.05 (14.79)		17.39 (18.13)*	8.57 (8.19)		10.48 (8.28)*
<b>Savings (\$)/Year</b>	\$5,838 (\$12,615)		\$10,020 (\$13,429)*	\$6,366 (\$6,808)		\$7,785 (\$7,230)*
<b>\$ Health</b>	4.25 (1.08)	4.44 (0.91)*	4.41 (1.01)	4.10 (1.15)	4.14 (1.26)	4.41 (0.92)
<b>Nostalgic</b>	7.67 (2.32)	8.35 (2.04)*				
<b>Enjoyable</b>		5.54 (0.73)*			5.00 (1.23)*	
<b>Informative</b>		5.35 (0.95)			4.93 (1.27)	
<b>Recommend</b>		5.46 (0.78)*			4.82 (0.80)*	

Note: \* = significant at  $p < .05$

**Table 5: Readiness to Save**

Stage of Change	Sentimental Savings Group (n = 57)			Fin Ed Group (n = 45)		
	Pre	Post	% Change	Pre	Post	% Change
<b>Pre-contemplative</b>	4 (7%)	1 (2%)	-5%	5 (11%)	5 (11%)	0%
<b>Contemplative</b>	8 (14%)	5 (9%)	-5%	8 (18%)	6 (13%)	-5%
<b>Action</b>	45 (79%)	55 (89%)	10%	32 (71%)	38 (76%)	5%

Table 2 summarizes the demographic and financial information for all 102 subjects combined, as well as by group. Consistent with what would be expected in a randomized trial, no significant differences between the groups were found for the demographic variables (Table 2) or the dependent measures at baseline (Table 3). It should be noted that two participants (one in each condition) participated in the session despite being older than 54; their data was collected and included in the analyses.

**Approach to Data Analysis**

Baseline differences in demographic variables between the FE and SS groups were examined using independent samples *t*-tests and chi-square tests to see if the two conditions differed significantly. Baseline differences in scores on the dependent measures were also measured using independent samples *t*-tests.

Mixed analyses of variance (ANOVAs) were conducted for each dependent

variable with “group” as the between-subjects factor and “time” (pre-session, post-session, and follow-up) as the repeated measures within-subject factor. Follow-up contrasts were employed to explore the nature of the differences in the dependent measures over time. For measures used only at a single time point (e.g., acceptability), independent samples *t*-tests were conducted. Effect sizes were measured as partial eta squared. Small effect sizes were defined as 0.01, medium as 0.06, and large as 0.14 (Richardson 2011). Table 4 presents the means and standard deviations of each dependent variable at pre, post, and follow-up for participants in each condition.

**Results**

What follows is a review of the results regarding the differences between groups at pre-session, changes in their readiness to save, and changes in their savings rates. This is followed by a review of the results of the remaining dependent measures starting with a

between-subjects analysis followed by within-subjects contrasts. Lastly, the session acceptability analysis and the sentimental saving analysis measuring any changes in emotional attachment to the sentimental item in the SS group following the session is reported.

**Readiness to save.** An important component of change is readiness to change. According to the TTM, change takes place according to stages, with the goal of moving from precontemplation to contemplation and then to action. Table 5 shows the changes in readiness to save from pre-session to post-session for the SS and FE groups. Prior to the sessions, 79 percent of participants in the SS group were in the action stage of increasing their savings rates. Following the session, this increased to 89 percent. In contrast, the FE group had 71 percent in the action stage of change, which increased to 76 percent post-session.

**Savings rates.** Table 4 shows the means and standard deviations for savings rates at pre-session and

the three-week follow-up. A mixed ANOVA was conducted to assess the impact of the sessions (SS and FE) on participants' savings rates from pre-session to the three-week follow-up. No between-group main effect was observed, but a significant main effect for time was observed: [ $F(1,98) = 24.619, p = 0.000$ , partial eta squared = 0.201]. This indicates that both groups increased their savings rates over the course of the three weeks after the session. A significant interaction effect for Time X Group [ $F(1,98) = 8.469, p = 0.004$ , partial eta squared = 0.080] indicates that the SS group reported increasing their savings rate over the three-week period significantly more than the FE group.

A mixed ANOVA was conducted to assess the impact of the sessions (SS and FE) on participants' projected annualized savings in dollars from pre-session to the three-week follow-up, based on their reported percentage of gross savings. A significant between-groups main effect was not observed, but a significant main effect for time was observed: [ $F(1,98) = 5.688, p = 0.019$ , partial eta squared = 0.055]. This indicates that while both groups reported increasing their projected annualized savings in dollars, the SS group increased their savings in dollars over the three-week period significantly more than the FE group.

To examine these differences in how much savings rates increased in the two groups, post hoc analyses were conducted on each condition separately. Tests of within-subjects contrasts found significant pre-session to three-week follow-up changes in the SS group in savings rates [ $F(1,54) = 21.482, p < 0.0010$ , partial eta squared = 0.285]. With regard to projected annualized savings in dollars, tests of within-subjects contrasts found significant pre-session to three-week follow-up changes in the SS group [ $F(1,54) = 18.476, p < 0.001$ ,

partial eta squared = 0.255].

For the FE group, significant pre-session to three-week follow-up changes were also observed: [ $F(1,44) = 7.343, p = 0.010$ , partial eta squared = 0.143]. With regard to projected annualized savings in dollars, tests of within-subjects contrasts found significant pre-session to three-week follow-up changes in the FE group [ $F(1,44) = 9.002, p < 0.004$ , partial eta squared = 0.170]. However, in terms of effect size, the SS session exerted nearly twice the effect on savings rates and projected annualized savings, than the FE session.

### Results for Other Dependent Variables

**Between groups analysis.** Table 4 also shows the means and standard deviations for the remaining dependent variables at pre-session, post-session and three-week follow-up. They were examined via a mixed ANOVA. A Time X Group interaction was observed for "confidence" from post to follow-up [ $F(1,98) = 6.248, p = 0.014$ , partial eta squared = 0.060], indicating that the SS group showed a significant decrease in their confidence that they can save more compared to the FE group during the three weeks after the session.

A significant main effect for "time" was observed on five variables. Pre-session to post-session effects were observed on the following: importance [ $F(1,98) = 4.33, p = 0.040$ , partial eta squared = 0.042]; confidence [ $F(1,98) = 15.326, p < 0.000$ , partial eta squared = 0.125]; readiness [ $F(1,98) = 7.624, p = 0.007$ , partial eta squared = 0.072]; motivation to save [ $F(1,98) = 8.874, p = 0.004$ , partial eta squared = 0.083]; and financial satisfaction [ $F(1,98) = 11.612, p = 0.001$ , partial eta squared = 0.106].

Post-session to follow-up effects were observed in the following areas: importance [ $F(1,98) = 4.80, p = 0.031$ , partial eta squared = 0.047]; confidence [ $F(1,98) = 6.148, p = 0.014$ , partial eta squared = 0.060]; financial stress [ $F$

(1,98) = 4.552,  $p = 0.035$ , partial eta squared = 0.044]; and financial satisfaction [ $F(1,98) = 9.423, p = 0.003$ , partial eta squared = 0.088].

**Sentimental savings group: within subjects contrasts.** To more closely examine these within-subject differences, post hoc analyses were conducted on each condition separately. The results of these analyses can also be seen in Table 4.

Tests of within-subjects contrasts found significant pre-post changes in the SS group in the following areas: readiness [ $F(1,55) = 6.899, p = 0.011$ , partial eta squared = 0.111]; confidence [ $F(1,55) = 14.307, p < 0.000$ , partial eta squared = 0.206]; financial satisfaction [ $F(1,55) = 7.097, p = 0.010$ , partial eta squared = 0.114]; and financial health [ $F(1,55) = 5.505, p = 0.023$ , partial eta squared = 0.091]. This shows that the SS group showed an increase in readiness to save, confidence in their ability to save, financial satisfaction, and financial health immediately after the session.

Significant post-follow-up changes were seen in the areas of: confidence [ $F(1,55) = 15.715, p < 0.000$ , partial eta squared = 0.222] and financial satisfaction [ $F(1,55) = 14.777, p < 0.000$ , partial eta squared = 0.212]. This shows that while the SS group took action to save significantly more after the session, at the three-week follow-up they had less confidence they could save even more and had less financial satisfaction than they had immediately after the session.

**Financial education group: within subjects contrasts.** For the FE group, tests of within-subjects contrasts found significant pre-post changes in financial satisfaction [ $F(1,44) = 4.867, p = 0.033$ , partial eta squared = 0.100] and motivation [ $F(1,43) = 8.409, p = 0.006$ , partial eta squared = 0.164]. This indicates that immediately after their session, these participants

reported higher financial satisfaction and motivation to save more.

Significant post-follow-up changes were also seen in the area of financial stress [ $F(1,43) = 5.354, p = 0.026$ , partial eta squared = 0.111], indicating that at the three-week follow-up, the FE group was reporting significantly higher financial stress than they were experiencing immediately after the session. One possible explanation is that while their motivation to increase their savings went up, their readiness to take action may not have kept pace, leading to increased feelings of financial stress.

**Session acceptability analysis.** Table 4 shows the means and standard deviations for acceptability measures at post-session. Independent samples *t*-tests were conducted with regard to session acceptability, which was measured post-session. Two of the three measures of acceptability revealed between group differences: enjoyable [ $t(100) = -2.781, p = 0.006$ ] and recommend to a friend [ $t(100) = -2.677, p = 0.009$ ]. There were no significant differences between groups for informative [ $t(100) = -1.897, p = 0.061$ ]. As such, participants found the SS session more enjoyable and were more likely to recommend it to a friend than the FE session.

**Sentimental savings analysis.** In the SS group, a significant increase in emotional attachment to the sentimental item was observed from pre-session to post-session [ $F(1,54) = 5.013, p = 0.029$ , partial eta squared = 0.085].

## Discussion

Previous research has demonstrated that, for most people, decision-making related to money—such as saving behavior—is heavily influenced by their emotions. This study sought to determine what effect engaging people emotionally using a sentimental item in their possession would have on their financial savings beliefs and behaviors. To put this concept to a robust test,

a double-blind, randomized control experiment was conducted to compare the effects of the sentimental savings (SS) session to those of a mainstream financial education (FE) lecture.

Related to savings beliefs, results from the between-groups analyses did not indicate support for Hypothesis 1. Time X Group interaction analyses did not suggest that participants in the SS condition reported significantly greater improvements than those in the FE condition in their savings beliefs (e.g., perceived importance of saving, confidence in ability to save, motivation to save, and readiness to change savings behaviors) both immediately following the session and at the three-week follow-up. However, the SS group exhibited significantly larger increases in actual savings behavior than the FE group.

This set of findings strongly suggests that financial behaviors are determined by more than just beliefs alone. It would seem that invoking sentimentality did not exert effects on savings beliefs, but did exert effects on behavior via a separate, ostensibly emotional channel. This will be discussed further below.

The SS group experienced a significant decrease in their confidence that they can save more compared to the FE group during the three weeks after the session. Given the significant increases in savings at follow-up for the SS group versus the FE group, this finding may result from the fact that members of the SS group “maxed out” their savings soon after the intervention and were therefore less confident that they could save even more in the future when asked about it at the three-week follow-up. In contrast, while the FE group increased their savings somewhat after the FE intervention, they expressed confidence that they could save even more in the future when asked at the three-week follow-up.

Hypothesis 2 was not supported by

results from the between-group analyses. Time X Group interaction analyses did not suggest that participants in the SS condition reported significantly greater improvements than those in the FE condition in their financial stress, knowledge, and satisfaction both immediately following the session and at the three-week follow-up.

Further investigation of Hypothesis 2 using within-group analyses revealed that participants in both conditions reported significant increases from pre- to post-session in their financial satisfaction. In addition, participants in the FE condition reported a significant decrease in financial stress from post-session to the three-week follow up. If the goal of the intervention was to decrease stress among participants, this would have been achieved for the FE group. However, the goal of the experiment was to increase savings behavior, and the fact that the FE group showed less of an increase in savings behavior and also experienced less financial stress might be a bad thing.

A preponderance of evidence shows that Americans are not saving enough, and they do not seem to be concerned enough about this. Participants in the SS group started saving more and reported being even more concerned about their finances after the SS session.

Support for Hypothesis 3 was found. Both sessions, SS and FE, increased the savings rates of participants as measured three weeks later. Participants who received the session that utilized a sentimental item from their own lives increased their savings rate almost three times more than the participants who received standard financial education about saving money. Specifically, participants in the FE condition reported a pre-session savings rate of 8.57 percent of their gross income. Three weeks after the session, they reported a 10.48 percent savings rate—a 22 percent increase.

Participants in the SS group reported a pre-session savings rate of 10.05 percent and a three-week follow-up savings rate of 17.39 percent, representing an increase in savings of 73 percent. In addition, results from within-group analyses indicated that participants in the SS condition experienced significant increases in their financial health immediately following the session, whereas participants in the FE condition did not.

As noted earlier, these findings make a strong case for the role of emotionality (and specifically sentimentality) in savings behavior. Logical awareness of the advantages of saving and ways to do so effectively clearly play a role, but providing opportunities for people to access and experience the emotional advantages of saving seems to motivate behavior much more profoundly.

The implications of this for individuals and institutions that seek to improve the financial health of individuals are quite broad. Financial planners and programs that seek the most helpful impact would do well to make the emotional appeal of saving, particularly in the area of sentimentality, a primary consideration.

Support for Hypothesis 4 was also found. Participants in the SS condition reported significantly greater emotional attachment to their sentimental item immediately following the session. This finding meshes with the notion articulated previously that what accounts for much of the dramatic increase in savings observed in the SS group is that participants who were encouraged to relate their savings behavior to their saving of sentimental items (and related, positive emotionally charged memories) were able to develop a strong emotional incentive for saving money. Going through the SS session may have enabled these participants to more viscerally relate saving money to the kinds of family and life values and goals that mean the most to them.

Furthermore, participants found the SS session enjoyable and were likely to recommend it. This bodes well for potentially incorporating aspects of the SS session into experiences designed for a wider audience—as in money coaching groups, for example.

### Limitations

One limitation of this study is that participants in both groups agreed to participate in a study on savings, suggesting a pre-study interest in the topic. This hypothesis is supported by their self-reported savings rates before the study, which were on average 3 percent to 4 percent higher than the savings rate of the typical American. The participants were also aware of the \$50 incentive to participate in the study before they volunteered. While these issues were controlled for in the randomized aspects of the between-group comparison, it is possible that they could have had an impact on the overall increases in savings behavior across both groups.

While the participants were drawn from five distinct locations across the United States, the sample in this study is not nationally representative. As such, it should not be assumed that the findings of this study are generalizable to the population at large.

Another limitation of the current study is that it relied on self-reporting for tracking key outcome variables such as savings behavior. This was equated for both groups due to the randomized design, but it is possible that the SS group compelled people to report more savings rather than to actually save more in practice. A future study might be able to track actual savings amounts in bank accounts, but accessing confidential financial transactions would be a substantial logistical hurdle.

It is also the case that the FE session was somewhat shorter than the SS session, and that the effects observed were

the result of simply more time spent with participants. While both presentations were designed to take the same amount of didactic time, participants in the SS group spent significantly more time engaged in discussion, sharing, and experiential tasks. While participants were encouraged to share and ask questions in the FE session, less chose to do so and the sessions ended sooner. The fact that participants enjoyed the SS session and appeared to be more emotionally engaged could account for this discrepancy. Even so, a future study could more strictly equate the time spent in both types of sessions to ensure that the differences in effectiveness are not due to the time of the session.

**Providing opportunities for people to access and experience the emotional advantages of saving seems to motivate behavior.**

### Implications for Financial Planners

The results of this study have several noteworthy implications for financial planners. First, it provides additional support for traditional financial literacy efforts to educate clients regarding various savings vehicles and strategies. These efforts had a significant impact in the present study and increased savings rates by 22 percent. However, this study makes a strong argument for the benefits of using tools and techniques from the emerging field of financial psychology to engage clients on an emotional level to facilitate significant behavioral change. One such method used in the study was drawn from experiential therapy, which uses direct experience to facilitate change (Klontz, Klontz, and Tharp 2016).

Rather than just naming their savings goals, participants were asked to visualize them in detail and then create visual images of them. In the financial planning office, planners could encourage clients to describe their financial planning goals in significant visual detail. For example, if a client stated “retirement” as a goal, planners could facilitate emotional engagement by asking the client to expand on what that means with questions such as: “So what does retirement mean to you?” “How old do you see yourself being?” “Where do you picture yourself living?” “Who are you with?” “What do you see yourself doing?” “How does it feel?” Given the potentially powerful impact of emotional engagement, planners might want to consider spending significant time helping clients create vivid descriptions of their financial planning goals.

Participants were also engaged in a presentation designed to help them gain insight into their own financial psychology. This included a discussion of money scripts, how they are associated with financial outcomes (Klontz, Britt, Mentzer, and Klontz 2011), how they predict financial behaviors (Klontz and Britt 2012), and an exercise designed to help participants identify their own money scripts (Klontz and Klontz 2009).

Financial planners who are interested in incorporating financial psychology in their work with clients are encouraged to explore texts including *Facilitating Financial Health: Tools for Financial Planners, Coaches, and Therapists* (Klontz, Kahler, and Klontz 2016), *Client Psychology* (Chaffin 2018), *Financial Therapy: Theory, Research, and Practice* (Klontz, Britt, and Archuleta 2015), *Communication Essentials for Financial Planners* (Grable and Goetz 2017), and *Financial Counseling* (Durband, Law, and Mazzolini 2018); and the July 2017 issue of the *Journal of Financial Planning* (Lawson and Klontz 2017).

Participants in the study were also encouraged to explore the “why” behind their savings goals. This was accomplished through the linking of a sentimental item to their core values and linking their core values to their savings goals. If a financial planner wanted to increase a client’s motivation to act on a goal, it could be beneficial to spend time exploring how the goal aligns with their core values.

Using listening tools drawn from motivational interviewing (Horwitz and Klontz 2013; Klontz, Horwitz, and Klontz 2015; Klontz, Kahler, and Klontz 2016), planners could identify, reflect, and reinforce a client’s core values around financial planning goals. For example, if a client identifies a financial goal of saving to help a child with college or a future down payment on a home, the planner could identify the client’s dedication to family as a core value and facilitate a discussion of this value to further increase a client’s motivation.

Overall, the results of this study would seem to be a strong endorsement of the broad and holistic approach to financial health that is embodied in financial psychology. Much has been written about how too many families have strong emotional ties with one another but fail to adequately plan for their loved ones’ financial futures. By connecting people’s sentimental emotionality to their experience and understanding during financial planning conversations, it may be possible to achieve results in the realm of financial behavior that reflect the deep intrinsic emotional commitments that people feel toward those they care for most. Helping people get their financial behavior in line with their core values and commitments promises to be a gratifying pathway toward healthier financial decision making. ■

## Endnotes

1. See the 2008 “Stress in America,” report from the American Psychological Association at [apa.org/news/press/releases/2008/10/stress-in-america.pdf](http://apa.org/news/press/releases/2008/10/stress-in-america.pdf). See also the 2016 report “Stress in America: The Impact of Discrimination,” at [apa.org/news/press/releases/stress/2015/impact-of-discrimination.pdf](http://apa.org/news/press/releases/stress/2015/impact-of-discrimination.pdf).
2. See the Bureau of Economic Analysis report, “Personal Income and Outlays, January 2006” at [bea.gov/news/2006/personal-income-and-outlays-january-2006](http://bea.gov/news/2006/personal-income-and-outlays-january-2006).
3. See the 2006 Associated Press article, “U.S. Savings Rate Hits Lowest Level Since 1933,” available at [nbcnews.com/id/11098797/#.WWKgnqZvSUK](http://nbcnews.com/id/11098797/#.WWKgnqZvSUK).
4. See the Bureau of Economic Analysis report, “Personal Saving Rate” for March 2019 available at [bea.gov/data/income-saving/personal-saving-rate](http://bea.gov/data/income-saving/personal-saving-rate).
5. See [nefe.org/about](http://nefe.org/about).
6. See [cfp.net/docs/default-source/ethics-enforcement/standards-of-professional-conduct-final.pdf](http://cfp.net/docs/default-source/ethics-enforcement/standards-of-professional-conduct-final.pdf).

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