Can Money Habitudes Make a Difference? An Experiment to Bridge Research and Practice

Abstract

Bridging research and practice is a key component of building a credible and sustainable profession where practice methods, modalities, tools, and techniques are validated for their use with clients. The purpose of this research was to examine if a tool used in practice - Money Habitudes® - could make a difference in a number of personal domains of one's life. Money Habitudes® is an online card game designed to create awareness of one's own money habits and attitudes. Financial behaviors, financial anxiety, relationship satisfaction, similar money goals and values, couple communication about money, and financial cognitions were investigated utilizing an experimental design with a working adult sample that lived in a Midwestern region of the US. Results indicated that playing online Money Habitudes® improved a number of personal domains, especially frequency of couple discussions about money.

Keywords: financial behaviors; financial anxiety; relationship satisfaction; shared goals and values; couple communication

Introduction

Bridging research and practice is a key component of building a credible and sustainable profession where practice methods, modalities, tools, and techniques are validated for their use with clients. The purpose of this research was just that, to examine if a tool used in practice—Money Habitudes®, an online card game designed to create awareness of money habits and attitudes—could make a difference in a number of personal domains of one's life. This online version is the electronic version of the Money Habitudes® cards developed by a practicing financial coach to promote self-discovery of "underlying spending habits and their effects" (Garrison, moneyhabitutides.com). Primarily, this research sought to look at pre and post-test differences between self-efficacy, financial behavior, financial anxiety, financial knowledge, financial cognition, and couple relationship factors (e.g., relationship satisfaction and communication) among working adults.

Literature Review

Financial Behavior

In recent years, consumer economists and therapists have focused on financial behavior in various settings (Xiao, 2008). Financial behavior has been defined in a variety of ways. The widespread definitions of financial behavior include (a) "the capability to capture of understanding overall impacts of financial decisions on one's (i.e., person, family, community, country) circumstances and to make the right decisions related to the cash management, precautions and opportunities for budget planning," (b) "any human behavior that is relevant to money management. Common financial behaviors include cash, credit and saving behavior," (c) "The actual financial decision making, practices and decisions (Copur, 2015)." Research on financial behavior has been conducted in a variety of ways for the past few decades. Based on studies in diverse disciplines, a variety of elements are crucial in financial decisions. There are many variables that may affect individuals' financial behavior. Financial education and knowledge, along with financial satisfaction, income, education, age, race, and ethnicity influence financial behavior (Lyons, Chang, & Scherpf, 2006; Robb &Woodyard, 2011).

Financial Anxiety

Financial anxiety is defined as a psychosocial syndrome that leads individuals to have an undesirable attitude toward thinking about their financial situation in an effective manner (Burchell, 2003). Archuleta and colleagues (2013) suggested that financial anxiety is assumed as one of the important aspects of financial mental health. Despite the increasing interest of researchers in the topic of financial mental health, few studies have focused on the emotional aspects, particularly financial anxiety, of individuals' financial behavior. Archuleta et al. (2013) developed the Financial Anxiety Scale, a financial anxiety measurement tool that was used to identify individuals who are experiencing increased levels of financial distress. Their findings indicated that financial satisfaction is inversely associated with financial anxiety in their sample of college students. Although financial anxiety among college students was not related to financial behavior, such as having debt, financial anxiety was associated with positive financial behavior (Carlson, Britt, Goff, & Archuleta, 2015).

Other research by Shapiro and Burchell (2012) suggested that individuals with substantial financial anxiety have an unconscious bias toward handling financial information. They found that financial anxiety differs from other mental health diagnoses, such as depression and general anxiety. Individuals who experience financial anxiety tend to avoid or dismiss the source of anxiety entirely rather than solving the causality. Likewise, an exploratory clinical study demonstrated the relationship among financial anxiety, physiological arousal, and planning intention (Grable, Heo, and Rabbani. 2015). Their results supported the findings of Shapiro and Burchell (2012) in that high anxiety levels are associated with an avoidant mechanism and may lead to a form of self-imposed helplessness.

Financial Cognitions

Cognitive psychologists differentiate the two aspects of cognition: “fluid intelligence (the ability to think clearly and quickly about a problem) or crystallized intelligence (the accumulated relevant knowledge about problems) (Smith, McArdle, & Willis, 2010 p. 363)”. These cognitive skills are associated with memory retrieval, numeracy, retrieval fluency, and intact mental status. Thus, financially cognitive skills affect individuals’ financial behavior, risk attitude, and the financial decision making process in a family. In the study of Benjamin, Brown and Shapiro (2013), their results suggested that people with higher cognitive ability are less risk-averse and more patient. In other words, they asserted that individuals with low cognitive function are likely to show low levels of asset accumulation and low levels of financial market participation. Banks and Oldfield (2007) measured cognitive functions of older individuals in England and found that the numerical ability among the functions are significantly correlated with various measures of wealth and retirement saving outcomes. Smith et al. (2010) investigated the association of cognitive traits and numeracy of both spouses on financial outcomes of the family. They found that the as positive cognitive traits increased, more involvement was invested in making financial decisions in the family.

Goals and Values

People with shared goals and values tend to have similar understanding about (a) the meaning and usage of money, (b) the role of autonomy and independence, and (c) expectations and desires about family and relationship goals (Archuleta, Grable & Britt, 2010). In a number of previous study, shared goals and values were shown as an important determinant to financial and relationship satisfaction both directly and indirectly. Archuleta, Grable, and Britt (2010) explored that shared goals and values were directly related to financial satisfaction. Archuleta and colleagues (2013) suggested that having shared goals and values about money was a stronger predictor of relationship satisfaction than communication strategies were. Archuleta et al. (2013) found that harsh start-up and shared goals and values mediate the relationship between financial satisfaction and relationship satisfaction under the assumption that when a couple has a common view about money, they will have increased relationship satisfaction.

Relationship Satisfaction

In recent studies in the field of financial planning, counseling and therapy, the relationship satisfaction which is associated with financial behaviors, financial satisfaction, and couples' stress has attracted a growing interest. Previous research focused on the association between financial problems and relationship satisfaction. Two decades ago, Vinokur, Price, and Caplan (1996), demonstrated that financial strain had significant effects on depression of both partners, which led to additional adverse effects on satisfaction with the relationship. Kerkmann, Lee, Lown, and Allgood (2000) identified that financial factors, including financial behaviors and perceptions of how well finances were managed accounted for 15% of marriage satisfaction. Gudmunson, Beutler, Israelsen, McCoy, and Hill (2007) suggested that financial strain affects forms of couples' interaction both positively and negatively. These forms function as stronger mediators of the relationship between financial strain and marital stability than personal emotional distress. Most recently, Totenhagen and colleagues (2019) partially supported that financial satisfaction was positively linked with relationship satisfaction. They suggested that increased financial stress was related to decreased relationship satisfaction, especially for unmarried men and married women.

Couple Communication

Previous research has found a positive association between healthy communication among couples and marital satisfaction (Caughlin & Huston, 2002). Some research has suggested a link between healthy communication and increased intimacy (Laurenceau, Barrett, & Rovine, 2005). While other research has shown healthy couple communication is associated with a lower likelihood to divorce (Huston, Caughlin, Houts, Smith, & George, 2001).

Wilmarth, Nielson, and Futris (2014) found a mediation effect of couple communication on the association between financial wellness and relationship satisfaction among a sample of married individuals in a southern state. Furthermore, Kelley et al.'s (2018) findings indicated that couple communication seems to be strongly related to marital outcomes as financial stress does. They examined couple communication as a moderator in the relationship between financial stress and marital quality. The results found couple communication did not moderate the association between the financial stress and the wives' marital quality. However, positive couple communication significantly reduced the poisonous relationship of financial stress to marital quality for the husbands.

With this literature in mind, six hypotheses were developed for this study:

H1: Financial behaviors will improve after playing Money Habitudes.

H2: Financial anxiety will decrease after playing Money Habitudes.

H3: Relationship satisfaction will increase after playing Money Habitudes.

H4: Having similar financial goals and values will increase after playing Money Habitudes.

H5: Couple communication (i.e. ease, frequency, arguments) will improve after playing Money Habitudes.

H6: Financial knowledge will not change after playing Money Habitudes.

H7: Financial cognitions will increase after playing Money Habitudes.

Methodology

Sample

Data was collected as part of a larger study that has three stages, including an initial survey, an online financial game (if randomly selected), and a follow-up survey. To recruit respondents, a team of researchers contacted a variety of employers that had ten or more employees from a mid-western region. Employers ranged from professional to industrial, including employees from banks, agricultural equipment retailers, and educational institutions. Employers who agreed to help with the study were sent an email that outlined the study's expectations and benefits, along with a statement to invite their employees to participate in the research project. Employers then emailed their employees asking employees to participate. Employees agreed to participate in the study by clicking on the link in the email directing them to the initial survey, which included an informed consent.

There were 236 respondents that completed the initial survey. Fifty percent (n = 118) of the respondents were randomly selected to receive the online financial game, Money Habitudes® (i.e., the treatment group), while the other 50 percent did not receive the online financial game (i.e., the control group). Those that were randomly selected to participate in Money Habitudes® were then sent a link to access Money Habitudes® within one week of completing the initial survey. Of the 118 respondents, 111 completed the Money Habitudes® online game (94% response rate). Two months after the completion of the Money Habitudes® online game (treatment group) or the initial survey (control group), respondents were sent a follow-up survey. In the treatment group, 99 respondents completed the two-month follow-up survey (89% response rate), while 90 respondents completed the two-month follow-up survey in the control group (76% response rate). In summary, we had 236 participants for the initial survey, creating two groups of 118 each. Of the 118 participants in the treatment group, 111 completed the Money Habitudes online game and 99 completed the follow-up survey; while 90 of the 118 participants in the treatment group completed the two-month follow-up survey. From pre- to post-test, our overall sample size decreased from 236 to 189 total respondents, yielding an overall retention rate of 80%. Respondents who completed all steps to the research project were entered into a drawing for one of ten $50 gift cards. The current study utilizes only data from those that completed both the pre- and post-surveys (N = 189).

Measures

Financial behavior was assessed using Grable and Joo's (2001) eight-item measure. Financial behaviors included setting money aside for savings and retirement, having a plan to reach financial goals, following a monthly budget, paying off and maxing out credit cards, and spending more than earned. Each item was assessed on a 4-point scale that ranged from never (1) to always (4). Total scores could range from 8-32.

Financial anxiety was assessed using the seven-item Financial Anxiety Scale (FAS; Archuleta, Dale, & Spann, 2013). The FAS uses Generalized Anxiety Disorder criteria from the DSM-IV-TR and applies it to one's financial situation. Each item is assessed on a seven point scale, ranging from one to seven. Total scores could range from seven to 49. Previous research has indicated that the measure has high reliability (Archuleta et al. 2013)

Relationship satisfaction was measured using Schumm et al.'s (1986) Kansas Marital Satisfaction Scale (KMSS). The KMSS utilizes three items on a seven-point Likert-type scale, ranging from *extremely dissatisfied* (1) to *extremely satisfied* (7). Total scores could range from three to 21. Previous research shows that the scale has high reliability with an alpha of .93 and strong validity (Mitchell, Newell, & Schumm, 1983).

Similar goals and values were two items taken from the Shared Goals and Values scale (Archuleta, 2013; Archuleta, et al., 2013). This scale was adapted from Gottman's Sound Relationship House Scales (Gottman, 1999). For the purposes of this study, only two of the four items were used and then they were evaluated separately to break down differences between similar goals and similar values. The first item stated "we have similar financial goals." The second item stated, "we have similar values about the importance and meaning of money in our lives." Both items were assessed on seven-point Likert-type scale, ranging from *strongly disagree* (1) to *strongly agree* (7).

Couple communication was assessed using three separate items, reflecting on the past two months: (a) "my partner and I talk about money frequently;" (b) "talking about money with my partner has been easy;" and (c) "my partner and I always argue about money." Each item was measured on a seven-point Likert-type scale, ranging from *strongly disagree* (1) to *strongly agree* (7); the items were evaluated separately for the purposes of this study.

Financial knowledge was tested using a 5-item financial literacy quiz utilized in the 2009, 2012, and 2015 National Financial Capability Study conducted by FINRA Investor Education Foundation. The quiz consists of questions testing knowledge on interest rates, inflation, bond prices, mortgage repayment, and investment risk. A scale was created using a sum of correct responses to the questions, with scores ranging from 0 to 5, and higher scores indicating greater financial knowledge.

Financial cognition was measured using a sum of responses to three items, with a possible range in scores from 3 to 15 (Archuleta, Glenn, Lawson, Clady & Solomon, under review). Respondents were asked to rate their level of agreement to the following three questions, on a scale of 1 (*strongly disagree*) to 5, (*strongly agree*):

- I can predict the situations when I will spend more than I meant to.
- I know what I should do differently to manage my money better.
- I know what motivates me to spend or save the way I do.

The validity and reliability of the financial cognition scale was tested using factor analysis with results indicating the scale is valid and reliable, having a standardized alpha of .87 and an Eigenvalue of 2.36.

Models

Paired sample t-tests were conducted to determine whether a difference existed between pre- and post-test observations for our key variables of interest: self-efficacy, financial behavior, financial anxiety, relationship satisfaction, similar goals, similar values, frequent discussions with one's partner, easiness of discussing finances with one's partner, financial arguments with one's partner, financial knowledge, and financial cognition. Next, a series of two-sample t-tests were used to examine whether differences in the mean change from pre- to post-test existed between the treatment and control groups for the same set of key parameters as mentioned above.

Results

Descriptive Results

The average age of respondents was 41 years. Most respondents were White (92%), female (75%), full-time employees (94%) in education (65%), and either married or cohabiting with a significant other (76%). Many respondents were highly educated, as 76% held a bachelor's degree or higher. Slightly over a quarter of the respondents (26%) reported that they earned less than $50,000, while 18% said that they earned more than $100,000. The remaining 56% of respondents mentioned that they earned between $50,000 and $100,000. Full descriptive results are available in Table 1.

Paired Sample T-Test Results

The paired sample t-test results are available in Table 2. Results indicate that financial behavior was the only parameter that positively increased for both the treatment (μ_1 = 21.56, μ_2 = 22.12, t = 2.51, $p < .05$) and control (μ_1 = 21.62, μ_2 = 22.38, t = 2.47, $p < .05$) groups. Key parameters of interest that showed statistically significant results for the treatment group only were: (a) respondents with similar goals (μ_1 = 5.35, μ_2 = 5.63, t = 3.09, $p < .01$), (b) respondents with similar values (μ_1 = 5.21, μ_2 = 5.49, t = 2.41, $p < .05$), (c) frequency of financial discussions with one's partner (μ_1 = 4.59, μ_2 = 5.13, t = 3.68, $p < .001$), (d) easiness of discussing finances with one's partner (μ_1 = 4.65, μ_2 = 4.96, t = 2.34, $p < .05$), and (e) financial cognition (μ_1 = 11.91, μ_2 = 12.41, t = 2.14, $p < .05$). Therefore, hypotheses 1, 4, 7 and were supported, while hypothesis 5 was partially supported. For hypothesis 5, arguments about money did not significantly improve; however as stated, frequency and ease of talking about money did significantly improve. Financial knowledge did not significantly improve which was expected (H6).

Two Sample T-Test Results

The only variable of interest that showed a significant difference between the control and treatment groups for mean change between pre- and post-test was that of frequency of financial discussions with one's partner. The mean change for the control group was -.04 (*SD* = 1.32) while the mean change for the treatment group was .54 (*SD* = 1.26), resulting in a mean difference between the groups of .58 (*SD* = 1.29, *C.I.* = 1.00, .16, t = 2.74, $p < .01$).

Discussion

The sample was a highly educated and homogenous group from the Midwestern portion of the United States. The results show that individuals subject to the Money Habitudes® game did report improved financial behavior and financial cognition, as well as better relationship-oriented financial outcomes from pre- to post-test. Specifically, respondents reported that they felt like they were more aligned with their significant other in terms of financial goals and values, and that they had increased communication with their significant other as it pertained to their finances. Respondents also indicated that talking about finances with their significant other was easier than before playing the Money Habitudes® game. On the other hand, those in the control group also reported improved financial behavior, perhaps because they were subject to a survey asking questions about their financial behavior and so they may have paid more attention to those behaviors from pre- to post-test.

Finally, when the differences between pre- and post-test scores were compared between the control and treatment groups, the frequency of financial discussions with one's partner was the only thing that differed. Taken together with the paired sample t-test results, the results appear to indicate that the Money Habitudes® game may have a positive influence on an individual's financial behavior and cognition, but seemingly helps those who play the game to have better communication efforts with their significant other around household financial matters. This is significant in and of itself given that research shows that communication around household finances is vital for maintaining healthy relationships (Dew, Britt, Huston, 2012; Britt, Hill, LeBaron, Lawson, & Bean, 2017).

Limitations

As inherent in any study, limitations exist in this study as well. First, generalizability is an issue as this was a sample of working adults in a Midwestern region of the US. A sample more representative of the US may have produced different results. Regardless, this sample helps to reveal how working adults may be impacted by the utilization of an online tool that helps stimulate positive outcomes. Also, the Money Habitudes® game was only taken by one partner in the relationship. Having both partners participate in Money Habitudes® may highlight differences in partner's perceptions, and indicate areas the couple could explore more in depth. The time between pre-test and post-test was two-months, limiting our findings to short-term changes; therefore, long-term affects cannot be ascertained from the data.

Implications

The significant difference between the control and treatment groups for frequency of discussions with one's partner indicates that simply playing the card game encourages people to talk with their partners more about money. In practice, the results would be used to help facilitate a conversation with a couple to help them explore their similarities and differences around money, promoting an environment where couples can understand each other's points of views and how they make decisions. Future research should explore the relational and financial outcomes when a couples engages in a facilitated conversation by a financial counselor, coach, therapist, or planner after playing the card game. Furthermore, with the insight of playing the game alone prompting significant changes in frequency of conversations, it is important to recognize that card game likely prompted self-reflection on one's own relationship with money and their relationship with their partner around money. A practitioner could help take a deeper dive into a couples shared money goals and values, financial behaviors, financial cognitions, and couple communication to facilitate stronger relational outcomes.

While there were significant increases between pre and post-test on several variables that were tested, there was not a significant difference between the treatment group (i.e., played the online version of Money Habitudes®) and control group on most variables with the exception of frequency of discussions. The research indicate something shifted for those who played the card game.

Conclusion

The findings of this study indicate that simply playing the online Money Habitudes® game helps to promote awareness about one's relationship with money and encourages couple interactions in regards to money. If this is the case, Money Habitudes® when used in practice by a financial therapist, counselor, or planner could help facilitate discussions among individuals and couples, allowing for further reflection upon their own money attitudes and habits and how they interact with their partner regarding money. Furthermore, this experiment is an example of how researchers and practitioners can collaborate together to build a body of evidence based practices, allowing practitioners to confidently serve clients utilizing tested tools to improve their financial behaviors and well-being. Bridging the gap between research and practice adds validity to tested assessments and helps establish financial counseling, planning, therapy, and education as credible and worthwhile professions.

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Table 1

Sample Descriptives: Overall Sample, those in the Money Habitudes® Group, and those in the Control Group.

	Full Sample (N = 189)		Money Habitudes® (n = 99)		Control (n = 90)	
Variable (Reference Group)	*M / %*	*SD*	*M / %*	*SD*	*M / %*	*SD*
Age	41.20	12.59	41.15	12.09	41.26	13.19
Gender						
Male	25%		26%		23%	
Female	75%		74%		77%	
Race						
White	92%		93%		91%	
Non-White	8%		7%		9%	
Education Level						
Some College or Less	13%		17%		9%	
Vocational Degree	11%		10%		12%	
Bachelor's Degree	39%		38%		39%	
Graduate Degree	37%		34%		40%	
Income						
Less Than $50,000	26%		28%		24%	
$50,001-$75,000	28%		28%		28%	
$75,001-$100,000	28%		28%		28%	
Greater Than $100,000	18%		16%		20%	
Job Status						
Full-Time T1	94%		93%		97%	
Part-Time T1	5%		6%		3%	
Self-Employed T1	1%		1%		0%	

Full-Time T2	95%	94%	97%
Part-Time T2	4%	5%	3%
Self-Employed T2	1%	1%	0%
Marital Status			
Married/Cohabiting T1	76%	72%	80%
Not Married/Cohabiting T1	24%	28%	20%
Married/Cohabiting T2	79%	76%	83%
Not Married/Cohabiting T2	21%	24%	17%
Employment Industry			
Professional	21%	18%	23%
Education	65%	69%	61%
Government	6%	4%	8%
Laborer	3%	2%	3%
Other	5%	6%	4%

Table 2

Descriptive Statistics and Paired T-Test Results for Changes between Pre- and Post-Test by Group

Outcome	Pre-test M	Pre-test SD	Post-test M	Post-test SD	n	95% CI for Mean Difference	t	df
Financial Behavior								
Money Habitudes	21.56	4.22	22.12	3.82	95	.14, 1.17	2.51*	94
Control	21.62	3.96	22.38	3.58	85	.11, 1.04	2.47*	84
Financial Anxiety								
Money Habitudes	18.74	11.03	17.85	10.32	99	-2.28, .51	-1.26	98
Control	17.39	9.64	16.52	8.97	90	-1.96, .23	-1.58	89
Relationship Satisfaction								
Money Habitudes	17.92	2.99	17.81	3.57	72	-.82, .76	-.07	71
Control	17.83	3.80	17.95	3.97	74	-.57, .68	.17	73
Similar Goals								
Money Habitudes	5.35	1.27	5.63	1.28	74	.12, .56	3.09**	73
Control	5.40	1.57	5.51	1.41	75	-.17, .28	.48	74
Similar Values								
Money Habitudes	5.21	1.41	5.49	1.39	72	.06, .63	2.41*	71
Control	5.29	1.59	5.39	1.58	75	-.15, .26	.51	74
Frequent Discussions with Partner								
Money Habitudes	4.59	1.64	5.13	1.44	74	.25, .83	3.68***	73
Control	5.16	1.23	5.11	1.34	75	-.34, .26	-.26	74
Easy-to-Discuss with Partner								
Money Habitudes	4.65	1.57	4.96	1.44	74	.05, .60	2.34*	73
Control	4.83	1.77	4.97	1.67	75	-.18, .50	.93	74
Did Not Argue about Money								
Money Habitudes	5.50	1.46	5.49	1.36	74	-.26, .29	.10	73
Control	5.53	1.56	5.73	1.31	75	-.05, .51	1.62	74
Financial Knowledge								

Money Habitudes	3.85	.94	3.85	1.11	99	-.18, .18	.00	98
Control	3.81	.94	3.79	.95	90	-.21, .16	-.24	89
Financial Cognition								
Money Habitudes	11.91	2.20	12.41	1.65	99	.04, .97	2.14*	98
Control	12.02	1.82	11.99	1.66	89	-.39, .30	-.26	88

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