How Are You Doing? Financial Well-being During COVID-19

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Abstract

Optimal financial well-being is a goal for both financial professionals and consumers. The COVID-19 pandemic raised concerns about consumers' financial well-being. This study sought to explore the factors related to financial well-being using the Personal Financial Wellness framework (Joo, 2008). Data was collected from a diverse sample during the COVID-19 pandemic. Results indicated that objective financial status (e.g., income), positive pre-pandemic financial behaviors, financial satisfaction, and being older and single mattered in one's increased level of financial well-being during the COVID-19 pandemic. Subsequently, financial satisfaction was found to be a mediating factor between subjective financial knowledge and financial well-being. Implications for financial professionals, researchers, and policymakers are provided.

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Introduction

Financial professionals' primary goal is to help clients have successful financial lives by enhancing their financial well-being, ultimately increasing their overall well-being. The COVID-19 pandemic had a significant impact on people across the world, including the U.S., but how did it affect financial well-being? In response to the pandemic, the U.S. government passed legislation and implemented policies aimed at providing financial support to consumers. The Families First Coronavirus Response Act became law on March 18, 2020 (Moss et al., 2020). The key provisions of this legislation included nutrition benefits, 12 weeks of paid leave for employees needing to provide childcare, additional funding to states for unemployment benefits, paid sick leave, and insurance coverage for COVID-19 testing. On the same day, the U.S. Department of Housing and Urban Development and the Federal Housing Finance Agency declared an eviction and foreclosure moratorium for mortgage loans backed by Fannie Mae, Freddie Mac, and the FHA for 60 days (Federal Housing Finance Agency, 2020; U.S. Department

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of Housing and Urban Development, 2020). The Coronavirus Aid, Relief, and Economic Security (CARES) Act became law on March 27, 2020. The CARES Act provisions included direct payments of $1,200 per eligible individual and $500 for each child that qualified, a maximum of $100,000 of penalty-free withdrawals from retirement accounts for distributions associated with the coronavirus, qualified retirement plan loans up to $100,000, waived required minimum distributions for 2020, the allowance of a $300 charitable donation deduction for taxpayers that chose the standard deduction, and a $600 increase to weekly unemployment benefit payments through the end of July, 2020 (National Association of Tax Professionals, 2020). These government interventions likely had an impact on consumers' financial well-being. Researchers are in the process of learning how individual financial well-being was impacted during and post-pandemic. Learning from the crisis can help us better prepare clients for what may lie ahead. In this study, we aimed to explore the factors associated with enhanced financial well-being during the COVID-19 pandemic.

Theoretical Framework

The Personal Financial Wellness (PFW) framework (Joo, 2008) was used to guide this study. In the personal finance wellness framework, financial wellness is defined as an active state of financial health that includes both subjective and objective evaluative terms. Financial wellness is seen as one component of overall personal well-being and comprised four sub-constructs: (a) objective status, (b) financial satisfaction, (c) financial behavior, and (d) subjective perceptions. Objective status includes financial factors of income and other objective measures of financial health such as financial ratios. According to Joo (2008), financial satisfaction can be seen as a global measure of how one feels about their financial situation or comprised of multiple factors that may impact one's perception of their own financial situation. Financial behaviors capture what one is actively doing in various areas of personal finance, such as cash flow management, debt management, savings, etc. Subjective perceptions encompass attitudes and subjective financial knowledge. Literature has shown that attitudes and subjective financial knowledge (i.e., what one thinks they know about personal finance) can be the largest contributing factor to engaging in positive financial behaviors and having increased financial well-being (Robb & Woodyard, 2011). In this study, we use the four sub-constructs of Joo's (2008) personal wellness framework to understand financial well-being and will refer to financial wellness as financial well-being in this paper.

Literature Review

Financial Well-being

Financial well-being has been defined by the Consumer Financial Protection Bureau (CFPB) as "a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life" (Consumer Financial Protection Bureau, 2017, p. 6). In CFPB's definition, those with higher financial well-being can absorb financial shocks and have the freedom to make choices to enjoy life. Similarly, Netemeyer et al. (2018) conceptualized perceived financial well-being as two distinct constructs: (a) the distress related with managing one's money in the present and (b) feeling secure in one's financial future. They found that perceived financial well-being predicts overall well-being and the size of the effect is similar to that of the other life domains (e.g., relationship support satisfaction, physical health assessment, and job satisfaction) combined. Vlaev and Elliott (2014) contributed to the understanding of financial well-being by surveying young workers and families to determine the components of financial well-being. They found the top factor of influence on both groups of participants to be based on the amount of control they had over their finances. Individuals with greater control over their finances were likely to indicate a higher state of financial well-being. This is important because during the COVID-19 pandemic many people were worried about losing their jobs for pandemic-related reasons outside of their control. Young adults' financial well-being has been linked to overall life satisfaction, health, academic achievement, and psychological well-being (Shim et al., 2009). Arber et al. (2014)

examined the association between subjective financial well-being, income, and health during the middle and late stages of life for individuals in Britain. They found that subjective financial well-being and income were both independently linked with health in the middle stage of life. During the late stage of life, subjective financial well-being was also linked with health, and it mediated the impact of income on health.

Objective Status

Objective financial status is central to shaping financial well-being. One measure useful in objectively determining financial status is income. Incorporating income enables an effective comprehensive financial evaluation as indicated by the many studies that have included income to determine financial well-being. For example, Shim et al. (2009) included students' income and their parents' income as one of the objective measures in their models to estimate financial well-being. Gerrans et al. (2014) found that objective financial status, including the level of income, assets, and debt, was strongly associated with financial satisfaction. Other research has indicated that income was one of the strongest influences of financial well-being along with financial capability, financial inclusion and social capital (Muir et al., 2017). Using data from Estonia, Riitsalu and Murakas (2019) found a positive relationship between income and financial well-being. Other research suggests that the relationship between income and financial well-being may be more nuanced. Zyphur et al. (2015) observed that only men had greater levels of subjective financial well-being when their incomes were higher. In contrast, the findings of Malone et al. (2010) indicated that the financial well-being of American women elevates with income, education, age, and their contribution to household earnings.

Financial Satisfaction

Another key component of financial well-being is financial satisfaction. Financial satisfaction can be defined as one's level of satisfaction with their financial circumstances (Hira & Mugenda, 1998). Joo and Grable (2004) created a framework for financial satisfaction and its determinants. Their findings indicated that financial satisfaction is directly and indirectly associated with financial behavior, financial stress, financial knowledge, income, financial solvency, risk tolerance and education.

Are financial well-being and financial satisfaction related? According to the literature, the answer is yes. In one study, financial satisfaction was even used to operationalize subjective financial well-being (Xiao & O'Neill, 2018). However, many other studies view them as distinct concepts (Fan & Henager, 2022; Prawitz et al., 2006; Tenney & Kalenkoski, 2019). Research suggests that financial satisfaction is directly and positively related to financial well-being (Fan & Henager, 2022; West & Cull, 2020). Building on Joo's (2008) PFW framework, Fan and Henager (2022) conceptualized financial satisfaction as being one component of financial well-being. West and Cull (2020) defined financial satisfaction as the level of satisfaction with one's financial circumstances and financial well-being as consisting of personal characteristics, current financial management, and one's expectations about the future of their personal finances. Tenney and Kalenkoski (2019) examined participants' objective measures of financial well-being using financial ratios and financial satisfaction to look for correlations. They found that the probability of being fully satisfied with one's present financial circumstances rose by 0.19 with a 1% increase in the participants' investment ratio.

Financial Behavior

Joo (2008) identified financial behavior as being one of four sub-constructs of financial well-being. Financial behavior is "any human behavior that is relevant to money management" (Xiao, 2008, p. 70). Financial behavior has been shown to affect financial satisfaction and overall financial well-being. The work of Castro-González et al. (2020) indicated that an individual's financial behaviors predict their financial well-being. Gutter and Copur (2011) examined the relationship between financial behavior and financial well-being for 15,797 college students via an online survey. They found differences in the magnitude of financial well-being by different financial behaviors and socioeconomic characteristics. Specific financial

behaviors (e.g., saving, budgeting, compulsive buying, and risky credit card use) were shown to have a significant relationship with financial well-being. Of the variables tested by Joo and Grable (2004), financial behavior was found to have the greatest impact on financial satisfaction. Conversely, the findings of Robb and Woodyard (2011) suggested that financial satisfaction influences financial behavior. These results imply that financial behavior and financial satisfaction are interrelated. Woodyard and Robb (2016) sought to conduct a study similar to the work of Joo and Grable (2004) but with a larger sample. Their findings indicate that behavior and feelings may contribute to financial satisfaction more than knowledge.

Subjective Perceptions

The final sub-construct of financial well-being according to Joo's (2008) framework is subjective perceptions. According to her framework, subjective perceptions are comprised of one's financial attitudes and financial knowledge (i.e., what one thinks they know about personal finance). Research tells us that both constructs are salient. Utilizing the CFPB's financial well-being scale, Lee et al. (2020) found that having greater subjective financial knowledge increased financial well-being and the propensity to plan amplified this positive relationship. Another study showed that one's attitude to money influenced financial behaviors, and financial behaviors predicted financial well-being (Castro-González et al., 2020). Subjective financial knowledge was also found to impact financial behaviors (Robb & Woodyard, 2011).

Based upon Joo's (2008) Personal Financial Wellness framework and the literature review, the following hypotheses were developed.

H1: Objective financial status (i.e., income, employment) will be positively associated with increased levels of financial well-being during COVID-19.

H2: Pre-COVID-19 pandemic financial behaviors will be positively associated with increased levels of financial well-being during COVID-19.

H3: Subjective perceptions (i.e., financial knowledge) will be positively associated with increased levels of financial well-being during COVID-19.

H4: Financial satisfaction will be positively associated with increased levels of financial well-being during COVID-19.

H5: Subjective perceptions (financial knowledge) will have an indirect effect on financial well-being through financial satisfaction during COVID-19.

Methodology

This study utilized Qualtrics Panels to recruit the sample. Panel members were sent an email invitation or prompted on the respective survey platform to proceed with the survey. The invitation provided a hyperlink and a nominal incentive in which the panel member responded by clicking the link. The incentives offered were not standard but rather unique to the individual. The researchers did not know the incentives that were offered. The only criteria to participate is that respondents needed to be 18 years or older. Data were gathered as part of an experimental study about goal setting and overall well-being that included a pre-test, online exercise, and post-test. Only the initial survey data were included in the current study as the focus of this study was not to test the outcome of the online exercise rather to examine the relevant variables cross-sectional data in the pre-test survey. The data from this survey were collected in April 2020. A total of 145 respondents completed the initial survey.

Outcome Variable

The outcome variable was financial well-being. In this study, we used the financial well-being measure developed by the Consumer Financial Protection Bureau. According to the CFPB report (2017), the scale is associated with four elements: (a) "control over daily and monthly finances," (b) "capacity to absorb a financial shock," (c) "being on track to meet financial goals," and (d) "the financial freedom to make choices that allow enjoyment of life." Due to those elements, the financial well-being concept is reflected as subjective and perceived. Financial well-being is measured by ten questions on a Likert scale ranging from 1 to 5. The scores reported were

processed according to CFPB guidelines to create a single score that ranged from 0 to 100.

Independent Variables

Financial Behavior

Financial behavior was measured by eight items adapted from Grable & Joo (2004) and Dew & Xiao (2011). The eight items assessed how participants normally handled their money prior to the COVID-19 pandemic (before March 6, 2020). The items included: (a) " I set money aside for savings or an emergency fund;" (b) "I set money aside for retirement;" (c) "I had a plan to reach my financial goals;" (d) "I had a weekly or monthly budget that I followed;" (e) "I paid credit card bills in full and avoided finance charges;" (f) "I reached the maximum limit on a credit card;" (g) "I spent more money than I earned;" and (h) "I paid my bills on time." Each variable response ranged from 1 (*never*) to 4 (*always*) except for the questions asking about reaching the maximum limit on a credit card and spending more money than earned. These two items were reverse coded, ranging from 1 *(always*) to 4 (*never*). The eight items were summated with scores ranging from eight to a maximum of 32.

Financial Knowledge

Both subjective and objective financial knowledge were measured. A single self-reflected question assessed respondents' perceived financial knowledge using Likert-type scale. Scores on the item could range from 1 (*very little financial knowledge*) to 10 (*very high financial knowledge*). Objective financial knowledge was assessed through five questions focused on key financial concepts: compound interest (Question 1), inflation (Question 2), diversification (Question 3), retirement planning (Question 4), and time value of money (TVM) (Question 5). These questions were either multiple-choice or true/false. Correct responses were assigned a score of 1, while incorrect ones received 0. The total number of correct answers was then summed, with higher scores indicating a greater extent of objective financial knowledge. The average score for correct answers was 2.4, with a standard deviation of 1.47. Summation techniques have been employed across various studies, including those by Dew & Xiao (2011), Grable et al. (2020), Lind et al. (2020), Mountain et al. (2020), and Robb et al. (2012). Table 1 displays the questions used to assess the objective financial knowledge.

Table 1. Objective Financial Knowledge Questions

Q.1	Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
Q.2	Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?
Q.3	Do you think that the following statement is true or false? "Buying a single company stock usually provides a safer return than a stock mutual fund."
Q.4	True or False: There are annual contribution limits on the amount you can save in a 401(k) plan or IRA that depend on your income.
Q.5	Assume a friend inherits $10,000 today and his sibling inherits $10,000 three years from now. Who is richer because of the inheritance?

Financial Satisfaction

A commonly used single-item financial satisfaction question was used in this study. The question was, "How satisfied are you with your overall current financial situation?" Using a 10-point Likert-type scale, scores could range from 1 (*very dissatisfied*) to 10 (*very satisfied*).

Control Variables

Demographic variables used as control variables included gender, income, education level, race/ethnicity, employment status. In terms of gender, those who identified themselves as females were coded 1, otherwise 0. Due to a small sample size, some demographic variables were dichotomized. Average income ranged between $40,000 and $50,000 and was used to create a dichotomous variable where "above average income" ($50,000 or above) was coded 1, otherwise 0. Educational attainment was also coded dichotomously with those respondents who have a college degree or higher level of education coded 1, otherwise 0. If the race of a respondent was other than White, then race was coded 1, otherwise 0. Those who reported that they were single were coded 1, otherwise 0. Employment status (fully employed and partially employed, relative to non-employed) was included in our analysis.

Statistical Analysis

We conducted descriptive analyses and correlations between explanatory variables. Next, we tested the hierarchical ordinary least square (OLS) regressions models to estimate the relationship among the core variables, controlling for the socio-economic characteristics. Finally, additional analyses were conducted to test for a possible mediating relationship. Baron and Kenny's (1986) causal-steps test was employed in the mediation analyses and included the following assumptions:

1. The effect of X on Y is significant.
2. The effect of X on M is significant.
3. The effect of M on Y controlled for X is significant.
4. The effect of X on Y controlled for M is smaller than the total effect of X on Y.

The sample size of this study (n = 145) is relatively small for the SEM analysis. Thus, we used the regular causal-steps test without using SEM software to test the mediational relationship. Fritz and MacKinnon (2007) showed that the casual steps test without using SEM software was the most frequently used methodologies by psychologists and studies with smaller median sample sizes (N < 159.5) than methods that used SEM software. Along with the causal steps analysis, bootstrapping and the Sobel test were performed to test robustness.

Results

Table 2 summarizes the descriptive statistics of this study. The average age of the respondents was 41.5 (SD = 13.8). The average household gross income fell between $40,000 and $50,000. Nearly half (49%) of respondents reported that their household income was above $50,000. Twenty-six percent of respondents of the sample reported attaining a college degree or higher level of education. About 63% of the sample reported being white, while the other races comprised 37%. Thirty-five percent of respondents reported that they were single, more than half (53%) of respondents were female, and 47% were male. Slightly less than half of the respondents (49%) were employed full-time at the time of the interview, while 14% were employed part-time, and 37% were non-employed. The average financial well-being score was 49.4 (SD = 13.4). The average pre-pandemic financial behavior scale score was 21.2 out of 32. Perceived financial knowledge (M = 6.5, SD = 2.2) appeared higher than actual financial knowledge (M = 2.4; SD = 1.5) for respondents in this study. Specifically, the average perceived financial knowledge was 68%, while respondents scored 46% on a five-item test of objective financial knowledge.

Table 2. Descriptive Statistics (N = 145)

Variables	Frequency (%)	Mean	SD
Age		41.5	13.79
Household Income (categories)			
(1) 0-$20,000	28.3%		0.45
(2) $20,001-$40,000	22.8%		0.42
(3) $40,001-$70,000	22.1%		0.42
(4) $70,001-$100,000	16.6%		0.37
(5) $100,001+	10.3%		0.31
Education Attainment			
High school	31.7%		0.47
Some college	42.8%		0.50
College	18.6%		0.39
Graduate	6.9%		0.25
Race			
White	62.8%		0.49
African American	17.9%		0.38
Asian	8.3%		0.28
Hispanic	9.0%		0.29
Native American	2.1%		0.14
Marital Status			
Single	35.2%		0.48
Married	42.8%		0.50
Divorced	12.4%		0.33
Separated	1.4%		0.12
Others	8.3%		0.28
Female	53.8%		0.50
Employment			
Full-time employed	49.0%		0.50
Part-time employed	13.8%		0.35
Non-employed	36.6%		0.48
Financial behavior		21.2	5.80
Financial Well-being		49.4	13.39
Subjective financial knowledge		6.5	2.23
Objective financial knowledge		2.4	1.47
Financial satisfaction		5.9	2.24

Table 3 shows the correlation coefficients among the variables of interest in this study (i.e., income, subjective knowledge, pre-pandemic financial behavior, financial satisfaction, and financial well-being). All the variables were significantly correlated with each other at the $p < .05$ level or lower, except for subjective financial knowledge and income, which was slightly above the $p < .05$ standard ($p < .059$). None of the correlations were above the $r < .70$ benchmark to indicate potential multicollinearity issues.

The results of this correlation analysis showed positive relationships among the variables. The

findings suggested that more appropriate financial behavior was correlated to greater confidence in self-reflective financial knowledge; the higher the household income level, the higher the financial satisfaction and the CFPB well-being score. The size of the correlation between financial behavior and the CFPB well-being score was 0.61. The results suggest that individuals with better financial behavior before COVID-19 are more likely to have a higher CFPB well-being score.

Higher self-reflective financial knowledge was related to a higher household income level, financial satisfaction, and the CFPB well-being score. Also, household income level was positively related to financial satisfaction and CFPB well-being score. Financial satisfaction was strongly correlated with the CFPB well-being score (0.57). We tested these relationships in multivariate regression models (reported in Table 4) that control for the effects of other individual difference variables in multiple steps.

Table 3. Correlation Results between Major Variables

	Financial Behavior Score	Subjective Financial Knowledge	Household Income	Financial Satisfaction	CFPB Well-being score
Financial Behavior Score	1.0000				
Subjective Financial Knowledge	0.2539 *0.0021*	1.0000			
Household Income	0.3814 *<.0001*	0.1571 *0.0592*	1.0000		
Financial Satisfaction	0.3242 *<.0001*	0.4646 *<.0001*	0.2173 *0.0086*	1.0000	
CFPB Well-being Score	0.6146 *<.0001*	0.2716 *0.001*	0.3495 *<.0001*	0.5650 *<.0001*	1.000

Hierarchical Regression

The results of the hierarchical OLS regressions for the CFPB well-being score are shown in Table 4. Our regression findings support Hypotheses 1 through 4. In model 1, age, attaining a higher education degree, being a race other than white, being single, gender, and full- and part-time employment were examined as predictors of financial well-being. The results indicated that age was positively related to financial well-being and holding a college degree or above was marginally significantly associated with financial well-being. Other variables were not statistically significantly related to financial well-being. The R^2 for this model was 12%.

In the second model, household income was added. The results indicated that age was still statistically significantly associated with financial well-being, but higher education was no longer significantly associated with financial well-being. Females became marginally significantly and negatively associated with financial well-being. Interestingly, with controlling objective financial status (income), employment status (both full-and part-time, relative to non-employed) was negatively associated with financial well-being at a marginally significant level. Income was significantly and positively associated with the financial well-being score. If an individual's income level was above-average, the financial well-being score was 11 points higher than that of

his counterpart. The R^2 for this model was 24%. Aligning with H1, objective financial status (income) positively correlated with financial well-being. The findings support the hypothesis by suggesting that individuals with higher income levels obtain greater financial well-being.

In the third model, the control variables from model 2 were examined in addition to financial behavior. The results showed that age, being single, above-average income level, and higher financial behavior scores were positively related to financial well-being. Full-time employment was negatively associated with financial well-being at a marginally significant level. The R^2 for this model was improved to 50%. H2 proposed that a higher level of financial behavior positively predicted levels of financial well-being. The coefficient on financial behavior was significant and positive. Thus, H2 is supported. In the fourth model of this analysis, we included the perceived financial knowledge and objective financial knowledge variables in the model. The results showed that age, being single, higher financial behavior scores, above-average household income, and subjective financial knowledge were positively associated with financial well-being. Being a full-time employee (relative to non-employed) was negatively associated with financial well-being at a statistically significant level. The R^2 for this model was 53%. In support of H3, subjective perceptions (i.e., financial knowledge) were positively related to levels of financial well-being. The findings indicated that individuals who regard themselves as financially knowledgeable showed approximately a 1-point higher financial well-being score.

In our final model, we included a financial satisfaction variable along with the previous variables. The results indicated that age, being single, above-average household income, and positive financial behavior were significantly and positively associated with the financial well-being score while being a full-time employee was negatively associated with financial well-being. However, with the inclusion of financial satisfaction, subjective financial knowledge was no longer significantly associated with the well-being score. The final model was significant, accounting for 64% of the total variance in the model. In H4, a positive relationship between financial satisfaction and levels of financial well-being was hypothesized. Our results support the hypothesis, finding that one point increase in financial satisfaction was related to an increase of 2.3 points in the financial well-being score.

Mediation Analyses

In our final regression model, we found that adding financial satisfaction completely removed the effect of subjective perception (subjective financial knowledge) on levels of financial well-being. We hypothesized that there would be a mediation effect of financial satisfaction on the association between subjective perception and financial well-being. Table 5 and Figure 1 present the findings from the mediation test. In path a, the direct association between subjective financial knowledge (i.e., subjective perception) and financial satisfaction was positively significant, indicating that an individual who perceived themselves as financially knowledgeable was more financially satisfied. In the second path, the direct association between financial satisfaction and financial well-being was significant and positive. Third, the direct association between subjective financial knowledge and financial well-being was also positively significant. However, in the fourth path, the association between subjective financial knowledge and financial well-being score was found to be statistically insignificant when controlling for financial satisfaction.

Table 4. OLS Regression Results

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	*SE*	B	*SE*	B	*SE*	B	*SE*	B	*SE*
Age	0.27 ***	0.09	0.30 ***	0.08	0.29 ***	0.07	0.28 ***	0.07	0.20 ***	0.06
College or above	4.48 *	2.67	0.57	2.62	0.80	2.13	0.10	2.17	0.35	1.93
Other races (ref: White)	2.03	2.34	3.52	2.20	1.44	1.81	1.35	1.78	0.94	1.58
Single	1.35	2.38	3.73	2.27	4.02 **	1.85	3.58 *	1.81	2.94 *	1.61
Female	-3.77	2.51	-4.04 *	2.33	-2.31	1.91	-1.69	1.94	-2.18	1.72
Full-time employed	-2.24	2.83	-4.91 *	2.69	-4.20 *	2.19	-5.69 **	2.20	-6.88 ***	1.96
Part-time employed	-3.55	3.48	-6.00 *	3.28	-1.38	2.73	-1.97	2.68	-2.92	2.38
Above average income			10.90 ***	2.30	5.10 **	2.00	5.22 ***	1.96	4.16 **	1.75
Financial behavior score					1.31 ***	0.16	1.20 ***	0.16	1.04 ***	0.14
Subjective financial knowledge							1.07 ***	0.39	0.15	0.38
Objective financial knowledge							0.53	0.68	0.49	0.61
Financial satisfaction									2.30 ***	0.38
R^2	0.12		0.25		0.50		0.53		0.64	

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

The results indicated that financial satisfaction fully mediated the association between subjective financial knowledge and financial well-being, making the relationship insignificant. In other words, subjective knowledge influences financial well-being only through the level of financial satisfaction. We ran bootstrap and Sobel tests to confirm the mediation effect. The bootstrap results indicated that the indirect effect of financial knowledge on financial well-being was significant. The estimated direct effect of financial knowledge was 0.07, and the indirect effect mediated by financial satisfaction was 1.6. That is, 96% of the total effect of subjective knowledge was mediated by financial satisfaction.

We also conducted the Sobel test. We calculated the z-value following the Sobel test equation suggested by Baron and Kenny (1986):

$$Z \text{ value} = ab/\text{sqrt}\,(b^2 s_a^2 + a^2 s_b^2)$$

In this equation, a = raw (unstandardized) regression coefficient for the association between the independent variable and the mediator; s_a = the standard error of a; b = raw coefficient for the association between the mediator and the dependent variable; and s_b = the standard error of b.

Aligning with bootstrap results, the Sobel test results suggest that the indirect effect of subjective knowledge on CFPB well-being score via financial satisfaction is significantly different from zero (4.71, $p < .0001$). The findings support H5 that subjective perceptions (financial knowledge) indirectly affect financial well-being through financial satisfaction.

Figure 1. Mediation Results of Financial Satisfaction between Subjective Financial Knowledge and Financial Well-being (N = 145)

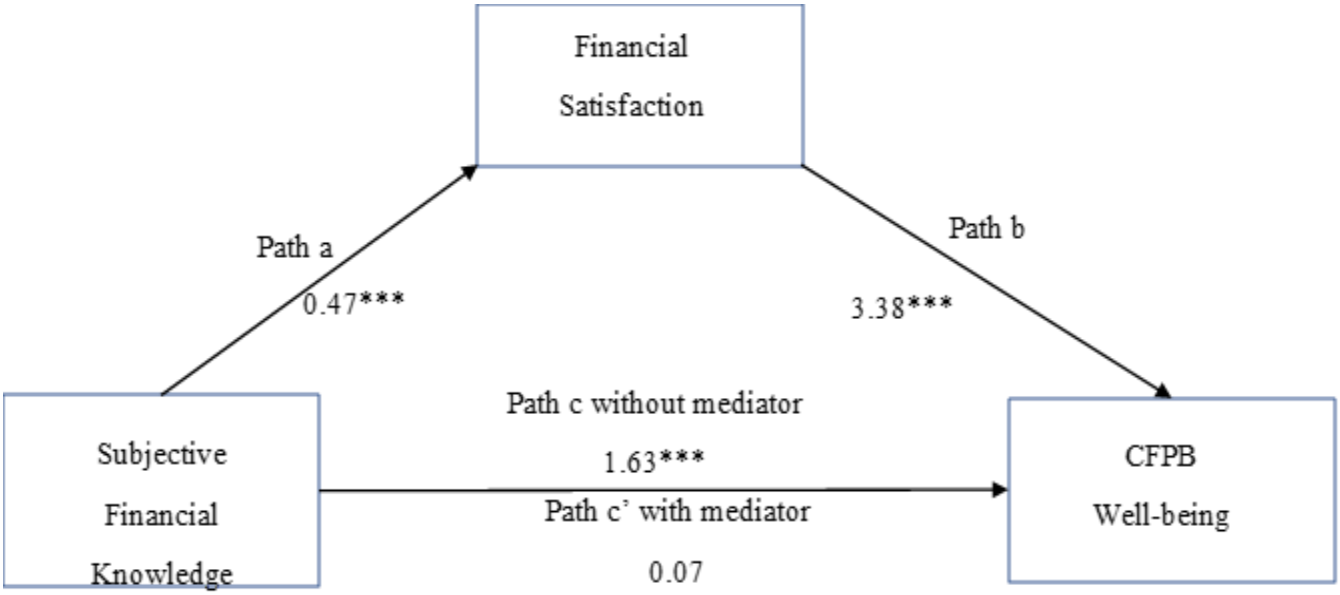

Table 5. Mediation Test Results

	Explanatory variables	Outcome variables	B
Path a	Subjective financial knowledge	Financial satisfaction	0.47 ***
Path b	Financial satisfaction	Financial well-being	3.38 ***
Path c	Subjective financial knowledge	Financial well-being	1.63 **
Path c'	Subjective financial knowledge	Financial well-being	0.07

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

Discussion

In alignment with Joo's (2008) Personal Financial Wellness framework, objective financial status (e.g., income), positive pre-pandemic financial behaviors, and financial satisfaction mattered in one's increased level of financial well-being during the COVID-19 pandemic. In addition, age and being single were significant demographic variables that were associated with financial well-being in the final model. Of no surprise, displaying positive financial behaviors prior to the COVID-19 pandemic, having above-average household income, and being satisfied with one's personal finances are major factors in raising financial well-being. However, a few interesting observations were made from the analyses that provide implications for practitioners, researchers, and policy makers. First and most notably, full-time employment was negatively and statistically significantly associated with increased financial well-being. This is an interesting insight that lends itself to potential policy implications during a pandemic, such as COVID-19. A number of factors could have affected this association, such as difficulty juggling work and personal life, caring for loved ones or oneself being sick, or having reduced or reallocated resources. One factor that could have affected the negative relationship between both full-time and part-time employed respondents (although the relationship between part-time employment and financial well-being was not significant) in this sample is that those who were unemployed would have received additional financial benefits from the federal government under the CARES Act. With this in mind, our

study also indicates that above-average income was positively and significantly associated with financial well-being. Another factor that may have impacted the relationship between being employed and financial well-being is that those employed full-time or less may have been concerned about the potential of pandemic-related job loss or reduction in pay whereas the unemployed did not have employment or wages to lose. Support for this idea exists in the literature, like Choi et al. (2020) who found that feeling insecure about one's job status was negatively related to financial well-being.

Similar to previous research (Robb & Woodyard, 2011), objective financial knowledge did not seem to matter in any of the models. Subjective financial knowledge was important; however, once financial satisfaction was included, subjective financial knowledge was no longer significant. Further analyses found that financial satisfaction fully mediated the relationship between subjective financial knowledge and financial well-being. When one feels they know about personal finance and are satisfied with their financial situation, then financial well-being rises. One could raise the question that subjective financial knowledge may be measuring financial self-confidence as the measure specifically asks respondents about how much they think they know. In this case, having confidence about what you think you know plays an important role in financial well-being through financial satisfaction.

Limitations

As with any study, limitations are present. First, financial behavior was a lookback measure. To answer the relevant questions, the respondent had to look back to their financial behaviors before COVID-19 (prior to March 2020), which was at least three months prior to the interview date. Personal experience or emotional judgement amid the turmoil of COVID-19 could be reflected in their responses. Thus, their behaviors before COVID-19 may be distorted or embellished according to their current financial or health status.

Second, as previously mentioned, the data were collected online during an unprecedented time in not only U.S. history but also global history. Individuals and families faced complex issues of navigating health and safety concerns, psychological issues, and financial distress. While it is beyond the scope of this study to take into account these factors, we capture a glimpse of potential outcomes that Americans faced.

Third, unemployment was found to be a significant factor in understanding financial well-being during the COVID-19 pandemic. However, we do not know when respondents if respondents were unemployed prior to the pandemic or as a result of the pandemic. We only know that they were unemployed at the time of the survey. Knowing when respondents became unemployed may contribute to further understanding of why it was an important factor for increased financial well-being.

Finally, although the sample represents diverse demographics in terms of age, gender, and education attainment, the sample may not generalize the U.S. population. For example, in regard to race/ethnicity, this sample included fewer people who identified as White (62.8%) and more Black/African Americans (17.9%) compared to the U.S. population (76.3%, 13.4%, respectively). On the other hand, gender was near the national average in this sample including 53% female compared to the national average of 50.5% (U.S. Census Bureau, 2019).

Implications

Multiple implications can be drawn from this study regarding practice, research, and policy, all in the pursuit of improved client and, in general, consumer financial well-being. First, financial professionals (e.g., financial counselors, financial planners, and financial therapists) should continue striving to not only increase their clients' objective financial status, but also clients' positive financial behaviors, confidence surrounding financial matters, and financial satisfaction. Findings from this study indicate that clients would benefit from crisis preparation. Financial professionals would be prudent to help clients develop positive financial behaviors prior to a crisis as well as equip themselves with knowledge about unemployment benefits and other government benefits should their clients find themselves unemployed or in an unprecedented crisis similar to COVID-19. For

some financial professionals (e.g., financial planners/advisors), they may not normally work with clients who are unemployed or who may have lower financial well-being when they are employed full-time during a crisis. A stigma against accessing government benefits may exist for some clients and financial professionals. However, this study's findings demonstrate that government benefits when unemployed, like those offered through the CARES Act, may in fact ease the financial burden and help clients move to state of enhanced financial well-being. While it was beyond the scope of this study, financial professionals may find it beneficial to understand government benefits, prepare for a crisis response, and help clients overcome the challenges posed during and after a crisis.

Second, future research should further examine the relationship between unemployment and financial well-being as well as above average income during the COVID-19 pandemic. As already noted, unemployment and above average income were significantly related to increased levels of financial well-being. While above average income intuitively makes sense, unemployment does not. This relationship leads to the next implication for policy that indicates that it is possible that government benefits do, at least in the short-term, improve individuals' financial well-being. Longitudinal research would help examine how people who have higher income and who are employed full-time versus unemployed during a crisis fair long after the crisis is over. Finally, and conversely to the previous point, longitudinal research should explore how stimulus policies—such as enhanced unemployment benefits— may have negative effects, such as extending dependency on government benefits.

Conclusion

Using Joo's (2008) Personal Financial Wellness framework, this study set out to discover how individuals' financial well-being was impacted by the COVID-19 pandemic. According to Joo's framework, objective status, subjective perspectives, financial behaviors, and financial satisfaction play a role in financial well-being. However, this study found that subjective financial knowledge was not a significant predicting variable directly related to financial well-being when accounting for all the other factors. However, financial satisfaction served as a key mediator between subjective financial knowledge and financial well-being. In addition, full-time employment was negatively related to financial well-being while above average income was positively related. Considering the timing of the survey—during the COVID-19 pandemic—a number of insights were gleaned to help practitioners, researchers, and policy makers further understand factors important to enhancing financial well-being, begging the question, how are you doing?

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