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Older Adult Financial Fraud Victimization and Changes in Physical and Mental Health

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In 2023, Texas ranked third in the United States for the number of elder fraud complaints filed with the Federal Bureau of Investigation (FBI), with over 7,000 Texans reporting losses totaling $278.3 million (FBI, 2023). While there is a high financial toll associated with elder financial fraud, this type of victimization has far-reaching mental health consequences that can significantly impact an individual's well-being (Button et al., 2010). Victims of financial scams often experience emotional distress, with feelings of shame, embarrassment, and vulnerability (Button et al., 2014). These emotions can result in a decline in mental health, triggering conditions like anxiety, depression, and a diminished sense of self-worth (Weissberger et al., 2020). The trauma of realizing that they have been deceived by a trusted individual or stranger can worsen existing psychological and mental vulnerabilities. For example, according to an issue brief by the Financial Industry Regulatory Authority (FINRA) Foundation (2021), elderly individuals who often make poor financial and healthcare decisions report higher levels of loneliness and lower cognition capabilities (see Stewart et al., 2021). The emotional turmoil tied to financial fraud victimization may therefore worsen existing frailties and lead to re-victimization or long-term adverse health outcomes.

In addition to the direct effect of victimization on individual health, elder financial fraud can result in diminished access to necessary medical care services. As victims of fraud or scams often lose significant portions of their financial resources, they may no longer be able to afford medications, treatments, or even basic living expenses. This situation can lead to a deterioration in overall health as individuals are forced to make difficult decisions about what to prioritize financially. A report by the American Association of Retired Persons (AARP) highlights that financial strain among older adults can prevent them from seeking timely medical attention or purchasing necessary medications, leading to worsening chronic health conditions or developing new medical issues (AARP, 2019). Furthermore, the stress of being financially burdened may lead to unhealthy coping mechanisms, such as poor nutrition, lack of physical activity, and insufficient sleep, which can contribute to poorer health outcomes.

Research has begun to examine the physical and mental health factors associated with elder financial fraud. A recent study by Yu and colleagues (2022) analyzed data from a sample of 900 older adults and found that older age, cognitive health, and financial literacy are strongly related to scam susceptibility. Other research reports that older adults who are financially exploited are more likely to experience mental and physical health decline, with one study reporting that victims of financial exploitation show worse health conditions (Sarriá et al., 2019). Another study by Deliema and colleagues (2018) analyzed data from the Health and Retirement Study (HRS)—a nationally representative longitudinal panel survey of approximately 22,000 individuals in the United States over age 50—to evaluate the physical and psychological consequences of fraud victimization. Their analysis focused on three outcomes: (1) cognitive functioning, (2) self-reported depression, and (3) self-rated overall health. The findings from their analysis revealed that fraud victimization is associated with decreases in cognitive functioning at one wave, but not over a six-year period of the life span. While informative, one limitation of the study was the exclusion of other measures in the HRS capturing features of physical and mental health found to be associated with fraud victimization.

Taken together, while previous research suggests that elder fraud victims often face mental and physical health problems (Lamar et al., 2022), most research is based on cross-sectional data (Sarriá et al., 2019), making it difficult to assess if victimization is related to changes in health-related issues. Of the existing longitudinal research (DeLeima et al., 2018), the focus has mostly been on broad measures of physical and mental health status,

leaving much unknown about whether financial fraud victimization is related to worsening symptoms of specific domains of poor physical health, such as high blood pressure, heart conditions, restless sleep, and pain management problems. Therefore, the current report aims to address this gap by analyzing longitudinal data from the HRS to evaluate the associations between victimization and changes in physical and mental health in a national sample of older adults.

Sample

Data were drawn from the HRS, a longitudinal sample of approximately 31,000 participants that began in 1992. The HRS provides information on a nationally representative sample of individuals in the United States who are at least 50 years old. Data collection has occurred every two years from 1992 to 2022. The HRS aims to collect information on the health, family dynamics, and economic situations of older adults in the United States during their transition from active employment to retirement. The HRS also collects information on relevant factors to this population in separate questionnaires, such as the Participants Lifestyle Leave Behind Questionnaire (LBQ). Participants selected by HRS staff to be a part of a nationally representative subset of the full sample were asked to complete the LBQ during 2008. The 52-item questionnaire asked participants about their health and physical functioning, income, assets, psychological traits, and experiences. It was mailed to their homes, and they were asked to return the completed questionnaire by mail. The analysis is based on self-report data from all 4,400 respondents who participated in the 2002 and 2008 HRS interviews and completed the 2008 LBQ.

Measures

Independent Variable

The independent variable (or "predictor") in the current study is whether the participant experienced financial fraud victimization. This variable was measured by asking participants in the LBQ: "*Have you ever been the victim of financial fraud in the past 5 years?*" Response categories were 0 = no and 1 = yes. Table 1 presents descriptive statistics for this measure along with other variables included in the analyses. As indicated in Table 1, approximately 5% of participants reported being victims of financial fraud in the past five (5) years.

Table 1. Descriptive Statistics

	Mean/%	SD/n	Min	Max	*N*
Financial Fraud Victimization $_{2008}$	4.50%	200	0	1	4,440
Physical Health					
High Blood Pressure $_{2002}$	52.91%	2,349	0	1	4,440
High Blood Pressure $_{2008}$	60.37%	2,680	0	1	4,440
Heart Condition $_{2002}$	25.05%	1,112	0	1	4,440
Heart Condition $_{2008}$	26.20%	1,163	0	1	4,440
Do Not Feel Rested $_{2002}$	13.54%	601	0	1	4,440
Do Not Feel Rested $_{2008}$	12.94%	575	0	1	4,440
Troubled with Pain $_{2002}$	30.03%	1,333	0	1	4,440
Troubled with Pain $_{2008}$	34.44%	1,529	0	1	4,440
Mental Health					
Depression $_{2002}$	1.31	1.85	0	8	4,440
Depression $_{2008}$	1.35	1.86	0	8	4,440
Cognitive Functioning $_{2002}$	20.11	5.30	2	35	4,440
Cognitive Functioning $_{2008}$	19.27	5.69	2	35	4.440
Controls and Demographics					
Educational Attainment $_{2002}$	12.70	2.93	0	17	4,400
Income $_{2002}$	$12,966	$31,413	0	$700,000	4,400
Married/Partnered $_{2002}$	70.56%	3,133	0	1	4,440
Heart Attack $_{2008}$	2.21%	98	0	1	4,440
Age	65.76	8.54	35	93	
Race					
White	85.42%	3,793	-	-	-
Minority	14.57%	647	-	-	-
Sex					
Male	38.13%	1,693	-	-	-
Female	61.86%	2,747	-	-	-

Dependent Variables

There are six (6) dependent variables (or "outcomes") in the current study, including four indicators of physical health and two indicators of mental health.

Physical Health

- High Blood Pressure. During data collection in 2002 and 2008, participants were asked: "*Has a doctor ever told you that you have high blood pressure or hypertension?*" Responses to this question were coded as 0 = no and 1 = yes. Approximately 53% of respondents reported being told they had high blood pressure in 2002 and 60% of participants in 2008.

- Heart Condition. In both 2002 and 2008, participants were asked: "*Has a doctor ever told you that you had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?*" Participants were instructed to report 0 = no and 1 = yes. Around 25% of respondents reported being informed by a physician that they had a heart condition in 2002 and 26% of participants in 2008.

- Do Not Feel Rested. In 2002 and 2008, participants were asked: "*How often do you feel really rested when you wake up in the morning?*" Original responses ranged from 1 = *most of time* to 3 = *rarely or never*. For analysis purposes, these were transformed into a binary variable, where 0 = most of time/sometimes and 1 = rarely or never. Roughly 14% of the sample

reported not feeling rested when they woke up in the morning in 2002 and 13% of the sample in 2008.

- Troubled With Pain. Participants were asked in 2002 and 2008 to report on their experiences with pain. Specifically, participants were asked: "*Are you often troubled with pain?*" Response categories for this question were 0 = no and 1 = yes. As presented in Table 1, 30% of participants reported often having trouble with pain in 2002, while 34% of participants reported being troubled with pain in 2008.

Mental Health

- Depression. Participant depression was measured the same way in 2002 and 2008 using the Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977). The 8-item version of the instrument asks participants to report (0 = no, 1 = yes) if they experienced any of the following symptoms in the past week: (1) depressed, (2) everything like feeling was an effort, (3) sleep was restless, (4) happy, (5) lonely, (6) enjoying life, (7) feeling sad, and (8) can often not "get going." Values were summed together to create an index of depressive symptomatology, with higher values reflecting more symptoms.[1] The measure demonstrated good internal consistency in 2002 (α = .78) and 2008 (α = .81). with both being strongly and positively correlated with one another (r = .65, p < .001).

- Cognitive Functioning. Participant cognitive functioning was measured in 2002 and 2008 by the modified Telephone Interview for Cognitive Status (TICS; Herzog & Wallace, 1997). This is a brief standardized test adapted from the original TICS measure (Brandt et al., 1988) to remotely screen for cognitive disorders. The TICS measure captures address orientation, concentration, short-term memory, mathematical skills, and verbal language. Higher scores represent higher cognitive functioning. The measure demonstrated good internal consistency in 2002 (α = .75) and 2008 (α = .79), with both being positively correlated over time (r = .51, p < .001).

Control Variables and Demographic Characteristics

Participant age, race, sex, educational attainment, income, and marital status were measured in 2002 and included as control variables. Age was measured in years, which ranged from age 35 to 93, and had an average of 65 years old. Race was measured as a binary variable where 0 = White and 1 = Minority. Sex was measured as a binary variable where 0 = male and 1 = female. Educational attainment was measured in 2002 as a continuous variable, ranging from 0 = *no formal education* to 17 = *post-college* (*17+ years*). The average value of 12.70 on this measure corresponds to a high school education. Income was measured in 2002 as the total amount of reported income. Marital status/partnering was also assessed in 2002 as a binary variable (0 = no, 1 = yes). Approximately 70% of participants reported being married or partnered. Lastly, reports of suffering a heart attack or myocardial infarction since the last interview were measured in 2008 (0 = no, 1 = yes), with less than 3% of participants reporting suffering such an event.

Analytic Plan

The analytic plan unfolded in a series step to examine whether and to what extent financial fraud victimization is associated with an increase in physical and mental health problems. First, a series of logistic regression models were calculated to examine the effect of financial fraud victimization on all physical health outcomes while controlling for pre-existing levels of each physical health measure. Previous measures of each dependent variable were included in each model to understand whether reported victimization in 2008 was related to an increase or decrease in physical or mental health problems during the same time. To evaluate this, the first model examined the relationship between financial fraud victimization and the odds of reporting high blood pressure in 2008, while controlling for previously reported high blood pressure in 2002, educational attainment, income, marital/partnered status, heart attack in the past two years, age, race, and sex. The following models examined the associations between financial fraud victimization and the odds of having a heart condition, not feeling rested, and trouble with pain, while taking into consideration previous levels of each health problem in 2002, controls, and demographics. Second, this method was repeated for all examined mental health outcomes, but using Ordinary Least Squares (OLS) regression. OLS regression was chosen based on the continuous distribution of values for depression and cognitive functioning. Similar to the analyses for physical health, the first OLS model focused on evaluating the effect of financial fraud victimization on depression in 2008, while controlling for previously

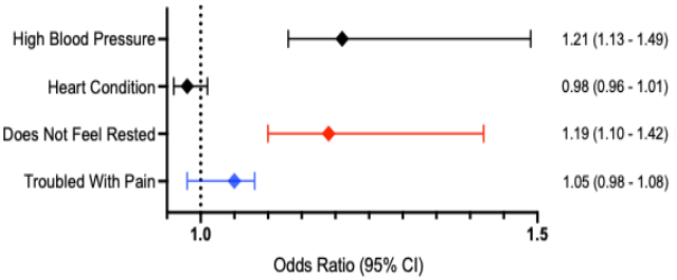
[1] For analysis purposes, item 6 of the CES-D scale, "enjoying life," was reverse coded. Reverse coding in statistical analysis ensures that scores on positively-worded and negatively-worded items in a survey/questionnaire align, which allows for meaningful and consistent comparisons related to the underlying constructs (Hurwicz et al., 2017).

reported levels of depression in 2002, covariates, and demographic characteristics. The second and last OLS model assessed the relationship between financial fraud victimization and cognitive functioning in 2008 after accounting for prior levels of cognitive functioning, covariate measures, and demographics. All regression analyses were conducted using StataIC version 15 (StataCorp, 2017) with robust standard errors.

Results

Figure 1 presents the main results from each logistic regression model predicting changes in physical health. Participants who reported being the victim of financial fraud in the past five years were 21% more likely to report having high blood pressure, compared to participants who did not report being the victim of financial fraud. Financial fraud victimization was not associated with any changes in having a heart condition. However, victims of financial fraud were 19% more likely to report not feeling rested on most mornings, compared to non-victims. Participants who reported being the victim of financial fraud in the past five years were no more or less likely to be troubled with pain, compared to non-victims of financial fraud.

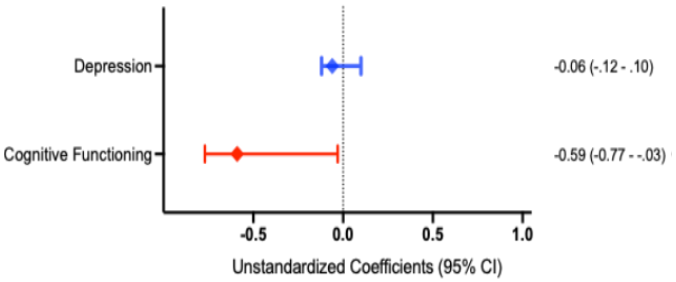
Figure 1: Associations Between Financial Fraud Victimization and Physical Health*



**Notes: CI = confidence interval. Estimates are from models controlling for educational attainment, income, married/partnered status, heart attack, pre-existing levels of physical health outcome, age, race, and sex.*

Figure 2 shows the main results from each OLS regression model predicting changes in mental health. Participants who reported being the victim of financial fraud in the past five years showed no increase or decrease in the number of depressive symptoms experienced in the past week in 2008, compared to those who did not report being a victim. With respect to cognition, financial fraud victimization was associated with a slight decrease in cognitive functioning among those who reported financial fraud victimization, compared to those who did not.

Figure 2: Associations Between Financial Fraud Victimization and Mental Health*



Notes: CI = confidence interval. Estimates are from models controlling for educational attainment, income, married/partnered status, heart attack, pre-existing levels of physical health outcome, age, race, and sex.

Discussion and Policy Implications

Older adults in the United States are disproportionately affected by financial fraud due to a combination of cognitive vulnerabilities, trust, and financial assets accumulated over a lifetime. Victims of financial fraud lose billions of dollars each year, and many are unaware of being defrauded until it is too late. Cognitive decline, as well as poor physical and psychological health, impair one's ability to recognize red flags for this type of crime. After victimization, the disappointment of being defrauded, along with feelings of anxiety and worry about recovering lost assets or re-victimization, has the potential to impact physical well-being. While much is known about the physical and mental health correlates of risk for elder financial fraud, comparatively less is understood about whether victimization leads to changes in physical and mental health status over time. The current report aimed to test this question using longitudinal data from a nationally representative sample of older adults in the United States. The findings revealed that victims of financial fraud experienced increases in risk for two of four indicators of physical health—high blood pressure and not feeling rested after sleeping—suggesting that perhaps stress from victimization is connected to cardiometabolic health. Victims of financial fraud also reported slight decreases in one of two indicators of physical health—cognitive functioning—indicating that perhaps the impact of being victimized on sleep or other behaviors critical for maintaining cognitive health is affected by this source of trauma.

Improving physical and mental health among victims of elder financial fraud requires a multi-faceted approach that attends to both immediate and long-term needs. Financial abuse can lead to significant stress, anxiety, and depression, which in turn affects the victim's overall well-being. To address this, it is crucial to provide

comprehensive healthcare, including mental health counseling and physical rehabilitation services. Cognitive behavioral therapy (CBT) has been shown to be particularly effective in helping individuals manage stress, anxiety, and depression resulting from traumatic financial loss (Ishikawa & Mace, 2023). Additionally, social support networks are vital for emotional recovery. Support groups, peer counseling, and engagement with trusted family or community members can provide reassurance, reduce feelings of isolation, and promote psychological healing (Wood & Lichtenberg, 2017). Regular physical activity, such as walking or yoga, can also help reduce stress and improve overall health by lowering blood pressure and enhancing mood.

To prevent further victimization and promote long-term well-being, financial literacy education and empowerment are key strategies. By equipping elderly individuals with the knowledge and skills to recognize fraud and manage their finances independently, they are less likely to fall victim to financial exploitation. Programs focused on improving financial literacy have shown promise in increasing self-confidence and decision-making abilities among seniors, reducing the likelihood of future abuse (Fong et al., 2021). Moreover, building a more robust social safety net and ensuring that victims of elder financial fraud have access to legal and financial services is essential. Legal interventions can help restore lost assets, while financial counselors can help victims regain control over their finances, alleviating some of the stressors that contribute to both mental and physical health decline. Empowering elderly individuals with knowledge and resources not only fosters independence but also aids in restoring their dignity and improving their quality of life.

Financial fraud schemes are diverse and have become increasingly sophisticated. Some of the most common include phishing, lottery and sweepstakes scams, and investment fraud. The National Council on Aging (NCOA) estimates that one in five older adults are victims of financial exploitation, and only a small percentage report it. The psychological toll of fraud on seniors can be devastating. The loss of significant amounts of money can leave older adults financially vulnerable, especially those who rely on fixed incomes like Social Security or pensions. In many cases, the emotional and psychological consequences are as harmful as the financial loss, causing anxiety, depression, and a loss of trust in others.

In response to these growing concerns, Texas can take stronger action to protect its aging population. First, Texas could enhance public awareness campaigns to educate older adults about common fraud schemes. Local and state agencies could partner with community organizations, senior centers, and healthcare providers to distribute informative materials, such as brochures, seminars, and online resources. The Texas Department of Aging and Disability Services (DADS) could expand outreach programs that teach seniors about the risks of financial fraud and provide tips for recognizing scams. These efforts would raise awareness and help older adults develop the skills to spot fraudulent activity before it causes harm.

Texas can also strengthen its legal and regulatory framework to better protect seniors from financial exploitation. One important step is to improve enforcement of laws against elder financial abuse, such as the Texas Elder Abuse and Exploitation Prevention Act and the federal Elder Abuse Prevention and Prosecution Act. Additionally, Texas could collaborate with financial institutions and law enforcement agencies to create a more integrated reporting system for suspected fraud, making it easier for seniors to report scams and seek restitution. By focusing on both prevention and enforcement, Texas can provide a safer environment for its older residents, helping to protect them from the long-lasting consequences of financial fraud.

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