

Loneliness and not Social Isolation Predict Financial Victimization in Older Adults

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Roughly one-third of Americans are over the age of 50. This proportion is expected to grow dramatically in upcoming decades (Vespa et al., 2018). Financial and monetary stability is especially important during this life course stage as individuals transition out of the labor force and rely on savings and other assets. Given the removal from the labor force, financial losses are more difficult to recoup. Those over the age of 50 typically have higher savings and other available assets, so are often a target for financial victimization. This victimization, in the form of fraud and theft, creates substantial psychological and economic harm. In the US, approximately 28.3 billion is stolen from older adults every year (Gunther, 2023). Understanding vulnerability factors can inform public policy, clinical practice, and prevention efforts. Prior work has identified multiple risk factors for elder abuse broadly, such as poor physical health, functional dependency, psychiatric illness, substance use, and demographic characteristics (Storey, 2020). Social isolation and loneliness have been suggested as probable risks for financial victimization (Sur et al., 2021), but current research is limited (Wood & Lichtenberg, 2017).

In the US, approximately one in three adults over the age of 50 report experiencing isolation or feeling lonely (Kullgren et al., 2023). The impact of social isolation and loneliness has been well explored in relation to health outcomes, including heart disease (Valtorta et al., 2016), diabetes (Tomaka et al., 2006), cognitive impairment (Cardona & Andrés, 2023) and all-cause mortality (Holt-Lunstad et al., 2015; Steptoe et al., 2013). The consensus of findings is that social isolation and loneliness both exert a strong negative impact on health. This impact is comparable with other well-established risk factors such as smoking and obesity (Holt-Lunstad et al., 2015; Perissinotto et al., 2012). While they are closely related, social isolation and

loneliness are distinct concepts (Newall & Menec, 2019). Social isolation refers to an object lack of social contacts while loneliness refers to the subjective unpleasant emotional experience of being alone, irrespective of actual social contacts (Asante & Tuffour, 2022).

Some prior work has commented on the role of loneliness in financial victimization, particularly telemarketing fraud. In one U.S.-based study using a small sample of older adults who had been defrauded ($N = 28$), the researchers (Alves & Wilson, 2008) found that the majority of participants had some college education and were between the ages of 60 and 70. Further, within their sample, divorce was common. In another study conducted with Chinese older adults, participants loneliness was associated with increased risk of fraud victimization (Xing et al., 2020). Other psychosocial variables, such as psychological vulnerability (Lichtenberg et al., 2013) have been associated with financial victimization, but the role of social isolation and loneliness is limited.

Given the limited existing body of work, theory has not been well explored in this area of research. This paper will be theoretically grounded in Self-Determination Theory (Deci & Ryan, 2012) and Basic Psychological Needs Theory (Vansteenkiste et al., 2020). These theories both posit that individuals can improve well-being through satisfying their basic social needs. Humans are motivated by both intrinsic and extrinsic forces to satisfy basic needs which are grouped as either competence, autonomy, or relatedness. Relatedness refers to the need to feel a sense of connection and belonging with peers. Those who are unable to meet a need will seek ways to do so, even when options are not optimal. Within the context of social isolation and loneliness in later life, fulfilling relatedness needs may expose an individual to persons with malicious intent and expose them to financial victimization.

Interventions addressing social isolation and loneliness have been developed and tested, and effect sizes for this work tend to be small (Hoang et al., 2022). Some forms of intervention, such as social cognitive training, appear to be more successful than others (Masi et al., 2011). These programs feature psychoeducational content related to addressing social isolation and loneliness. Expanding the content of these programs to include additional content relevant to the lived context of older adults experiencing social isolation and loneliness could potentially improve intervention impact.

Research Question

Despite the conceptual overlap between social isolation and loneliness, the literature on the psychosocial impact of social isolation and loneliness tends to focus on one without considering or controlling the other. This paper will explore the relationship of social isolation and loneliness to financial victimization among older adults by combining three years of panel data from a large longitudinal population-based study in the United States. After controlling for potential covariates, logistic regression will be used to examine if social isolation and loneliness serve as risk factors for financial victimization. Informed by Self-Determination Theory and Basic Psychological Needs Theory, I expect that both serve as risk factors such that those with higher levels of social isolation and loneliness will be more likely to have experienced financial victimization in the previous five years.

Method

Sample

The Health and Retirement Study (HRS) is a longitudinal representative panel study of more than 20,000 older adults in America that began in 1992. The sample used in this study consisted of participants who completed the Psychosocial and Well-being Questionnaire in 2008,

2010, or 2012. Additional information used for covariates was also drawn from cross-wave tracker data, the physical measures questionnaire, and the cognitive questionnaire. HRS collects these questionnaires from a rotating random 50% of the longitudinal panel every four years. For participants who completed more than one questionnaire across the three years, only the most recent was included, yielding an analytic dataset in which a given participant was present only once (i.e., observations were independent). Participants who did not provide information related to all variables relevant to the model were excluded listwise. After applying these criteria, 11,523 participants were in the analytic sample.

Measures

Financial Victimization. Two questions were used to create the dichotomous outcome measure of financial victimization. These questions were “Have you been the victim of financial fraud in the past five years?” and “have you been robbed or burglarized within the past five years?” If a participant answered yes to one or both, their answer was coded as 1. If they answered no to both, their answer was coded as 0.

Social Isolation. Six items were used to create an index measure of social isolation. This approach has been validated in other longitudinal panel survey work (Shankar et al., 2011). The six items included marital status, if the participant lived alone, if the participant had less than monthly contact with children, family or friends, and if they participated monthly in clubs, groups, or social organizations. In this index, the internal consistency using Cronbach’s alpha had a coefficient of $\alpha = .61$, suggesting an acceptable level of reliability. The final score was set as missing if they lack answers to any single item.

Loneliness. An 11-item scale was used to measure loneliness (Lee & Cagle, 2017). This scale was derived from the full 20-item Revised UCLA Loneliness scale. All 11 items are

answered on a three-point Likert scale (often, some of the time, and hardly ever or never). All items are one sentence (e.g., How much of the time do you feel that there are people you feel close to?) Consistent with HRS scoring guidelines (Smith et al., 2013), the final index score was set as missing if more than five items had missing values. The scale demonstrated good internal consistency (Cronbach's $\alpha = .87$).

Covariates

Age, self-defined gender, race/ethnicity, years of education, depressive symptoms, cognitive function, and self-rated health were all used as covariates. All of these measures have been found to have associations with financial victimization, so they were used to control for confounds to the outcome variable. Years of age when completing the survey was used for age. Self-defined gender was treated as dichotomous (0 = female, 1 = male). Race/ethnicity was entered as dichotomous (0 = White, 1 = all other). The writer of this paper recognizes that coding race/ethnicity in this way is a methodologically unsound approach that disregards the tremendous heterogeneity across racial and ethnic identity and would never use this coding scheme in an actual manuscript. Years of education was entered as total years of schooling with an upper range of 17. Depressive symptoms were entered as Center for Epidemiological Studies – Depression- 8 (CESD-8) score, with two items eliminated (items 4 and 6) due to overlapping content with a predictor (loneliness). Cognitive function was a composite of immediate and delayed word recall from a task in which participants were asked to recall a list of 10 words presented orally. Self-rated health was entered as a score from 1-5 based on the Likert response to the question “would you say your health is excellent, very good, good, fair, or poor?”

Analysis

A logistic regression with calculated odds ratios using maximum likelihood will be used to examine if social isolation and loneliness are related to financial victimization. All covariates and predictors will be entered in one step using the logit command in Stata v18. The outcome of question is binary, and appropriate for logistic regression. Linearity of the logit was tested by creating interaction terms between continuous predictors and their natural log and then entered the model. The interaction term for loneliness was not statistically significant ($p = .34$). The test statistic for isolation was statistically significant ($p = .03$). while the latter result may be an issue, the syllabus did not detail any requirement to discuss assumptions, so I did not transform social isolation into a form that would not violate assumptions of the model. To the reader of this paper, feedback on appropriate procedures for doing so would be appreciated. To check the robustness of findings, in sensitivity analysis, individual years will be disaggregated into 2008, 2010, and 2012 and tested using the model described above.

Results

Demographics and score averages across the outcome, predictors, and covariates are displayed in Table 1. In total, the analytic sample contained 11,523 participants. The average age of participants was 67.58 (SD = 10.99). More than half (59.4%) of participants identified as female. For race/ethnicity, 77.3% of participants identified as White. Participants averaged 12.79 (SD = 3.00) years of education. The average score for self-rated health was 3.15 (SD = 1.08) and participants recalled an average of 9.43 words on the cognitive task. The average score for the abbreviated CESD8 was 1.03 (SD = 1.45). Participants had an average score of 1.51 (SD 0.42) on the UCLA11 and 1.54 (SD = 1.19) on the social isolation index. A histogram providing a distribution of scores for loneliness is provided in Figure 1, and the distribution of scores on social isolation is provided in Figure 2. For the binary outcome variable, 90.2% of participants

had not experienced financial victimization in the previous five years while 9.8% endorsed having been financially victimized in the previous five years.

Table 1

Analytic Sample Demographics

Variable ¹	Mean/ n	SD / %	Range
Age	67.58	10.99	50 - 103
Gender	Female 6,845 Male 4,678	59.4% 40.6%	
Race/Ethnicity	White : 8,912 Black/African-American or Other: 2,611	77.3%	
Education (years)	12.79	3.00	0 – 17
Self-Rated Health	3.15	1.08	1-5
Cognition	9.43	3.54	0- 20
Depressive Symptoms	1.03	1.45	0-6
Loneliness	1.51	.42	1 - 3
Social Isolation	1.54	1.19	0-6
Victimization	No victimization: 10,388 Victimization: 1,135	90.2% 9.8%	

¹ n = 11,523 for all variables

Figure 1

Distribution of Loneliness Scores

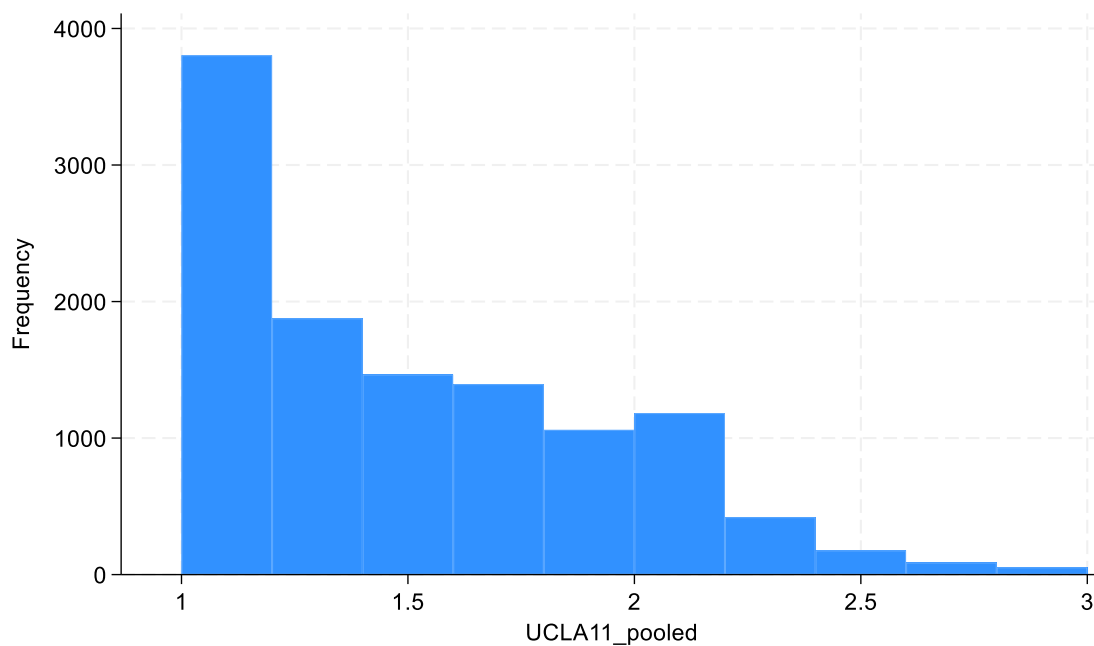
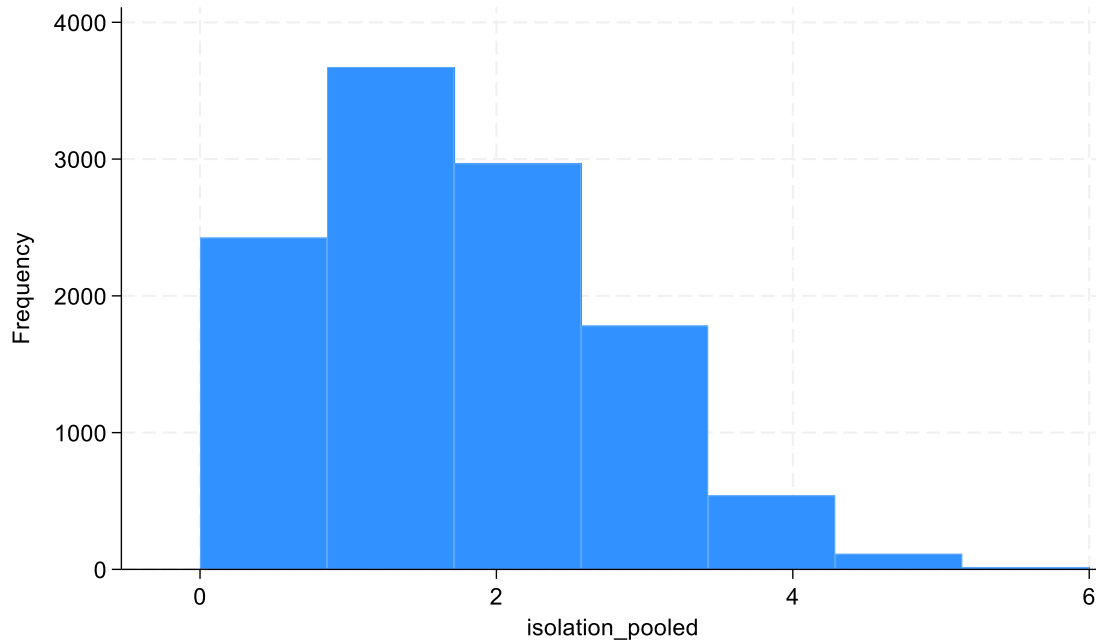


Figure 2*Distribution of Social Isolation Scores*

Results from the logistic regression are displayed in Table 2. The analysis found a significant association of loneliness ($OR = 1.42, p < .001$) with financial victimization. Given the 3-point Likert scale in the measure of loneliness (UCLA-11), this finding can be taken to mean that participants who reported experiencing loneliness an average of “some of the time” were 42% more likely to report financial victimization than those that reported experiencing an average of “hardly ever or never”. Extending to other values on the scale, the odds of experiencing financial victimization was also 42% higher when comparing those that reported experiencing loneliness “often” to those that reported experiencing loneliness “some of the time.” While social isolation was associated with slightly increased odds of experiencing financial victimization, the magnitude was not statistically significant ($OR = 1.03, p = .235$). Several of the covariates, including age, cognition, depression, gender, and education were also

associated with statistically significant changes in the odds of experiencing financial victimization. In addition to odds ratios, a figure showing the predicted probability of victimization based on loneliness score and social isolation are shown in Figures 3 and 4

Table 2

Logistic Regression of Financial Victimization

Variable	Odds Ratio	Std. Error	Statistic	p
Loneliness	1.42	.11	4.50	<.001
Isolation	1.03	.03	1.19	.235
Age	.98	<.01	-7.22	<.001
Self-Rated Health	.98	.03	-0.48	.628
Cognition	1.03	.01	2.45	.014
Depression	1.07	.02	3.03	.002
Race	1.13	.08	1.59	.111
Gender	1.16	.07	2.24	.025
Education	1.07	.01	5.66	<.001
Constant	.12	.05	-5.33	<.001

Figure 3

Prediction of Victimization by Loneliness

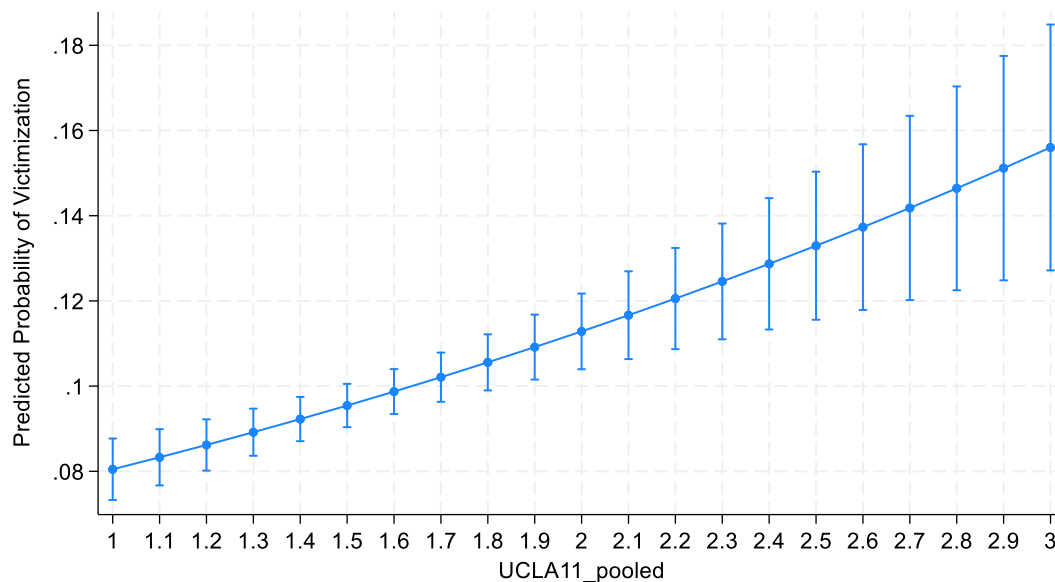
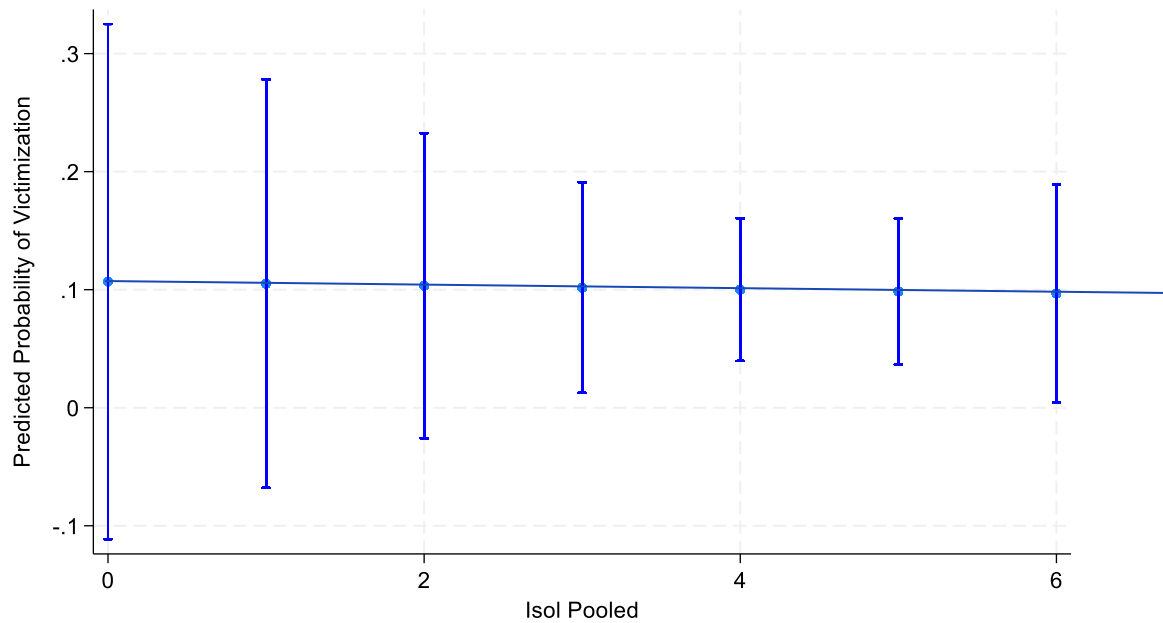


Figure 4*Prediction of Victimization by Social Isolation*

In the sensitivity analyses that examined each study year separately (2008, 2010, and 2012), findings were similar to the combined year dataset. In all years, loneliness was associated with increased odds of financial victimization and social isolation was not associated with increased odds of financial victimization.

Discussion

Using a combined three waves from a large nationally representative longitudinal panel study (HRS), this study found that among older adults (age 50+), loneliness and not social isolation is related to an increased odd of financial victimization. Extending finding from Self-Determination Theory and Basic Psychological Needs Theory, the two hypothesis of this study were (1) those with greater loneliness will have increased odds of financial victimization, and (2) those with greater social isolation will have increased odds of financial victimization. Hypothesis

1 is supported while hypothesis 2 is not. Those who were lonely may have sought out connection and in doing so been exposed to a person that financially victimized them. In contrast, the smaller social network of those who were socially isolated may have meant fewer exposures to persons that could potentially victimize them.

Future intervention work addressing social isolation among older adults should include educational material related to identifying and preventing financial victimization. This work has the potential to be particularly impactful in targeted to populations of older adults that have other risk factors associated with increased risk of financial exploitation, such as functional limitations, poor physical health, cognitive impairment, and mental health conditions. The findings of this study can also be applied to direct practice work with older adults. Practitioners working with older adults experiencing loneliness should be mindful of loneliness as a risk factor.

This study should be interpreted in light of its limitations. One unexpected finding related to one of the covariates, cognitive status. Scoring higher on a cognitive measure of functioning was related to increased a statistically significant increase in the odds of financial victimization. This finding is contradicted in multiple prior studies (Belbase & Sanzenbacher, 2017; James et al., 2014). A potential reason for this finding may be the specific domain tested, memory. Prior work that has associated cognitive impairment with financial victimization has focused on executive function, so future work should include a domain-specific measure of cognitive function that captures executive functioning in control variables. Additionally, findings may not accurately capture the relationship between predictors and outcome due to underreporting of financial victimization from participants (Gibson, 2013). Further, the measure of financial victimization was dichotomous and contained information about both fraud and robbery/theft. These two forms of victimization may be differentially associated with the predictors.

Conclusion

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