

Is Psychological Vulnerability Related to the Experience of Fraud in Older Adults?

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Financial exploitation, and particularly thefts and scams, are increasing at an alarming rate. In this study we (a) determined the national prevalence of older adults who report having been a victim of fraud, (b) created a population-based model for the prediction of fraud, and (c) examined how fraud is experienced by the most psychologically vulnerable older adults. The older adults studied were 4,400 participants in a Health and Retirement Study substudy, the 2008 Leave Behind Questionnaire. The prevalence of fraud across the previous 5 years was 4.5%. Among measures collected in 2002, age, education, and depression were significant predictors of fraud. Financial satisfaction and social-needs fulfillment were measured in 2008 and were significantly related to fraud above and beyond the 2002 predictors. Using depression and social-needs fulfillment to determine the most psychologically vulnerable older adults, we found that fraud prevalence was three times higher (14%) among those with the highest depression and the lowest social-needs fulfillment than among the rest of the sample (4.1%; $\chi^2 = 20.49$; $p < .001$). Clinical gerontologists and other professionals in the field need to be aware of their psychologically vulnerable clients' heightened exposure to financial fraud.

KEYWORDS *financial exploitation, psychological vulnerability, scams*

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While financial exploitation of older adults appears to be skyrocketing overall, one of the most rapidly increasing forms is theft and scams by strangers (Conrad, Iris, Ridings, Langley, & Wilber, 2010; MetLife, 2009, 2011). In their review of media-based stories of fraud and financial exploitation of older adults, the researchers who compiled the MetLife reports found that 51% of fraud cases are perpetrated by strangers. Conrad and colleagues (2010) advanced the conceptual framework of financial exploitation by identifying six clusters: (a) theft and scams, (b) abuse of trust, (c) financial entitlement, (d) coercion, (e) signs of possible financial exploitation, and (f) money-management difficulties. Our study focused on a nationally representative longitudinal study that examined prospective predictors of fraud (i.e., theft and scams). Specifically, Conrad and colleagues (2010) defined financial exploitation as illegal or improper use of an older adult's funds or property for another person's profit or advantage. Conrad and colleagues (2010) ordered their clusters by severity of the problem, with theft and scams being the most severe form of financial exploitation. Theft and scams are the taking of an older adult's monies without the permission of the older adult, either by outright stealing or committing fraudulent activities (i.e., scams). Terms such as "abuse of trust" and "financial entitlement" are thus categories of financial exploitation that imply an ongoing relationship between the parties. In this study, we examine only theft and scams, which comprise the most serious form of financial exploitation and one that can occur between those either with or without an ongoing relationship with the perpetrator.

Three recent random-sample studies examined the variables that correlate with reports of financial exploitation. For the most part, these studies gathered data on abuse of trust, coercion, and financial entitlement. Acierno et al. (2010) reported that 5.2% of all respondents reported having experienced financial exploitation by a family member during the previous year. Sixty percent of the mistreatment consisted of family members' misappropriation of money. The authors also examined a number of demographic, psychological, and physical correlates of reported financial exploitation. Only two variables—deficits in how many activities of daily living (ADL) the subject could perform without assistance and nonuse of social services—were significantly related to financial exploitation. Poor health and having experienced a previous traumatic event were also related to financial exploitation.

Laumann, Leitsch, and Waite (2008) reported that 3.5% of their sample had been victims of financial exploitation during the previous year. Younger older adults were the most likely to report financial exploitation. African Americans were more likely than non-Hispanic Caucasians to report financial exploitation, while Latinos were less likely than non-Hispanic Caucasians to report having been victimized. Finally, participants with a romantic partner were less likely to report financial exploitation.

Beach, Schulz, Castle, and Rosen (2010) found that 3.5% of their sample reported having experienced financial exploitation during the 6 months prior to the interview, and almost 10% had at some point since turning 60. The most common experience was signing documents the participant did not understand. The authors found that, directly related to theft and scams, 2.7% of their sample believed that someone had tampered with their money within the previous 6 months. In their sample, African Americans were more likely to report financial exploitation than were non-Hispanic Caucasians. Risk for depression and having any deficits in ADL were other correlates of financial exploitation.

Our study focused on older adults' experience of fraud (defined as financial loss other than robbery or theft) and is the first population-based study to gather prospective data to predict financial exploitation of any kind. Each of the studies asked participants to report whether they had been victims of financial exploitation during a defined time frame in the past (6 months, 12 months, anytime since turning 60), and all of the correlates were obtained concurrent with the report of mistreatment. Our study advances the field in three ways, by (a) using baseline data on demographic, depression, physical-health, and function variables to predict later reports of having been a victim of financial fraud; (b) obtaining interview data on unique variables not used in other studies (e.g., financial satisfaction and social needs), which were collected concurrent with data on reported victimization; and (c) examining the impact of fraud in the most psychosocially vulnerable older adults. This allowed us to investigate whether these new and unique variables will aid in the prediction of fraud, and whether clinicians need to become increasingly aware of the vulnerability of their older patients to financial fraud.

PSYCHOLOGICAL VULNERABILITY

Our conceptual framework is based on previous findings with depression and its impact and the impact of poor social-needs fulfillment in aging. Depression has long been known to predict disability and mortality (Blazer, 2003). In a similar fashion, the lack of social-needs fulfillment has been linked to disability and demoralization (Steverink & Lindenberg, 2006). The combination of clinically significant depressive symptomatology and poor social-needs fulfillment may improve our understanding of why clinically vulnerable older people are more susceptible than others to fraud.

Steverink and Lindenberg (2006) extended Ormel, Lindenberg, Steverink, and Verbrugge's (1999) research on social needs and Nieboer, Lindenberg, Boomsma, and Van Bruggen's (2005) theory of social production function (SPF) theory to understand successful aging. Steverink and Lindenberg focused on three social needs that exist throughout life: affection, behavioral confirmation (social approval that one's contributions are

useful and valued), and status, and found that needs for affection and behavioral confirmation remain high throughout life. The need for status, however, decreases with age, while the need for affection increases—and without continued behavioral confirmation, depression is more likely.

A related variable is financial satisfaction. Financial satisfaction is broadly related to physical and mental health in late life, while chronic financial strain is associated with increased mental and physical health problems and higher mortality (Lantz, House, Mero, & Williams, 2005; Szanton et al., 2008). Lack of financial satisfaction may also be a significant reason why certain older adults are more likely to experience fraud, since many scams involve promises of money.

One of the methodological challenges for research on financial exploitation is that most victims' reports are retrospective. Although our study focused solely on fraud, it provides an opportunity to examine whether, in a prospective data collection, the relationships of demographic and psychosocial variables that previous studies have found to be related to financial exploitation would still be significant. Our study advances the field by using baseline data on demographic, psychosocial and physical health, and function variables to predict later reports of having been a victim of financial fraud. In addition, unique variables not used in other studies (e.g., financial satisfaction and social needs) were collected concurrent with reported victimization questions; this allowed us to investigate whether these new and unique variables add to our conceptual framework of psychological vulnerability. Data were extracted from a nationally representative sample of 4,461 respondents who had completed both the 2002 Health and Retirement Study (HRS) regular survey and a 2008 Participant Lifestyle Leave Behind Questionnaire (LBQ). Thus, we were able to use the 2002 responses on demographic, health, depression, cognition, ADLs and IADLs and income variables to predict 2008 responses on fraud.

Our conceptual framework—psychological vulnerability—is an attempt to integrate different aspects of well being, as mood and perception of one's own position in society. The combination of these have not been employed as variables before. Clinically, however, it is well known that patient populations with comorbid conditions are often the most vulnerable to a number of negative outcomes, including social relations and conditions. Thus, while there has been no specific previous use of this combination of measures, the idea that low mood and low status will render older adults significantly more vulnerable to negative social outcomes is a reasonable hypothesis.

METHODS

Sample Design and Procedures

The Health and Retirement Study (HRS) is a national longitudinal study based on core biennial telephone surveys of approximately 31,000 participants that

began in 1992. It provides information about the segment of the U.S. population that is at least 50 years old. The primary objective of the survey is to facilitate research on health, family, and economic variables during the transition from active employment to retirement. The HRS also collects supplemental data using participant LBQs. Participants chosen by HRS as a nationally representative sample for this subset were asked to complete the LBQ in their homes and return it by mail. The 34-page survey contained 52 questions about various aspects of participants' daily lives, such as health conditions and physical functioning, income, assets, net worth, family structure, and psychosocial traits, states, and experiences. Our secondary analysis used data from all 4,461 respondents who had participated in both the regular 2002 HRS interview and the 2008 LBQ.

Measures

HRS MEASURES

Measures obtained from the general HRS dataset in 2002 were age, gender, race, years of education, marital status (presently partnered vs. not partnered), depression, functional limitations, self-rated health (Excellent, Very Good, Good, Fair, Poor), total reported income, and cognition. In the 2008 LBQ, data were also gathered for the first time on three social needs (affection, behavioral confirmation, and status), report of having experienced financial exploitation by theft or scams, and level of financial satisfaction.

CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE

Depressive symptoms were measured by the Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977). Using the 8-item version of the instrument and defining the time frame as the previous week, respondents were asked to respond yes/no as to whether (a) they were depressed, (b) everything "felt like an effort," (c) their sleep was restless, (d) they were happy, (e) they were lonely, (f) they enjoyed life, (g) they felt sad, and (h) they could not "get going."

Higher CES-D scores reflect more depressive symptoms, and a CES-D score ≥ 3 was used to indicate clinical depression (Steffick, 2000). The 8-item CES-D has similar symptom dimensions as the 20-item CES-D, and past research has demonstrated high internal consistency ($\alpha = .77$) and validity as implemented in the HRS (Steffick, 2000; Wallace, 2000).

FUNCTIONAL INDEPENDENCE

Functional independence was rated by how many ADL the respondent reported requiring assistance with, including bathing, eating, dressing,

walking across a room, and getting in or out of bed. Scores ranged from 0 to 5 for each item. Instrumental activities of daily living (IADL) were measured by assessing how many activities the respondent required assistance with, including using a telephone, taking medication, and handling money. Scores ranged from 0 to 3 for each item.

SELF-RATED HEALTH

Self-rated health was assessed with the question, “Would you say that your health is excellent, very good, good, fair, or poor?” Responses were scored 1 (Excellent) to 5 (Poor). Thus, lower scores equaled better self-rated health.

COGNITIVE FUNCTIONING

Cognitive functioning was measured by the modified Telephone Interview for Cognitive Status (TICS), which was included in the AHEAD/HRS data (Ofstedal, Fisher, & Herzog, 2005). Based on the older TICS measure published by Brandt, Spencer, and Folstein (1988) this is a brief standardized test that was developed for remote screening of cognitive disorders. The TICS measure includes items that address orientation, concentration, short-term memory, mathematical skills, praxis, and language, with a maximum score of 35 reflecting higher cognitive functioning. The TICS has high test-retest reliability and is generally sensitive to cognitive impairment (Herzog & Wallace, 1997); past work has identified factors reflecting mental status and memory (Herzog & Wallace, 1997). It has a Cronbach’s alpha of .69.

FINANCIAL SATISFACTION

Financial satisfaction—the perception of how well one’s finances meet one’s needs—was measured in 2008 by one question: How satisfied are you with your finances? Participants responded on a 5-point Likert-type scale: Not at All Satisfied (1), Not Very Satisfied (2), Somewhat Satisfied (3), Very Satisfied (4), Completely Satisfied (5). Thus, lower scores reflected lower satisfaction and higher scores reflected higher satisfaction.

SOCIAL NEEDS: AFFECTION, BEHAVIORAL CONFIRMATION, AND STATUS

Nieboer et al. (2005) developed a 15-item scale (SPF-IL) to measure levels of affection, behavioral confirmation, and status based on Ormel and colleagues’ social production functions theory (Ormel et al., 1999; Steverink & Lindenberg, 2006). We measured affection, behavioral confirmation, and status by identifying questions in the HRS 2008 LBQ that were comparable to questions on the SPF-IL 15-item scale, as described below.

Affection. SPF-IL: Do people help you if you have a problem, pay attention to you, really love you? LBQ: Do you have people to turn to, people to talk to, people to feel close to?

Z-scores were calculated for each participant for the three item responses. These z-scores were totaled, creating a scale with scores ranging from 8.02 to 2.09; higher scores reflected greater fulfillment of Affection needs. Internal consistency for the affection items was ($\alpha = .84$) as compared with ($\alpha = .83$) for the SPF-IL.

Behavioral confirmation. SPF-IL: Do you feel useful to others, that your role is appreciated in a group, that people find you reliable? LBQ: Do you feel part of a group of friends, do you receive adequate appreciation for providing help in your family? How well does the word "responsible" describe you?

The first and third questions were recoded so that higher scores reflected greater fulfillment of Confirmation needs. While the first question used a 3-point Likert scale, the second and third questions used 5- and 4-point Likert scales, respectively. Z-scores for all item responses were totaled, creating a scale ranging from -8.04 to 2.37 on which higher scores reflected greater fulfillment of Confirmation needs. Internal consistency for the behavioral confirmation items was $\alpha = .30$, compared with $\alpha = .75$ for the SPF-IL.

Status. SPF-IL: You are influential, known for accomplishments, do better than others.

LBQ: You receive poorer service than others in restaurants or stores, are treated with less courtesy or respect than others, have high standards and work toward them, have gotten the important things you want in life.

The second item used a 7-point Likert scale and the others used 6-point scales. As with the first and third Behavioral Confirmation items, the Status items were transformed so that their values fell evenly between 1 and 3. Z-scores were for these item responses were totaled to create an index with scores ranging from -13.10 to 3.18; higher scores reflected greater fulfillment of Status needs. Internal consistency for the status items was $\alpha = .47$, compared with $\alpha = .58$ for the SPF-IL. Although neither subscale was in the range of desirable consistency, the LBQ had an alpha score similar to the SPF-IL for the status variable.

FINANCIAL FRAUD QUESTION

One question from the LBQ was used to gauge the extent of participants' levels of financial exploitation by theft and scams: "Have you been the victim of financial fraud in the past 5 years?" (Yes, No). Immediately preceding this question was the question: "Have you been robbed or burglarized within the past 5 years?" (Yes, No). We coded the fraud scores as 0 (no fraud) and 1 (fraud victim). A higher score was thus related to fraud victimization.

Statistical Methodology

To evaluate bivariate relationships between fraud and predictor variables, a series of *t*-tests and chi-square tests of independence were completed (displayed later in Results in Table 2). A stepwise logistic regression was then performed to determine how the variables of interest predicted frequency of fraud in this sample. The first step included age, gender, minority status (White, non-White), years of education, and marital status (partnered, non-partnered). The second step included 2002 CES-D, 2002 ADLs, 2002 IADLs, 2002 self-rated health, 2002 income and 2002 TICS. The third step included 2008 financial status and the 2008 psychosocial variables affection, behavioral confirmation, and status. All analyses were completed using SPSS Version 19.

To evaluate the experience of fraud in the most psychologically vulnerable, three subgroups were selected: (1) those scoring in the highest 10% depression category (CES-D scores 5 to 8 of 8), (2) those scoring in the bottom 10% of social-needs fulfillment, and (3) those scoring in the most vulnerable category—highest 10% in depression and lowest 10% in social-needs fulfillment—were compared with the rest of the group, and chi-square (χ^2) tests were performed.

RESULTS

The sample included 4,440 respondents, as described in Table 1. The mean age was 65.8 years ($SD = 8.5$ years) and the average respondent had 12.7 years of education ($SD = 2.9$). The sample was 61.9% female and predominantly White (85.4%). Most respondents (70.6%) reported that they had partners (spouses or similar domestic relationships). Incidence of financial fraud was low in the sample (4.5%), and more than half of the sample (52.7%) reported being “very satisfied” or “completely satisfied” with their finances.

In bivariate analyses (Table 2), fraud was significantly more common among respondents who were younger ($t_{(df = 4438)} = 2.58, p = .01, d = .19$), had more education ($t_{(df = 4438)} = -2.41, p = .02, d = .18$), reported more depression symptoms on the CES-D ($t_{(df = 214)} = -2.25, p = .03, d = .18$), reported less financial satisfaction ($t_{(df = 213)} = 3.94, p < .001, d = .33$), and reported less fulfillment of social needs regarding status ($t_{(df = 4438)} = 3.52, p < .001, d = .25$). In bivariate analyses, fraud was not significantly related to gender, minority status, ADL or IADL disability, self-reported health, income, cognitive functioning measured using the TICS, disease burden, or fulfillment of affection or confirmation social needs. The effect size for these bivariate relationships, though significant, was small, with $d = .5$ –.8 accepted as a medium effect size and $d = .80$ as a large effect size.

A stepwise logistic regression (Table 3) was performed to assess how the variables of interest—and social needs in particular—predict incidence

TABLE 1 Means, Standard Deviations, and Frequencies for Variables of Interest

Variables	Mean	SD	Range
Age	65.76	8.54	35–93
Education	12.70	2.93	0–17
CES-D	1.31	1.85	0–8
ADL	0.17	0.59	0–3
IADL	0.05	0.26	0–5
Self-rated health	2.61	1.04	1–5
Income	\$12,966	\$31,413	\$0–\$700,000
TICS	20.11	5.30	2–35
Disease burden	1.05	1.00	0–6
Affection	0.15	2.54	–8.02–2.09
Behavioral confirmation	0.14	1.87	–8.04–2.37
Status	0.19	2.43	–13.10–3.18
	N	%	
Race			
White	3793	85.4	
Minority	647	14.6	
Gender			
Male	1693	38.1	
Female	2747	61.9	
Partnered			
Yes	3133	70.6	
No	1307	29.4	
How satisfied are you with your finances?			
Not at all satisfied	213	4.8	
Not very satisfied	469	10.6	
Somewhat satisfied	1419	32	
Very satisfied	1270	28.6	
Completely satisfied	1069	24.1	
Have you been the victim of financial fraud in the past 5 years?			
No	4240	95.5	
Yes	200	4.5	

of fraud. In the first step, the model had good overall fit (Hosmer and Lemeshow $\chi^2 = 8.18$, $p = .42$); fraud was significantly more likely among respondents who were younger ($\beta = -.02$, *Wald* $\chi^2 = 5.95$, $p = .02$, *Exp(B)* = .978) and had more education ($\beta = .06$, *Wald* $\chi^2 = 4.62$, $p = .03$, *Exp(B)* = 1.06). The second step of the model also demonstrated good overall fit (Hosmer and Lemeshow $\chi^2 = 6.64$, $p = .58$). Fraud was significantly predicted by younger age ($\beta = -.02$, *Wald* $\chi^2 = 4.10$, $p = .04$, *Exp(B)* = .979), more years of education ($\beta = .08$, *Wald* $\chi^2 = 7.71$, $p = .005$, *Exp(B)* = 1.09), and more depression symptoms ($\beta = .11$, *Wald* $\chi^2 = 7.38$, $p = .007$, *Exp(B)* = 1.12). The addition of the financial-satisfaction and social-needs variables significantly improved overall model fit ($\chi^2 = 22.13$, $p < .001$); this model also had good overall fit (Hosmer and Lemeshow $\chi^2 = 9.07$, $p = .34$). Fraud was significantly predicted by more education ($\beta = .09$, *Wald* $\chi^2 = 8.67$, $p = .003$, *Exp(B)* = 1.09), more depression symptoms

TABLE 2 Results of *t*-Tests and Chi-Square Tests of Independence Comparing Primary Variables of Interest Between Respondents Without Fraud History (Group 1) to Those With Fraud History (Group 2)

Variable	No Fraud <i>M</i> (<i>SD</i>) ^a	Fraud <i>M</i> (<i>SD</i>) ^a	<i>t</i> or (χ^2)	Cohen's <i>D</i> or (Cramer's <i>V</i>)
Age (years)	71.73 (8.56)	70.14 (8.16)	2.58**	0.19
Gender (% female) ^b	62.0%	59.0%	(0.73)	(0.01)
Minority status (% minority) ^c	14.5%	15.5%	(0.15)	(0.01)
Education (years)	12.67 (2.94)	13.19 (2.64)	-2.41*	0.18
Marital status (% partnered) ^d	29.4%	29.0%	(.02)	(0.00)
2002 CES-D	1.29 (1.84)	1.64 (2.11)	-2.25*	0.18
2002 ADLS	.17 (.59)	.21 (.64)	-0.81	0.06
2002 IADLS	.05 (.26)	.05 (.24)	0.04	0.00
2002 Self-reported health	2.61 (1.04)	2.64 (1.04)	-0.35	0.03
2002 Income	\$12,927 (\$31,728)	\$13,768 (\$23,816)	-0.37	0.03
2002 TICS	20.12 (5.29)	19.72 (5.51)	1.07	0.08
2002 Disease burden	1.05 (1.00)	1.07 (1.15)	-0.33	0.03
2008 Financial satisfaction	3.58 (1.10)	3.22 (1.30)	3.94***	0.33
2008 Affection	.16 (2.54)	.08 (2.53)	0.41	0.03
2008 Confirmation	.14 (1.87)	.08 (1.92)	0.40	0.03
2008 Status	.22 (2.41)	-.40 (2.71)	3.52***	0.25

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

^aExcept where noted as percentage.

^aCoded as 0 = male, 1 = female.

^bCoded as White = 0, non-White = 1.

^cCoded as 0 = not partnered, 1 = partnered.

($\beta = .09$, *Wald* $\chi^2 = 4.54$, $p = .03$, *Exp(B)* = 1.09), less financial satisfaction ($\beta = -.27$., *Wald* $\chi^2 = 13.67$, $p < .001$., *Exp(B)* = .764), and less fulfillment of status needs ($\beta = -.07$, *Wald* $\chi^2 = 4.99$, $p = .03$, *Exp(B)* = .932). The Nagelkerke R^2 for the total model was .03.

Analyses were then conducted for the most psychologically vulnerable. For those who had the highest 10% of depression scores at baseline, 5.9% went on to experience fraud compared to 4.3% of the rest of the sample. This difference represented a trend toward significance ($\chi^2 = 2.54$; $p = .10$). For those who scored in the bottom 10% of social-status need fulfillment, 7.0% experienced fraud compared with 4.26% of the rest of the sample. This 44% prevalence difference was statistically significant ($\chi^2 = 5.39$; $p < .05$). The strongest finding, however, was fraud prevalence in those with the highest depression and the lowest social-needs fulfillment (14%) compared to the prevalence among the rest of the sample (4.1%; $\chi^2 = 20.49$; $p < .001$).

DISCUSSION

This study is the first to include prospective predictors of reported financial fraud victimization of older adults; it is also the first to examine this

TABLE 3 Results of a Stepwise Logistic Regression Predicting Incidence of Fraud

Variables	Step 1			Step 2			Step 3					
	β	SE	Wald χ^2	Exp(B)	β	SE	Wald χ^2	Exp(B)	β	SE	Wald χ^2	Exp(B)
Age	-.02	.01	5.95*	.978	-0.2	.01	4.10*	.979	-.01	.01	1.11	.989
Gender	-.16	.15	1.06	.855	-.21	.06	1.67	.815	-.20	.16	1.59	.816
Minority status	.08	.21	.15	1.083	.03	.21	.02	1.1030	-.05	.21	.05	.953
Education	.06	.03	4.62*	1.059	.08	.03	7.71**	1.086	.09	.03	8.67**	1.093
Marital status	.12	.17	.47	1.123	.03	.17	.04	1.033	-.07	.18	.16	.933
2002 CES-D					.11	.04	7.38**	1.118	.09	.04	4.54*	1.094
2002 ADL					.02	.13	.02	1.019	.01	.13	.00	1.006
2002 IADL					-.16	.30	.29	.850	-.18	.30	.36	.834
2002 Self-rated health					-.01	.09	.02	.988	-.07	.09	.57	.935
2002 Income					.00	.00	.68	1.000	.00	.00	.53	1.000
2002 TTCS					-.01	.02	.28	.991	-.01	.02	.20	.993
2002 Disease burden					.04	.08	.30	1.044	.03	.08	.12	1.028
2008 Financial satisfaction									-.27	.07	13.67***	.764
2008 Affection									.01	.03	.14	1.013
2008 Confirmation									.06	.05	1.75	1.066
2008 Status									-.07	.03	4.99*	.932
Constant	-2.19	.78	.80	.11	-2.47	.85	8.41**	.08	-2.15	.88	6.02*	.117

Gender is coded as 0 = male, 1 = female. Minority status is coded as 0 = White, 1 = non-White. Marital status is coded as 0 = partnered, 1 = not partnered. * $p < .05$; ** $p < .01$; *** $p < .001$.

type of financial exploitation from a psychological-vulnerability perspective. We examined psychological predictors of fraud in two ways: (a) through the use of bivariate and logistic regression analysis, with the psychological variables measured as continuous; and (b) through a clinical focus by examining the most psychologically vulnerable older adults. Data collected in 2002 were used to predict reports of fraud in the previous 5 years collected in 2008 (i.e., during the period from 2003 to 2008). In the regression that used only prospective predictors of reported financial fraud, age, education and depression emerged as significant predictors. Lower age, higher education and higher depression predicted the likelihood of experiencing fraud, although the effect size was small. These data are consistent with other studies that measured financial exploitation and demographic and psychosocial measures, but used a retrospective approach. Age and education were significantly related to each other in our sample, in that increased age was associated with fewer years of education. Laumann et al. (2008) found that younger older individuals reported fraud more than did older respondents. Our results are somewhat similar, given that age and education were related (in our sample, “younger” refers to a preretirement age between 51 and 64). It may be that the awareness of the need for significant income for retirement—along with current economic challenges—make this group more likely to gamble on economic opportunities and/or investments. Self-reported depressive symptoms may reflect disappointment over discrepancies between one’s expectations for life and its realities. One wonders whether demoralization and disappointment with self are more related to later fraud experience than are loss of pleasure or energy. Although the bivariate effect size for depression is small ($d = .18$), it does support the notion that psychological characteristics relate to experiences of fraud.

Two new variables were collected in 2008: financial satisfaction and social-needs fulfillment. These emerged as significant predictors of reported fraud, with lower financial satisfaction and poorer social status correlating with reported fraud above and beyond all other 2002 and 2008 predictors. Again, the effect size was small, but these findings do support our conceptual model of psychological vulnerability, low social-status fulfillment, and increased experiences of fraud. This set of risk factors is different from other forms of financial exploitation. Older adults who suffer other modes of financial exploitation (e.g., money-management difficulties, abuse of trust) may be susceptible due to dementia and/or personal-care dependency (Conrad et al., 2010). Participants in the present study who had experienced fraud were more likely to be younger and better educated, but also to have perceived financial need and psychosocial difficulties.

Perhaps most important were our findings for the most psychologically vulnerable population. The combination of high depression and low

social-status fulfillment was associated with a 226% increase in fraud prevalence. These results not only support our conceptual framework, in which depressive symptoms and lack of social-needs fulfillment have an additive effect on fraud prediction, but serve to remind clinical gerontologists how broadly psychological vulnerability can affect older adults' lives in a variety of domains. (The term "clinical gerontologists" is used broadly here, and is intended to include other professionals such as nurses, physicians, physician assistants, social workers, and psychologists.) High depression in 2002 was associated with a 300% greater likelihood of being in the bottom 10% of social-status needs fulfillment 6 years later (21% vs. 7%), and the difference was statistically significant ($\chi^2 = 109.48$; $p < .001$).

The current study, like other nationally representative, sample-based studies, illustrates how we can enhance our understanding by performing a clinical analysis instead of one that stops at an epidemiological or broad population-based level. Clinical populations, by definition, are those with rarer characteristics or combinations of characteristics. In this case, the psychologically vulnerable clinical sample was defined by a combination of extreme depression symptoms and perceived low social-status fulfillment. Those identified by this method were much more vulnerable to the experience of theft or scams.

Clinical gerontologists and other professionals must remain aware that function across many quality-of-life domains is pertinent to practice; for example, it is well documented that depression is highly related to physical disability. Our study, which includes neither an intervention study nor a sample drawn from a clinic, demonstrates that social vulnerabilities exist alongside psychological difficulties. Assessment for financial exploitation or its potential, therefore, should be part of a clinician's toolkit when working with highly vulnerable individuals.

This study had several limitations. The HRS did not ask participants to describe the type of fraud they had experienced. In a recent data collection, Lichtenberg (2011) asked a group of 500 older adults the same lead question as the HRS, but also asked for a description of the fraud experience. These descriptions were a fit with Conrad and colleagues' (2010) scam category; fraud appears to be widely defined as a scam once theft by robbery or burglary has been eliminated. All variables were self-report, and self-report data have inherent problems such as under-reporting due to stigma and shame. Finally, the internal consistency of the status subscale, both for the LBQ and the SPF-IL, is not optimal and calls into question the scale's stability. Despite these shortcomings, the relatively high rate of fraud reported and its linkage to the most psychologically vulnerable should encourage clinical gerontologists and other professionals to study this phenomenon and to develop educational materials on psychological vulnerability among the elderly.

REFERENCES

- American Bar Association/American Psychological Association. (2008). *Assessment of older adults with diminished capacity: A handbook for psychologists*. Washington, DC: Author.
- Acierno, R., Hernandez, M. A., Amstadter, A.B., Resnick, H.S., Steve, K., Muzzy, W., . . . Kilpatrick, D.G. (2010). Prevalence and correlates of emotional, physical, sexual and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health, 100*, 292–297.
- Beach, S. R., Schulz, R., Castle, N. G., & Rosen, J. (2010). Financial exploitation and psychological mistreatment among older adults: Differences between African Americans and Non-African Americans in a population based survey. *The Gerontologist, 50*, 744–757.
- Blazer, D.G. (2003). Depression in late life: Review and commentary. *Journal of Gerontology: Medical Sciences, 58A*, 249–265.
- Conrad, K.J., Iris, M., Ridings, J.W., Langley, K. & Wilber, K.H. (2010). Self-report measure of financial exploitation of older adults. *The Gerontologist, 50*, 758–773.
- Brandt, J., Spencer, M., & Folstein, M. (1988). The Telephone Interview for Cognitive Status. *Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 1*, 111–117.
- Desmond, D. W., Tatemichi, T. K., & Hanzawa, L. (1994). The Telephone Interview for Cognitive Status (TICS): Reliability and validity in a stroke sample. *International Journal of Geriatric Psychiatry, 9*, 803–807.
- Herzog, A. R., & Wallace, R. B. (1997). Measures of cognitive functioning in the AHEAD Study. *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences, 52B*(Special Issue), 37–48.
- Järvenpää, T., Rinne, J. O., Räihä, I., Koskenvuo, M., Löppönen, M., Hinkka, S. . . . Kaprio, J. (2002). Characteristics of two telephone screens for cognitive impairment. *Dementia and Geriatric Cognitive Disorders, 13*, 149–155.
- Lantz, P.M., House, J.S., Mero, R.P., & Williams, D.R. (2005). Stress, life events, and socioeconomic disparities in health: Results from the Americans' Changing Lives Study. *Journal of Health and Social Behavior, 46*, 274–288.
- Laumann, E. O., Leitsch, S. A., & Waite, L. J. (2008). Elder mistreatment in the United States: Prevalence estimates from a nationally representative sample. *Journal of Gerontology: Social Sciences, 63B*, S248–S254.
- Lichtenberg, P., Schneider, B., & Stickney, L. (2011). Early disability and depression predicts financial victimization in urban black elders. Presented at Gerontological Society of America, Boston, November.
- MetLife (2009). *Broken trust: Elders, family and finances*. New York, NY: MetLife Mature Market Institute.
- MetLife (2011). *The MetLife Study of Elder Financial Abuse: Crimes of occasion, desperation and predation against America's elders*. New York, NY: MetLife Mature Market Institute.
- Nieboer, A., Lindenberg, S., Boomsma, A, Van Bruggen, A.C. (2005). Dimensions of well-being and their measurement: The SPF-IL Scale. *Social Indicators Research, 73*, 313–353.

- Ofstedal, M. B., Fisher, G. G., & Herzog, A. R. (2005). Documentation of cognitive functioning measures in the Health and Retirement Study. Ann Arbor, MI: University of Michigan.
- Ormel, J., Lindenberg, A., Steverink, N., & Verbrugge, L. M. (1999). Subjective well-being and social production functions. *Social Indicators Research*, *46*, 61–90.
- Nieboer, A., Lindenberg, S., Boomsma, A., & Van Bruggen, A. C. (2005). Dimensions of well-being and their measurement: The SPF-IL Scale. *Social Indicators Research*, *73*, 313–353.
- Radloff, L.S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement* *1*, 385–401.
- Steffick, D. E. (2000). Documentation of affective functioning measures in the health and retirement study. HRS Documentation Report DR-005. Ann Arbor: Survey Research Center at the University of Michigan Institute for Social Research.
- Szanton, S.L., Allen, J.K., Thorpe, Jr., R.J., Seeman, T., Bandeen-Roche, K., & Fried, L.P. (2008). Effect of financial strain on mortality in community-dwelling older women. *Journal of Gerontology*, *63B*, 369–374.
- Steverink, N., & Lindenberg, S. (2006). Which social needs are important for subjective well-being? What happens to them with aging? *Psychology and Aging*, *12*, 281–290.
- Wallace, R., Herzog, A. R., Ofstedal, M. B., Steffick, D., Fonda, S., & Langa, K. (2000). Documentation of affective functioning measures in the Health and Retirement Study. Ann Arbor, MI: Survey Research Center, University of Michigan.
- Welsh, K. A., Breitner, J. C. S., & Magruder-Habib, K. M. (1993). Detection of dementia in the elderly using telephone screening of cognitive status. *Neuropsychiatry, Neuropsychology, and Behavioral Neurology*, *6*, 103–110.