

# Financial Exploitation of Older Adults: A Population-Based Prevalence Study

Janey C. Peterson, EdD, MS, RN<sup>1</sup>, David P.R. Burnes, PhD, MSW<sup>4</sup>, Paul L. Caccamise, LMSW, ACSW<sup>3</sup>, Art Mason, LMSW<sup>3</sup>, Charles R. Henderson, Jr., PhD<sup>2</sup>, Martin T. Wells, PhD<sup>8</sup>, Jacquelin Berman, PhD, MSW<sup>6</sup>, Ann Marie Cook, MPA<sup>3</sup>, Denise Shukoff, JD<sup>3</sup>, Patricia Brownell, PhD<sup>6</sup>, Mebane Powell, MSW<sup>6</sup>, Aurora Salamone, MPS<sup>5</sup>, Karl A. Pillemer, PhD<sup>2</sup>, and Mark S. Lachs, MD, MPH<sup>7</sup>

<sup>1</sup>Division of Clinical Epidemiology and Evaluative Sciences Research, Center for Integrative Medicine, Department of Cardiothoracic Surgery, Weill Cornell Medical College, New York, NY, USA; <sup>2</sup>Department of Human Development, Cornell University, Ithaca, NY, USA; <sup>3</sup>Lifespan of Greater Rochester, Rochester, NY, USA; <sup>4</sup>Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON, Canada; <sup>5</sup>New York City Department for the Aging, New York, NY, USA; <sup>6</sup>Fordham University, Bronx, NY, USA; <sup>7</sup>Division of Geriatrics and Palliative Medicine, Weill Cornell Medical College, New York, NY, USA; <sup>8</sup>Departments of Statistical Science and Social Statistics, Cornell University, Ithaca, NY, USA.

**BACKGROUND:** Financial exploitation is the most common and least studied form of elder abuse. Previous research estimating the prevalence of financial exploitation of older adults (FEOA) is limited by a broader emphasis on traditional forms of elder mistreatment (e.g., physical, sexual, emotional abuse/neglect).

**OBJECTIVES:** 1) estimate the one-year period prevalence and lifetime prevalence of FEOA; 2) describe major FEOA types; and 3) identify factors associated with FEOA.

**DESIGN:** Prevalence study with a random, stratified probability sample.

**PARTICIPANTS:** Four thousand, one hundred and fifty-six community-dwelling, cognitively intact adults age  $\geq 60$  years.

**SETTING:** New York State.

**MAIN MEASURES:** Comprehensive tool developed for this study measured five FEOA domains: 1) stolen or misappropriated money/property; 2) coercion resulting in surrendering rights/property; 3) impersonation to obtain property/services; 4) inadequate contributions toward household expenses, but respondent still had enough money for necessities and 5) respondent was destitute and did not receive necessary assistance from family/friends.

**KEY RESULTS:** One-year period FEOA prevalence was 2.7 % (95 % CI, 2.29–3.29) and lifetime prevalence was 4.7 % (95 % CI, 4.05–5.34). Greater relative risk (RR) of one-year period prevalence was associated with African American/black race (RR, 3.80; 95 % CI, 1.11–13.04), poverty (RR, 1.72; 95 % CI, 1.09–2.71), increasing number of non-spousal household members (RR, 1.16; 95 % CI, 1.06–1.27), and  $\geq 1$  instrumental activity of daily living (IADL) impairments (RR, 1.69; 95 % CI, 1.12–2.53). Greater RR of lifetime prevalence was associated with African American/black race (RR, 2.61; 95 % CI, 1.37–4.98), poverty (RR, 1.47; 95 % CI, 1.04–2.09), increasing

number of non-spousal household members (RR, 1.16; 95 % CI, 1.12–1.21), and having  $\geq 1$  IADL (RR, 1.45; 95 % CI, 1.11–1.90) or  $\geq 1$  ADL (RR, 1.52; 95 % CI, 1.06–2.18) impairment. Living with a spouse/partner was associated with a significantly lower RR of lifetime prevalence (RR, 0.39; 95 % CI, 0.26–0.59).

**CONCLUSIONS:** Financial exploitation of older adults is a common and serious problem. Elders from groups traditionally considered to be economically, medically, and sociodemographically vulnerable are more likely to self-report financial exploitation.

**KEY WORDS:** financial exploitation; elder financial abuse; elder abuse; elder mistreatment; economic abuse.

J Gen Intern Med

DOI: 10.1007/s11606-014-2946-2

© Society of General Internal Medicine 2014

## INTRODUCTION

The phenomenon of elder financial abuse has received recognition as a growing medical, social, and public health problem. Older adults are more likely to have financial resources than their younger counterparts, and this, in combination with the higher prevalence of social isolation, cognitive impairment, and other factors, renders them uniquely susceptible to financial exploitation.<sup>1</sup> A growing body of neuropsychological and functional imaging research has attempted to delineate better the precise mechanisms that may enhance vulnerability to financial exploitation in older adults (FEOA).<sup>2,3</sup> Training programs have been developed to help physicians identify financially vulnerable patients in their practices.<sup>4</sup> Over the past three decades, studies have attempted to estimate the prevalence of elder abuse.<sup>5–9</sup> While many of these studies have included questions about financial exploitation, their general focus has been on more “traditional” forms of mistreat-

Received March 14, 2014

Revised May 12, 2014

Accepted June 12, 2014

ment, such as physical, sexual, and psychological/emotional abuse and neglect.

In this paper, we describe the results of one of the largest and most methodologically rigorous studies of elder abuse conducted to date. Mindful of previous gaps in our knowledge about the prevalence of financial exploitation in this population, we intentionally focused on FEOA and included several areas that heretofore had not been probed in elder abuse prevalence studies involving large representative samples.

## DESIGN

### Overview

In 2008–2009, Lifespan of Greater Rochester Inc., Weill Cornell Medical College, and the New York City Department for the Aging formed a partnership to conduct the first statewide prevalence study of elder abuse in New York with funding from New York State Office of Children and Family Services. Among community-dwelling adults ages  $\geq 60$  years in the State of New York, we used a random, stratified probability sample design to assess the occurrence of elder abuse and FEOA, including improper use of funds, property or resources, coerced property transfers, denial of access to assets, fraud, false pretense, embezzlement, conspiracy, or falsifying records. Our specific aims were to: 1) estimate the one-year period prevalence and lifetime prevalence (since age 60) of FEOA; 2) describe the major types of FEOA; and 3) identify factors associated with FEOA.

### Setting and Participants

A random digit dial sample was derived from a database of residential phone numbers across ten regions encompassing NY State (i.e., Western NY, Finger Lakes, Southern Tier and Central NY, North Country, Capital region and Mohawk Valley, Mid-Hudson, New York City, and Long Island).<sup>10</sup> Our inclusion criteria were: 1) age  $\geq 60$  years; 2) English or Spanish speaking; 3) community-dwelling (e.g., non-nursing home resident); and 4) cognitively intact as defined by a modified version of the Abbreviated Mental Test.<sup>11</sup> Our sampling strategy ensured that equal numbers of subjects were enrolled across age strata by decade (60 to  $\geq 80$ ). We oversampled under-represented racial and ethnic groups using additional random digit dial databases containing household-level, census-derived demographic information<sup>11</sup> with a target of 26 % non-white, which was representative of the State of NY in 2009.<sup>12</sup> The Weill Cornell Medical College Institutional Review Board approved the study.

Data were collected May–July, 2009. Using American Association for Public Opinion Research criteria,<sup>13,14</sup> our response rate was 67.4 % and our cooperation rate was

75.2 % ( see Appendix 1). We examined for possible selection bias resulting from differential refusal rates and found that age, region, and household composition did not differ between those who consented and those who declined to participate. Those who declined were less likely to be married/partnered.

### Interview

Telephone interviews were performed by trained staff at the Cornell Survey Research Institute. After obtaining informed consent and assuring confidentiality, we asked respondents if they were in a private place to complete the telephone interview. If not, we arranged a time to call back or offered a toll free number. Those who met eligibility criteria were invited to participate. In cases of illness, we offered the opportunity for a close proxy to complete the survey on behalf of the respondent. Institute personnel received intensive training by study investigators (AM and MSL) on elder abuse and procedures to safeguard potential victims. During the interview period, the principal investigator was available for emergencies.

### Main Measures

Financial exploitation is the improper use of funds, property, or resources by another individual. It includes (but is not limited to) fraud, false pretense, embezzlement, conspiracy, forgery, falsifying records, coerced property transfers, or denial of access to assets. We defined one-year period prevalence as one or more FEOA events over the past year. Lifetime prevalence was defined as one or more FEOA events since age 60.

The financial exploitation items were based on previously used measures<sup>15,16</sup> and were developed using a two-stage consensus process involving expert FEOA researchers and clinicians (AM, MSL, JB, PB, MP, AS, DS). Previous measures were found to be outdated. For example, they did not consider technologically mediated financial abuse (e.g., misuse of an ATM card). To ensure that all relevant domains were captured, the New York City Elder Abuse Network, a multi-disciplinary group including social service, legal, and health care entities dedicated to preventing and addressing elder mistreatment, reviewed the final version of the financial measure. Mistreatment was measured using behaviorally defined descriptions of specific events with closed<sup>1,5</sup> and open-ended questions. Five domains of potential financial exploitation were assessed: 1) stolen or misappropriated money or property; 2) coercion or false pretense resulting in surrendering rights, property, or signing/changing a legal document; 3) impersonation to obtain property or services; 4) inadequate contributions toward household expenses, but respondent still had enough money for necessities; and 5) respondent was destitute and

did not receive necessary assistance from family/friends (e.g., went on welfare, could not pay rent) (Appendix 2). Respondents were also asked to provide a narrative description of the event in their own words.<sup>17</sup> The measure included self-reported frequency and severity ratings of the event. Respondents with an FEOA event met one of the following three criteria: 1) endorsed “yes” to having an FEOA event on the quantitative questionnaire and also offered a corroborating narrative description of the event; 2) did not endorse a quantitative FEOA item, but offered narrative data consistent with an FEOA event; or 3) endorsed “yes” to having an FEOA event on the quantitative questionnaire, but declined to provide a narrative description of the event. The qualitative data were used to adjudicate the outcomes to ensure that the events were consistent with FEOA, as defined in Appendix 2, and to derive 14 specific subtypes of financial exploitation, which we then categorized within the five original domains of exploitation.

We assessed a range of socio-demographic and clinical covariates, including age, sex, marital status, household size and composition, self-reported health status, and household income level. Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) were evaluated using a modified version of the Duke Older Americans Resources and Services (OARS) scale.<sup>18</sup>

## Statistical Analyses

We calculated means and standard deviations for continuous variables and frequencies and percentages for categorical variables. For the comparison of sociodemographic data between those with lifetime prevalence of FEOA (no vs. yes), *chi-square* tests were used for categorical data and *t*-tests were conducted on continuous variables (SAS 9.3 and Stata 12.1). Inverse probability weighted analyses were conducted for the primary outcomes. We derived probability weights for Latino ethnicity and American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/Pacific Islander and Caucasian race, and ages 60–69, 70–79 and  $\geq 80$  years using publicly available census data projections for NY State in 2009.<sup>12,19</sup> The probability weight is calculated as  $N/n$ , where  $N$  = number of elements in the population and  $n$  = number of elements in the sample.

We conducted analyses of self-reported FEOA using dichotomous outcomes. Several articles in recent medical and public health literature<sup>20–22</sup> point out that when the outcome event is not too rare, it is more desirable to estimate a relative risk or risk ratio (RR) directly, since there is an increasing differential between the RR and odds ratio (OR) with increasing incidence rates. Therefore, we used a generalized linear model with a binomial family and log link function for the dichotomous outcome, controlling for socio-demographic (education, gender, age, and urban/suburban/rural environment) and proxy status (use of proxy

to complete the questions) variables. We adjusted the lifetime prevalence model for years over age 60. No imputations for missing data were carried out.

Open coding methods<sup>23</sup> were used to classify the narrative data into 14 separate concepts within the five domains of FEOA.<sup>24,25</sup> Two clinicians, one an expert in elder abuse (MSL) and the other a clinician and expert in qualitative methodology (JCP), independently reviewed the responses and then met together to corroborate the findings and reach consensus. Non-FEOA and duplicate events were reviewed and removed from the data set by agreement of both coders (see Appendix 2).

## RESULTS

Four thousand, one hundred and fifty-six interviews were conducted—4,000 (96.2 %) with respondents and 156 (3.8 %) with proxy respondents. Interviews lasted a mean of 12 minutes (median 10 minutes, range 6–66). Table 1 provides descriptive characteristics of the sample. The mean age was  $74.7 \pm 8.6$  years (range 60–101.7), and 64.5 % were female. Seventy-five percent were Caucasian and 19.0 % were black. Overall, 12.5 % had not completed high school and 36.2 % completed college. Nearly 8 % lived below the poverty threshold.<sup>26</sup> The rate of FEOA was similar among the proxy reporters compared to self-reporters (7.1 % vs 4.6 % ( $p=0.16$ )).

Twelve events were deemed to be non-FEOA events (e.g., civil disputes) and were not included as outcomes. Table 2 displays the one-year period prevalence ( $n=113$ , 2.7 %, 95 % CI, 2.29–3.29) and lifetime prevalence ( $n=195$ , 4.7 %, 95 % CI, 4.05–5.34) of FEOA. The 195 respondents experiencing an FEOA reported 292 discrete events. Among those with events, 44.5 % reported one event, 15.4 % reported two events, and 6.8 % reported  $\geq 3$  events in (at least one) of the five domains. Stealing or misappropriation of money or property was, by far, the most common form of FEOA, accounting for 77.8 % of the one-year period prevalence and 78.4 % of the lifetime prevalence (Table 2).

Table 2 also displays self-reported seriousness of FEOA lifetime prevalent events. Of 149 respondents who reported “money or property stolen or misappropriated,” 124 (83 %) reported it was ‘somewhat’ or ‘very’ serious. Of 36 respondents who reported “being forced or misled into surrendering rights, property, or signing/changing a legal document,” 30 (83 %) reported it was ‘somewhat’ or ‘very’ serious. Of the 21 respondents who reported “being impersonated to obtain property or services,” 20 (95 %) reported it was ‘somewhat’ or ‘very’ serious. Of the 39 respondents who reported “inadequate contributions toward household expenses,” 26 (67 %) reported it was ‘somewhat’ or ‘very’ serious. Finally, of the 15 respondents who reported they had been “destitute and did not receive

**Table 1. Bivariate Socio-Demographic Characteristics of the Population Stratified According to Lifetime Prevalence of Financial Exploitation of Older Adults (FEOA)**

Participant characteristics	Total n (%)	≥ 1 FEOA n (%)	p
Female	2,680 (64.5)	129 (4.8)	0.62
Age (mean [SD])	74.7 ( 8.6)	74.2 (8.7)	0.45
Age			0.30
60–69.9	1,432 (34.5)	76 (5.3)	
70–79.9	1,407 (33.9)	60 (4.3)	
≥80	1,317 (31.7)	59 (4.5)	
Proxy respondent	156 (3.8)	11 (7.1)	0.16
Survey language			0.38
English	4,088 (98.4)	194 (4.8)	
Spanish	68 (1.6)	1 (1.5)	
Race			< 0.0001
Black	788 (19.0)	72 (9.1)	
Caucasian	3,136 (75.4)	105 (3.4)	
Other	232 (5.5)	18 (7.8)	
Latino ethnicity	250 (6.0)	17 (6.8)	0.10
Marital status			< 0.0001
Married/partnered	1,958 (47.1)	47 (2.4)	
Widowed	1,358 (32.7)	82 (6.0)	
Separated, never married, divorced, refused	828 (20.2)	66 (7.9)	
Number of medications (mean [SD])	4.3 (3.1)	4.8 (3.4)	0.04
Education			0.08
<High School	514 (12.5)	37 (7.2)	
Completed high school or greater	2,120 (51.3)	87 (4.1)	
Completed college	1,496 (36.2)	67 (4.5)	
Income below poverty line (using weighted average threshold, adjusted for household size) (26)	313 (7.5)	38 (12.1)	< 0.0001
Household income/per person			0.0004
<\$15,000	1,225 (29.5)	79 (6.5)	
\$15,000– <\$30,000	1,351 (32.5)	60 (4.4)	
≥\$30,000	1,580 (38.0)	56 (3.5)	
Housing			0.0004
Own home	2,976 (71.6)	116 (3.9)	
Rent	1,034 (24.9)	70 (6.8)	
Live rent free, other	146 (3.5)	9 (6.2)	
Geographical context			< 0.003
Urban	2,395 (57.8)	132 (5.5)	
Suburban	1,117 (26.9)	44 (3.9)	
Rural	635 (15.3)	19 (3.0)	
Region			< 0.02
Western NY	492 (11.8)	19 (3.9)	
Finger Lakes	362 (8.7)	13 (3.6)	
Southern Tier & Central NY	374 (9.0)	15 (4.0)	
North Country, Capital region & Mohawk Valley	543 (13.1)	16 (3.0)	
Mid-Hudson	428 (10.3)	18 (4.2)	
New York City	1,378 (33.2)	89 (6.5)	
Long Island	579 (13.9)	25 (4.3)	
Live with a spouse/partner	1,874 (45.1)	45 (2.4)	< 0.0001
Those without a spouse:			0.0003
Lives alone	1,595 (69.9)	88 (5.5)	
1–2 non-spousal household member	585 (25.6)	48 (8.2)	
≥3 non-spousal household members	102 (4.5)	14 (13.7)	
Self-reported health			0.0006
Excellent-Very good	596 (19.3)	20 (3.4)	
Good-Fair	2,227 (72.1)	109 (4.9)	
Poor-Very Poor	267 (8.6)	25 (9.4)	

Respondents also estimated the frequency of one-year period prevalent FEOA events (Table 2). Of the 88 respondents who reported “money or property stolen or misappropriated,” 45 (51 %) reported ≥ 2 events. Of the 18 respondents who reported, “being forced or misled into surrendering rights, property, or signing/changing a legal document,” eight (44 %) reported ≥ 2 events. Of the 11 respondents who reported, “being impersonated to obtain property or services,” six (55 %) reported ≥ 2 events. Among the 12 respondents who reported they had been “destitute and did not receive necessary assistance from family/friends,” 11 (92 %) reported ≥ 2 events.

Family members were the most common perpetrators of FEOA events (57.9 %), and were most often adult children (24.6 %) (Table 3). The next most common perpetrators were friends and neighbors (16.9 %), followed by paid home care aides (14.9 %). Narratives from respondents in each of the FEOA categories are displayed in Table 4.

In multivariate analysis, we modeled both the one-year period prevalence and lifetime prevalence of financial exploitation. The following respondent characteristics were significantly associated with greater relative risk (RR) of one-year period FEOA prevalence: African American/black race (RR, 3.80; 95 % CI, 1.11–13.04), living below the poverty threshold (RR, 1.72; 95 % CI, 1.09–2.71), increasing number of non-spousal household members (RR, 1.16; 95 % CI, 1.06–1.27), and having ≥1 IADL impairments (RR, 1.69; 95 % CI, 1.12–2.53) (Table 5, One-Year Period Prevalence Model). Greater RR of lifetime FEOA prevalence was associated with: African American/black race (RR, 2.61; 95 % CI, 1.37–4.98), living below the poverty threshold (RR, 1.47; 95 % CI, 1.04–2.09), increasing number of non-spousal household members (RR, 1.16; 95 % CI, 1.12–1.21), having ≥1 IADL (RR, 1.45; 95 % CI, 1.11–1.90) or ≥1 ADL (RR, 1.52; 95 % CI, 1.06–2.18) impairments. Respondents who lived with a spouse/partner had a significantly lower RR of reporting FEOA lifetime prevalence (RR, 0.39; 95 % CI, 0.26–0.59) (Table 5, Lifetime Prevalence Model).

## DISCUSSION

This large-scale survey of financial elder exploitation has brought together methodologically rigorous quantitative data along with qualitative analysis of narrative events to shed new light on this understudied form of elder mistreatment. We have reported a 2.7 % (95 % CI, 2.29–3.29) one-year period prevalence and 4.7 % (95 % CI, 4.05–5.34) lifetime prevalence rate of self-reported FEOA. Our analyses convey a consistent narrative: financial exploitation disproportionately affected black older adults and those who lived below the poverty line. In addition, the presence of ≥ 1 IADL or ADL disabilities was significantly

necessary assistance from family/friends,” 14 (93 %) reported it was ‘somewhat’ or ‘very’ serious.

**Table 2. Lifetime Prevalence, Self-Reported Seriousness Ratings, One-Year Period Prevalence, and Self-Reported Frequency Ratings of Financial Exploitation of Older Adults (FEOA) According to Domain (Type) of Event**

Exploitation domains	Lifetime prevalence <sup>b,c</sup>	Seriousness				One-year period prevalence <sup>b,c</sup>	Frequency			
		Not	Somewhat	Very	Total <sup>a</sup>		Once	Two to Ten	> Ten	Total <sup>a</sup>
Money stolen	66 (33.8)	8 (12.5)	21 (32.8)	35 (54.7)	<b>64*</b>	34 (30.0)	14 (41.2)	17 (50.0)	3 (8.8)	<b>34</b>
Property Stolen	75 (38.5)	12 (16.2)	21 (28.4)	41 (55.4)	<b>74*</b>	44 (38.9)	21 (47.7)	19 (43.2)	4 (9.1)	<b>44</b>
Property used	5 (2.6)	4 (80.0)	—	1 (20.0)	<b>5</b>	3 (2.6)	—	1(33.3)	2 (66.7)	<b>3</b>
Information stolen	4 (2.1)	1 (25.0)	—	3 (75.0)	<b>4</b>	3 (2.6)	2 (66.7)	1(33.3)	—	<b>3</b>
Mail opened	3 (1.5)	1 (33.3)	1 (33.3)	1 (33.3)	<b>3</b>	3 (2.6)	1(33.3)	—	2 (66.7)	<b>3</b>
Medication stolen	3 (1.5)	—	1(33.3)	2 (66.7)	<b>3</b>	3 (2.6)	1(33.3)	1(33.3)	1(33.3)	<b>3</b>
Not classified	22 (11.3)	1 (4.8)	8 (38.1)	12 (57.1)	<b>21*</b>	13 (11.5)	6 (46.2)	6 (46.2)	1 (7.6)	<b>13</b>
<b>Stolen/misappropriated money or property<sup>#,a</sup></b>	<b>153 (78.4)<sup>a</sup></b>	<b>25<sup>#</sup> (16.8)<sup>a</sup></b>	<b>44<sup>#</sup> (29.5)<sup>a</sup></b>	<b>80<sup>#</sup> (53.7)<sup>a</sup></b>	<b>149<sup>**</sup></b>	<b>88 (77.8)<sup>a</sup></b>	<b>43 (48.9)<sup>a</sup></b>	<b>37 (42.0)<sup>a</sup></b>	<b>8 (9.1)</b>	<b>88</b>
Credit card/ATM stolen	12 (6.2)	—	5 (41.7)	7 (58.3)	<b>12</b>	6 (5.3)	3 (50.0)	1 (16.7)	2 (33.3)	<b>6</b>
Forced to change will	1 (0.5)	1 (100)	—	—	<b>1</b>	0 (0.0)	—	—	—	<b>—</b>
Forced to pay	6 (3.1)	1 (16.7)	3 (50.0)	2 (33.3)	<b>6</b>	3 (2.6)	2 (66.7)	1(33.3)	—	<b>3</b>
Not classified	19 (9.7)	4 (23.5)	4 (23.5)	9 (53.0)	<b>17*</b>	9 (8.0)	5 (55.6)	1 (11.1)	3 (33.3)	<b>9</b>
<b>Forced or misled into surrendering rights<sup>a</sup></b>	<b>38 (19.5)<sup>a</sup></b>	<b>6 (16.7)<sup>a</sup></b>	<b>12 (33.3)<sup>a</sup></b>	<b>18 (50.0)<sup>a</sup></b>	<b>36*</b>	<b>18 (15.9)<sup>a</sup></b>	<b>10 (55.6)<sup>a</sup></b>	<b>3 (16.7)<sup>a</sup></b>	<b>5 (27.7)<sup>a</sup></b>	<b>18</b>
Identity stolen	11 (5.6)	—	3 (27.3)	8 (72.7)	<b>11</b>	8 (7.0)	3 (37.5)	5 (62.5)	—	<b>8</b>
Not classified	10 (5.1)	1 (10.0)	2 (20.0)	7 (70.0)	<b>10</b>	3 (2.6)	2 (66.7)	1(33.3)	—	<b>3</b>
<b>Impersonated to obtain property or services<sup>a</sup></b>	<b>21 (10.8)<sup>a</sup></b>	<b>1 (4.8)<sup>a</sup></b>	<b>5 (23.8)<sup>a</sup></b>	<b>15 (71.4)<sup>a</sup></b>	<b>21</b>	<b>11 (9.7)<sup>a</sup></b>	<b>5 (45.5)<sup>a</sup></b>	<b>6 (54.5)<sup>a</sup></b>	<b>0<sup>a</sup></b>	<b>11</b>
Others not pay share	14 (7.2)	6 (42.9)	6 (42.9)	2 (14.2)	<b>14</b>	11 (8.8)	4 (36.4)	4 (36.4)	3 (14.2)	<b>11</b>
Others not pay debt	3 (1.5)	—	2 (66.7)	1(33.3)	<b>3</b>	2 (1.8)	—	2(100)	—	<b>2</b>
Others gave less/none	13 (6.7)	4 (33.3)	5 (41.7)	3 (25.0)	<b>12</b>	8 (7.0)	2 (25.0)	3 (37.5)	3 (37.5)	<b>8</b>
Not classified	10 (5.1)	3 (30.0)	—	7 (70.0)	<b>10</b>	4 (3.5)	1 (25.0)	2 (50.0)	1 (25.0)	<b>4</b>
<b>Inadequate contributions toward household expenses<sup>a</sup></b>	<b>40 (20.5)<sup>a</sup></b>	<b>13 (33.3)<sup>a</sup></b>	<b>13 (33.3)<sup>a</sup></b>	<b>13 (33.3)<sup>a</sup></b>	<b>39*</b>	<b>25 (22.1)<sup>a</sup></b>	<b>7 (28.0)<sup>a</sup></b>	<b>11 (44.0)<sup>a</sup></b>	<b>7 (28.0)<sup>a</sup></b>	<b>25</b>
Left broke/destitute	4 (2.1)	—	—	4 (100)	<b>4</b>	3 (2.6)	—	2 (66.7)	1(33.3)	<b>3</b>
Not classified	11 (5.6)	1 (9.0)	5 (45.5)	5 (45.5)	<b>11</b>	9 (8.0)	1 (11.2)	4 (44.4)	4 (44.4)	<b>9</b>
<b>Destitute and did not receive necessary assistance from family/friends<sup>a</sup></b>	<b>15 (7.7)<sup>a</sup></b>	<b>1 (6.7)<sup>a</sup></b>	<b>5 (33.3)<sup>a</sup></b>	<b>9 (60.0)<sup>a</sup></b>	<b>15</b>	<b>12 (10.6)<sup>a</sup></b>	<b>1 (8.3)<sup>a</sup></b>	<b>6 (50.0)<sup>a</sup></b>	<b>5 (41.7)<sup>a</sup></b>	<b>12</b>
<b>Total<sup>a</sup></b>	<b>195 (4.7)</b> <b>(95 % CI: 4.05–5.34)</b>					<b>113 (2.7)</b> <b>(95 % CI: 2.29–3.29)</b>				

<sup>a</sup>Bold indicates total number of subjects<sup>b</sup>Domain counts add up to more than the subject totals, since some subjects reported multiple unique events within a domain<sup>c</sup>Of the 195 subjects who reported FEOA events, 98.5 % (192) endorsed “yes” to having an FEOA event on the quantitative questionnaire, 87.2 % (170) endorsed “yes” to having an FEOA event on the quantitative questionnaire and also offered corroborating narrative data, and 1.5 % (3) did not endorse a quantitative FEOA item, but offered narrative data consistent with an FEOA event<sup>\*</sup>Some respondents did not report seriousness<sup>#</sup>Some respondents reported multiple types of events in a single domain**Table 3. Perpetrators (by Type) of Lifetime Prevalent Financial Exploitation of Older Adults (FEOA), According to the Domain of Financial Exploitation**

Perpetrator	Stolen/misappropriated money or property N=153	Forced or misled into surrendering rights or property N=38	Impersonated to obtain property or services N=21	Inadequate contributions toward household expenses (N=40)	Destitute and did not receive necessary assistance from family/friends (N=15)	Total N=195
Family	80 (52.3)	20 (52.6)	12 (57.1)	35 (87.5)	14 (93.3)	<b>113 (57.9)</b>
Spouse/partner	9 (5.9)	2 (5.3)	3 (14.3)	7 (17.5)	0 (—)	<b>15 (7.7)</b>
Adult child	26 (17.0)	7 (18.4)	5 (23.8)	20 (50.0)	9 (60.0)	<b>48 (24.6)</b>
Son/daughter in-law	5 (3.3)	1 (2.6)	1 (4.7)	2 (5.0)	0 (0.0)	<b>8 (4.1)</b>
Grandchild	20 (13.1)	2 (5.3)	0 (—)	2 (5.0)	1 (6.7)	<b>21 (10.8)</b>
Other relative	20 (13.1)	8 (21.0)	3 (14.3)	4 (10.0)	4 (26.6)	<b>28 (14.3)</b>
Friend/neighbor	27 (17.6)	10 (26.3)	4 (19.1)	2 (5.0)	1 (6.7)	<b>33 (16.9)</b>
Other non-relative	8 (5.2)	2 (5.3)	2 (9.5)	1 (2.5)	—	<b>12 (6.2)</b>
Paid home care aide	28 (18.3)	3 (7.9)	2 (9.5)	0 (—)	—	<b>29 (14.9)</b>
Unknown	10 (6.6)	3 (7.9)	1 (4.8)	2 (5.0)	—	<b>8 (4.1)</b>

<sup>a</sup>Bold indicates total number of subjects

**Table 4. Representative Narratives from Respondents for Each of the Five Domains of Financial Exploitation of Older Adults (FEOA)**

Stolen/misappropriated money or property	Forced or misled into surrendering rights, property or signing documents	Impersonated to obtain property or services	Inadequate contributions toward household expenses	Destitute and did not receive necessary assistance from family/friends
<i>My niece steals my medicine and has stolen \$3,200 in value of other items.</i>	<i>I gave up everything to move to Long Island and live with my daughter. We built an extension on her house and then she made me move.</i>	<i>About two years ago my granddaughter, who was using drugs, stole my ID and emptied my bank account and threatened me with physical violence. I got help to protect myself and filed a police report and I have not had anything to do with my granddaughter ever since.</i>	<i>A friend stayed with me for nine months during hard times. She did not pay for things once she finally had money.</i>	<i>My daughter, her husband, and in-laws promised to help me with the rent but have not done so. I was seven months behind at one time and am working full time to come up with the money.</i>
<i>My grandson was stealing money from my account but we both pretended the bank had been making a mistake. When I ask him to go to the ATM for me, he gives me what I asked for but also takes out some for himself. I called the bank and was able to confirm this was happening.</i>	<i>My adult daughter changed my lease and tried to take over my apartment and stole money from me.</i>	<i>My grandson stole my identity.</i>	<i>My nephew borrows money and does not pay it back when it is needed for household expenses.</i>	<i>My son did not pay rent and I had to apply for welfare</i>

associated with FEOA, as was increasing numbers of non-spousal household members. Older age was not associated with greater self-reported FEOA. The most common perpetrator was not an outsider, but most often a family member (57.9 %), followed by friends and neighbors (16.9 %), or a paid home aid (14.9 %). Our qualitative data (Table 3) compellingly demonstrated how family members exploited loved ones. Thus, somewhat counterintuitively, it was not those with the greatest resources who were most likely to be financially exploited, but those with the least.

We evaluated FEOA in five domains and included items on severity and frequency (Table 2), as well as open-ended questions (Table 4) that allowed each respondent to describe events in their own words. In the context of other studies (all cross-sectional),<sup>5,6,8,27</sup> we believe our battery to be the most comprehensive and rigorous to date. Further, our

FEOA one-year period and lifetime prevalence rates are among the lowest reported, likely because the narrative data enabled removal of non-FEOA cases. Even with rigorous methods, our lifetime prevalence rate approached 5 %. This rate, coupled with the exponentially growing number of elderly in the US, forms the basis for a burgeoning public health crisis in need of immediate attention.

Population-based, cross-sectional studies employing random sampling methods representative of national or statewide community-dwelling elders have found the following factors associated with FEOA: non-use of social services, need for ADL assistance, poor self-rated health, no spouse/partner, African-American race, and lower age.<sup>5,6,8</sup> Our findings support these results and extend the literature in several important ways. First, we found poverty to be strongly associated with FEOA. Poverty may result in many

**Table 5. Multivariate Regression Models for Characteristics Associated with One-Year Period Prevalence and Lifetime Prevalence of Financial Exploitation of Older Adults (FEOA)**

	One-year period prevalence		Lifetime prevalence	
	RR (95 % CI)	p value	RR (95 % CI)	p value
Caucasian <sup>Ref</sup>	—	—	—	—
African-American	3.80 (1.11–13.04)	0.03	2.61 (1.37–4.98)	0.004
Other	2.31 (0.28–19.28)	0.44	1.99 (0.84–4.70)	0.12
Poverty	1.72 (1.09–2.71)	0.02	1.47 (1.04–2.09)	0.03
Number of additional non-spousal household members	1.16 (1.06–1.27)	0.001	1.16 (1.12–1.21)	< 0.000
ADL impairment	1.40 (0.59–3.32)	0.45	1.52 (1.06–2.18)	0.02
IADL impairment	1.69 (1.12–2.53)	0.01	1.45 (1.11–1.90)	0.006
Lives with spouse	0.62 (0.17–2.26)	0.47	0.39 (0.26–0.59)	< 0.000

One-Year Prevalence Model: AIC=−0.820, BIC=−34146.71, and C-statistic=0.78; Lifetime Prevalence Model: AIC=−0.318, BIC=−34077.62, and C-statistic=0.73. Models control for education, gender, age, urban/suburban/rural environment, and whether a proxy answered the questions. The lifetime prevalence model was adjusted for years over age 60

individuals sharing the same home, and this may increase opportunities for FEOA. We also demonstrated risk with IADL impairment. It is not surprising that older adults with IADL impairment would be exploited, given that they require assistance with activities such as shopping and meal preparation, which would provide potential perpetrators greater access to finances. We found that those who reside in households with more non-spousal members were at greater risk.

There are several limitations of our study. First, findings were obtained by telephone survey and excluded subjects with dementia, which is a risk factor for elder abuse. Second, elders are less likely to disclose personal problems. For these reasons, we may be underestimating the frequency of FEOA. However, we implemented several design elements to maximize response, including use of direct telephone interviewing, inquiring whether the respondent was in a private place and could speak freely, reinforcing confidentiality, and assessing FEOA using behaviorally specific items. Third, we may have missed individuals who only had wireless telephones and no landline. However, according to the 2009 National Health Interview Survey, roughly 17 % of adult New Yorkers lived in wireless-only households,<sup>28</sup> and when the population of wireless-only households were examined in the US during this same time period, only 3.8 % belonged to adults  $\geq$  65 years.<sup>29</sup> Consequently, we believe that the potential for bias due to wireless only cell-phone use was negligible. Fourth, covariates were assessed at the time of FEOA assessment; therefore, causality cannot be inferred, and there may be other FEOA risk or confounding factors that we did not assess (e.g., mental health status, previous trauma). Finally, this study was conducted in one north-eastern state. Nonetheless, we believe this to be the most comprehensive assessment of FEOA conducted to date in a large representative sample of older adults in the US. Our study included a qualitative component, and we took care to remove cases that did not meet our criteria to produce the most conservative estimate of FEOA possible.

## CONCLUSION

If a new disease entity were discovered that afflicted nearly one in 20 adults over their older lifetimes and differentially struck our most vulnerable subpopulations, a public health crisis would likely be declared. Our data suggest that financial exploitation of older adults is such a phenomenon. Taken together, the covariates associated with greater FEOA risk in this study define a distinct and all too familiar profile of social and economic vulnerability in the United States: African American/blacks, living below the poverty line, suffering from IADL or ADL impairment, and residing in households with more non-spousal members. In

addition to robbing older adults of resources, dignity, and quality of life, victims of FEOA likely cost our society dearly in the form of increased entitlement encumbrances, health care, and other costs. We therefore believe that FEOA merits scrutiny by clinicians, policy makers, researchers, and any citizen who cares about the dignity and well-being of older Americans.

---

**Contributors:** We wish to thank the Cornell Survey Research Institute and the many older adults who participated in the study. Drs. Peterson and Lachs had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

### Funders:

- a. This work was supported by funding from the New York State William B. Hoyt Memorial Children and Family Trust Fund, administered under the New York State Office of Children and Family Services. The funding agency had no role in the design and conduct of the study, in the collection, analysis, and interpretation of data, or in the preparation, review, or approval of the manuscript.
- b. Dr. Peterson is the recipient of a Paul B. Beeson Award from the National Institute on Aging, the American Federation for Aging Research, The John A. Hartford Foundation and The Atlantic Philanthropies under award K23AG042869. Dr. Peterson also received research support to complete this analysis from the Department of Medicine, Weill Cornell Medical College, NY, NY.
- c. Dr. Lachs is the recipient of a Mid-Career Mentoring Award in Patient Oriented Research from the National Institute on Aging K24 AG022399. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

### Prior presentations:

- a. Portions of this work were presented at the Department of Medicine Grand Rounds, Weill Cornell Medical College, 16 September 2013.
- b. We previously released a report of frequency counts of the quantitative data only, which can be found at: <http://ocfs.ny.gov/main/reports/Under%20the%20Radar%2005%2012%2011%20final%20report.pdf>.

**Conflict of Interest:** The authors declare that they do not have a conflict of interest.

**Corresponding Author:** Janey C. Peterson, EdD, MS, RN; Division of Clinical Epidemiology and Evaluative Sciences Research, Center for Integrative Medicine, Department of Cardiothoracic Surgery, Weill Cornell Medical College, 1300 York Avenue, Box 46, New York, NY 10065, USA (e-mail: jcpeters@med.cornell.edu).

## REFERENCES

1. National Research Council. Elder mistreatment: Abuse, neglect, and exploitation in an aging America. Washington, DC: The National Academy Press; 2003.
2. Demakis GJ. Neuropsychological evaluation of decision-making capacity in older adults. *Psychol Inj Law*. 2013;6(1):41–50.
3. Han SD, Boyle PA, Yu L, Fleischman DA, Arfanakis K, Leurgans S, et al. Financial literacy is associated with medial brain region functional connectivity in old age. *Arch Gerontol Geriatr*. 2014; May 16.
4. Roush RE, Moye JA, Mills WL, Kunik ME, Wilson NL, Taffet GE, et al. Why clinicians need to know about the elder investment fraud and financial exploitation program. *Generations*. 2012;36(2):94–97.
5. Acierno R, Hernandez MA, Amstadter AB, Resnick HS, Steve K, Muzzy W, et al. Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: the National Elder Mistreatment Study. *Am J Public Health*. 2010;100(2):292–297.
6. Amstadter AB, Zajac K, Strachan M, Hernandez MA, Kilpatrick DG, Acierno R. Prevalence and correlates of elder mistreatment in South Carolina: the South Carolina elder mistreatment study. *J Interpers Violence*. 2011;26(15):2947–2972.
7. Begle AM, Strachan M, Cisler JM, Amstadter AB, Hernandez M, Acierno R. Elder mistreatment and emotional symptoms among older adults in a largely rural population: the South Carolina elder mistreatment study. *J Interpers Violence*. 2011;26(11):2321–2332.
8. Laumann EO, Leitsch SA, Waite LJ. Elder mistreatment in the United States: prevalence estimates from a nationally representative study. *J Gerontol Ser B Psychol Sci Soc Sci*. 2008;63(4):S248–S254.
9. Pillemer K, Finkelhor D. The prevalence of elder abuse: a random sample survey. *The Gerontologist*. 1988;28(1):51–57.
10. Genesys Marketing Systems Group. Landline Random-Digit Dial (RDD) Samples Copyright © 1987–2012 2/15/2013. Available from: <http://www.m-s-g.com/Web/genesys/landline-sample.aspx>.
11. Swain DG, Nightingale PG. Evaluation of a shortened version of the abbreviated mental test in a series of elderly patients. *Clin Rehabil*. 1997;11(3):243–248.
12. US Census Bureau, The New York State Department of Labor, . New York State Civilian Population Estimates by Demographic Characteristics - Age, Sex, Race, and Hispanic Origin, 2000–2009. [June 3, 2014]; Available from: <http://www.labor.ny.gov/stats/nys/statewide-population-data.shtm>.
13. American Association for Public Opinion Research. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. Lenexa, KS2009 [March 23, 2013]; Version 4:[Available from: [http://www.aapor.org/Standard\\_Definitions/1481.htm](http://www.aapor.org/Standard_Definitions/1481.htm)].
14. American Association for Public Opinion Research. Response Rate Calculator V3.1 Lenexa, KS2011 [March 23, 2013]; Version 3.1:[Available from: [http://www.aapor.org/Standard\\_Definitions/1481.htm](http://www.aapor.org/Standard_Definitions/1481.htm)].
15. Podnieks E. National survey on abuse of the elderly in Canada. *J Elder Abuse Negl*. 1992;4(1/2):5–58.
16. Manthorpe J, Biggs S, McCreadie C, Tinker A, Hills A, O'Keefe M, et al. The U.K. national study of abuse and neglect among older people. *Nurs Older People*. 2007;19(8):24–26.
17. Corbin J, Strauss A. Basics of qualitative research. 3rd ed. Thousand Oaks, California: Sage Publications; 2008.
18. Center for the Study of Aging and Human Development. Multidimensional functional assessment: the OARS methodology. A manual. 2nd ed. Durham, NC: Center for the Study of Aging and Human Development; 1978.
19. U.S. Census Bureau. State Intercensus Estimates. October 2012 [February 11, 2014]; Available from: [http://www.census.gov/popest/data/historical/2000s/vintage\\_2009/state.html](http://www.census.gov/popest/data/historical/2000s/vintage_2009/state.html).
20. Greenland S. Model-based estimation of relative risks and other epidemiologic measures in studies of common outcomes and in case-control studies. *Am J Epidemiol*. 2004;160(4):301–305.
21. McNutt LA, Wu C, Xue X, Hafner JP. Estimating the relative risk in cohort studies and clinical trials of common outcomes. *Am J Epidemiol*. 2003;157(10):940–943.
22. Zou G. A modified poisson regression approach to prospective studies with binary data. *Am J Epidemiol*. 2004;159(7):702–706.
23. Strauss A, Corbin J. Basics of qualitative research: techniques and procedures for developing grounded theory. 2nd ed. Thousand Oaks: Sage Publications; 1998. 312 p.
24. Corbin J, Strauss A. Integrating categories. Basics of qualitative research. 3rd ed. Thousand Oaks, California: Sage Publications; 2008:263.
25. Glaser B. Theoretical sensitivity Middle Valley. CA: Sociology Press; 1978.
26. Census Bureau US. Poverty Thresholds 2008. Washington, DC: Census.gov; 2009. [April 23, 2014]; Available from: <http://www.census.gov/hhes/www/poverty/data/threshld/thresh08.html>.
27. Beach SR, Schulz R, Castle NG, Rosen J. Financial exploitation and psychological mistreatment among older adults: differences between African Americans and non-African Americans in a population-based survey. *The Gerontologist*. 2010;50(6):744–757.
28. Blumberg SJ, Luke JV, Nadarajasundaram GN, Davern ME, Boudreaux MH, Soderberg K. Wireless substitution: State-level estimates from the National Health Interview Survey, January 2007–June 2010. Hyattsville, MD: National Center for Health Statistics; 2011. April 3, 2013.
29. Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July–December 2009. National Center for Health Statistics; May 2010 [April 3, 2013]; Available from: <http://www.cdc.gov/nchs/nhis.htm>.

## APPENDIX 1: AMERICAN ASSOCIATION FOR PUBLIC OPINION RESEARCH FORMULAS (13)

$$\text{Response Rate} = I / ((I + P) + (R + NC + O) + e(UH + UO))$$

$$\text{Cooperation Rate} = I / ((I + P) + R)$$

I Complete Interviews

P Partial Interviews

R Refusal and break off

NC Non Contact

O Other

e is the estimated proportion of cases of unknown eligibility that are eligible, according to AAPOR Eligibility Estimates.

UH Unknown Household

UO Unknown Other

## APPENDIX 2: DESCRIPTION OF FINANCIAL EXPLOITATION ITEMS

FEOA was assessed with five items. Respondents were asked if, since turning age 60, someone they lived with or spent a lot of time with had done the following: stolen anything or used things that belonged to them without permission (e.g., money, bank ATM or credit cards, checks, personal property or documents) (FEOA1); forced, convinced or misled them to give away something that belonged to them or to give away legal rights to something that belonged to them (e.g., money, bank account, credit card, deed to a house, personal property, or documents such as a will or power of attorney) (FEOA2); pretended to be them to obtain goods or money (FEOA3); inadequate contributions toward household expenses (e.g., rent, groceries), but respondent still had enough money for necessities (FEOA4); respondent was destitute and did not receive necessary assistance from family/friends (e.g., went on welfare, could not pay rent) (FEOA5).

For each affirmed FEOA item, respondents were asked: 1) how the perpetrator was related (i.e., spouse/partner, adult child, son/daughter-in-law, grandchild, other relative, neighbor, friend, other non-relative, or paid aid/attendant; 2) how many times the incident happened in the last year (i.e., never, once, two to ten times, more than ten times); 3) how serious a problem it was if the incident item happened (i.e., not serious at all, somewhat serious, very serious); and 3) to describe the incident using their own words. Responses were transcribed verbatim.

Each narrative was adjudicated to ensure that it was consistent with financial exploitation (i.e., improper use of funds, property or resources by another individual, including but not limited to, fraud, false pretense, embezzlement, conspiracy, forgery, falsifying records, coerced property transfers, or denial of access to assets). Therefore, we excluded civil disputes, divorce-related matters, and narratives that were inconsistent with financial mistreatment (as defined above) and did not consider them as outcomes.