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To determine longitudinal risk factors for elder abuse and neglect, an established cohort of community-dwelling older adults (n = 2,812) was linked with elderly protective service records over a 9-year follow-up period. Protective services saw 184 (6.5%) individuals in the cohort for any indication, and 47 cohort members were seen for corroborated elder abuse or neglect for a sampling adjusted 9-year prevalence of 1.6% (95% CI 1.0%, 2.1%). In pooled logistic regression, age, race, poverty, functional disability, and cognitive impairment were identified as risk factors for reported elder mistreatment. Additionally, the onset of new cognitive impairment was also associated with elder abuse and neglect. Because the mechanism of elder mistreatment case-finding in this study was a social welfare system (protective services), the influence of race and poverty as risk factors is likely to be overestimated due to reporting bias.

Key Words: Elder abuse, Family violence, Adult protective services, Epidemiologic studies

Risk Factors for Reported Elder Abuse and Neglect: A Nine-Year Observational Cohort Study[1]

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In community-based surveys in the United States and other Western cultures, between 3 and 6% of individuals over the age of 65 report having experienced elder abuse and/or neglect, usually at the hands of family members (Ogg & Bennett, 1992; Pillemer & Finkelhor, 1988; Podkieks, 1992). Aside from these self-reported prevalence studies, however, elder mistreatment remains the form of family violence about which we know the least. For example, although specific injuries in children of certain ages are virtually diagnostic of child abuse, it is not known if there are pathognomic injuries of elder abuse. Whereas an extensive literature on risk factors for child abuse has developed, the risk factor literature on elder abuse has been conflicting and inconsistent. Some of these inconsistencies may in part be due to methodology, arising from the retrospective nature of previous research (Lachs, Berkman, Fulmer, & Horwitz, 1994). Besides the recall biases inherent in retrospective designs, the impact of changing risk factors is poorly captured in these studies. For example, it has been our clinical experience that the mere presence of cognitive or functional impairment is not nearly as compelling a risk factor for mistreatment as the trajectory of the decline — such as, the acute worsening of these impairments that can occur after a prolonged hospitalization.

In this study we report on risk factors for reported and verified elder abuse and neglect in a cohort of 2,812 community-dwelling older adults followed over a 9-year period. Cases were identified through a state social service agency (the ombudsman's protective services for the elderly program) charged with assessment and advocacy for frail or disenfranchised elderly persons, a subset of whom have experienced elder mistreatment. Risk factors for entering this social welfare system for any reason have been reported previously (Lachs et al., 1994; Lachs, Williams, O'Brien, Hurst, & Horwitz, 1996).

Methods

The study was conducted by linking an established cohort of older adults with records from Connecticut's Ombudsman on Aging (the state entity responsible for investigating and adjudicating cases of elder abuse, neglect, self-neglect, exploitation, or abandonment occurring in the community

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or long-term care facilities). Detailed descriptions of the cohort and the referral pathway for ombudsman investigation have been reported previously (Lachs et al., 1994). Briefly, New Haven, Connecticut, is the site of a National Institute on Aging EPESE cohort (Established Populations for Epidemiologic Studies in the Elderly; National Institute on Aging, 1986). This stratified probability sample of 2,812 adults over the age of 65 was assembled on the basis of housing type and sex; nearly one in seven older adults living in the city in 1981 was enrolled. At cohort inception the median age was 75 years; men were oversampled so that the sample consisted of 1,643 men and 1,169 women from diverse ethnic, racial, and social backgrounds. In 1982 a detailed in-person baseline interview was performed covering several domains including demographics, functional and cognitive status, chronic diseases, self-perceived health, social networks, leisure activities, life events, depression, and a number of other areas. Standardized instruments were used wherever possible, and periodic inter-rater reliability studies were conducted among interviewers to ensure data quality. After the inception interview, cohort members continue to have annual reinterviews by phone, and in-person interviews every third year.

Since 1978, the State Ombudsman on Aging has had responsibility for investigating cases of elder abuse and neglect in Connecticut. Reports come to the office from a variety of sources including mandatory reporters (health care professionals and paraprofessionals whose work puts them in regular contact with older adults), and non-mandatory reporters. Suspicion alone is grounds for reporting in Connecticut. Once a call is received, the ombudsman must make an on-site visit within 5 days to investigate. This process involves contacting all parties able to provide information in addition to an interview with the older adult and, if possible, the alleged perpetrators of the mistreatment. After completing the evaluation, the ombudsman deems the cases to be either substantiated or uncorroborated.

Connecticut Definitions and Major Outcome of the Study

In Connecticut, *elder abuse* is defined as the willful infliction of physical pain, injury, or mental anguish, or the willful deprivation by a caretaker of services necessary to maintain physical and mental health. *Neglect* is defined as inability by an elderly person living alone to provide him- or herself the services necessary to maintain physical and mental health, or failure by the responsible caretaker to provide such services. Thus, under Connecticut definitions it is possible to be self-neglected. *Exploitation* is defined as taking advantage of an older adult for monetary gain or profit.

The major outcome of this study was reported and corroborated elder abuse and/or neglect, including exploitation, by a party other than the older adult occurring at any point during the 9-year follow-up period. Subjects who were investigated by the ombudsman for "self-neglect" or who had abuse or neglect investigations that were not corroborated were excluded from the analyses (i.e., from both the mistreated group and the comparison group of cohort members not investigated by the ombudsman). In several cases, cohort members had several ombudsman investigations over the follow-up period, sometimes for different allegations; those individuals were deemed to have experienced the outcome of any corroborated allegation in any investigation included abuse, neglect (exclusive of self-neglect), or exploitation.

The process whereby cohort members were identified as ombudsman clients during the follow-up period has also been described previously. This involved a manual "matching" of state and cohort records for all ombudsman clients whose demographic features corresponded to the initial eligibility criteria of the cohort. Extensive confidentiality safeguards were devised to protect the identity of all subjects; the final merged data set contained no information that would permit the identification of any individual.

Strategy of Analysis

A crude and sampling-adjusted prevalence was calculated for reported elder abuse and neglect over the 9-year follow-up period. Subsequent analyses compared the prevalence of risk factors in cohort members who experienced reported elder abuse and neglect with these risk factors in to those who did not. These analyses were also weighted for the sampling mechanism of the cohort. Potential risk factors were selected on the basis of (a) an extensive theoretical literature review on the causes of elder mistreatment (Johnson, 1991), (b) risk factors found in a review of prior studies (Lachs & Pillemer, 1995), and (c) the principal investigator's (ML) clinical experience in this area. Risk factors were broadly classified into four domains — sociodemographic, clinical, physical function, and social network.

We were especially interested in the role of functional and cognitive impairment in the genesis of elder mistreatment; prior retrospective research has shown these variables to be inconsistent predictors of mistreatment. Specifically, we were interested in looking at functional status as dynamic risk factors for mistreatment [i.e., the development of new activity of daily living (ADL) impairment or worsening cognitive ability rather than considering these variables cross-sectionally]. The longitudinal nature of the EPESE study permitted such analysis.

Pooled logistic regression analysis was used to examine the predictors of initial investigation for abuse or neglect (Cupples, D'Agostino, Anderson, & Kannel, 1988). This method was chosen to allow for updating of the predictor variables, which more fully utilizes the longitudinal nature of the study. Further, it permits individuals who are lost from the study (due to death or nursing home placement) to be included until the time they are lost. Because many of the potential risk factors of interest (e.g., cognitive status and social networks) were assessed at only the triennial face-to-face interviews, the 9-year follow-up

was divided into three 3-year intervals for this analysis. According to this strategy, each of three observation periods (1982–1985, 1985–1988, and 1988–1991) was included as a separate record for each subject in a "pooled sample." For each record, the risk factors were updated using each subject's status at the beginning of the interval; the outcome for each participant was whether mistreatment had been investigated and corroborated during that interval. The number of records each individual contributed to this pooled sampled depended upon three factors, which determined when the subject was at risk for the outcome. First, subjects who had experienced mistreatment during an interval were coded as having the outcome during that interval and were dropped from subsequent intervals. Second, individuals who died during an interval were dropped from subsequent intervals. Finally, individuals who entered long-term care facilities were dropped from intervals subsequent to their placement, as they were no longer capable of experiencing the outcome of interest (i.e., community elder mistreatment). Although the ombudsman in Connecticut has responsibility for the investigation of abuse, neglect, and quality-of-care issues arising in nursing homes, institutional abuse was not an outcome of the study. Only 3% of cohort members interviewed in nursing homes returned to the community; therefore, we felt that treating nursing home admission as permanently removing a person from risk of community investigation should not bias the results. Utilizing this method, 2,668 individuals in the 2,812-member cohort were included in the study; they contributed a total of 6,222 observations to the pooled sample.

Each potential risk factor was first evaluated in a pooled model that included only that variable and a variable indicating the observation interval. It was assumed that the odds ratio associated with a given risk factor was the same across intervals. This assumption was tested by running another model for each variable that also included an interaction term between the risk factor and the interval. An alpha level of .01 was stipulated as the boundary for significant risk factor-by-interval interaction. Next, each risk factor was included in a model that adjusted for age, sex, race, and household income as well as the interval. Finally, a model was constructed that included the sociodemographic features and statistically significant risk factors from each domain; here an alpha level of 0.2 was the criterion for model inclusion.

Data management and preliminary analyses were conducted using SAS software (SAS Institute, 1989). All hypothesis testing and multivariate analysis was conducted using SUDAAN in order to account for the sampling design (Shah, Barnwell, & Bieler, 1995).

Results

Over the 9-year follow-up period, 184 (6.5%) members of the cohort were seen by the ombudsman on 267 separate occasions for any indication. Of those investigations, 81 (30%) were for elder abuse and neglect, and 57 (70%) of the investigations were substantiated. In all, 47 members of the 2,812 cohort had experienced the outcome of reported elder abuse and neglect for a sampling-adjusted 9-year prevalence of 1.6% (95% CI 1.0%, 2.1%); 9 (19%) of these 47 cases were for abuse, 8 (17%) were for exploitation, and 30 (64%) were for neglect by another party. The most common perpetrators of mistreatment were adult children (45%), followed by spouses (26%). Other perpetrators of mistreatment included grandchildren and paid caregivers.

Table 1 shows bivariate comparisons of selected

Table 1. Bivariate Distribution of Selected Risk Factors in Patients With and Without Elder Mistreatment in Any Three-Year Interval

	Elder Abuse and/or Neglect		
Risk Factor	Yes (n = 47)	No (n = 6,175)[a]	p-value
Sociodemographic			
Age at interval onset (mean ± *SE*)	80.2 ± 1.7	75.6 ± 0.2	.006
Female (%)	66.8	64.8	.80
Non-White (%)	50.6	16.9	.001
<8 years education (%)	46.6	25.2	.08
Years of education (mean ± *SE*)	8.0 ± 0.8	9.6 ± 0.1	.06
Income <$5,000/yr (%)	44.5	26.7	.04
Physical Function			
ADL impairment (%)	34.5	13.9	.05
No. ADL impairments (mean ± *SE*)	1.3 ± 0.4	0.3 ± 0.02	.02
2+ Higher function impairments (%)	59.0	38.0	.06
No. HF impairments (mean ± *SE*)	3.0 ± 0.6	1.7 ± 0.04	.01
Clinical			
Cognitive disability (%)	50.7	10.6	.004
No. Pfeiffer MSQ errors (mean ± *SE*)	3.9 ± 0.8	1.5 ± 0.05	.002
Depressed (%)	22.0	15.3	.37
CES–D Score (mean ± *SE*)	8.9 ± 1.6	7.7 ± 0.2	.46
Urinary incontinence (%)	7.0	7.1	.97
2+ Chronic conditions (%)	35.8	48.6	.15
No. Chronic conditions (mean ± *SE*)	1.1 ± 0.1	1.5 ± 0.02	.02
Social Ties			
Married (%)	32.8	40.7	.30
Attend church 1 ×/month or more (%)	54.2	53.4	.94
Participate in group (%)	24.9	43.0	.05
Contact with friends/ relatives (%)	55.0	67.5	.15
0–1 above social ties	44.4	32.8	.13
No. above social ties (mean ± *SE*)	1.6 ± 0.2	2.0 ± 0.03	.005
Living alone (%)	19.7	43.1	.01

[a]*N*'s are pooled but not weighted. For means, p-value is based on t-test; for percentages, p-value is based on chi-square. Means, standard errors, percentages, and statistical tests are weighted and adjusted for sampling design. Percentages reflect the proportion of observations in each group (with or without elder abuse and/or neglect) who have the risk factor described.

Table 2. Risk Factors for Reported Elder Abuse and Neglect in Pooled Logistic Regression

Domain/Risk Factor	Adjusted for Interval Only		Adjusted for Interval, Age, Sex, Race, Income		Adjusted for Interval, Age, Sex, Race, Income and Other Significant Factors[a]	
	OR[b] (95% CI)	*p*-value	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
Sociodemographic						
Age (per year)	1.1 (1.0, 1.2)	**	1.1 (1.0, 1.2)	**	1.1 (1.0, 1.1)	+
Male	0.9 (0.5, 1.9)		1.2 (0.6, 2.4)		1.0 (0.5, 1.7)	
Non-White	5.1 (2.5, 10.4)	**	5.3 (2.6, 10.9)	**	4.0 (2.2, 7.2)	**
<8th grade education	2.6 (1.1, 6.4)	*	1.6 (0.6, 4.1)			
Income <$5,000/yr	3.8 (1.8, 8.3)	**	2.2 (1.1, 4.5)	*	2.1 (0.9, 4.7)	+
Physical Function						
Any ADL impairment	3.2 (1.6, 6.5)	**	1.9 (0.8, 4.2)	#		
No. ADL impairments	1.5 (1.2, 1.8)	**	1.3 (1.1, 1.6)	*	1.3 (1.1, 1.8)	*
2+ HF impairments	2.3 (1.0, 5.2)	*	1.4 (0.6, 3.4)			
No. HF impairments	1.2 (1.1, 1.4)	**	1.1 (0.9, 1.4)			
Clinical						
Cognitive disability	8.6 (3.6, 20.9)	**	3.8 (1.5, 9.3)	**	3.0 (1.1, 7.7)	*
No. Pfeiffer errors	1.5 (1.3, 1.7)	**	1.3 (1.1, 1.5)	*		
Depressed (CES–D 16+)	1.6 (0.7, 3.7)		1.5 (0.6, 3.4)			
Urinary incontinence	1.0 (0.4, 2.4)		0.9 (0.4, 2.1)			
2+ Chronic conditions	0.5 (0.3, 1.2)	#	0.5 (0.2, 1.1)	+		
No. Chronic conditions	0.7 (0.4, 1.0)	*	0.6 (0.4, 0.9)	*	0.6 (0.4, 0.8)	**
Social Ties						
Married	0.7 (0.4, 1.5)		1.3 (0.6, 3.0)			
Attends church	1.0 (0.4, 2.5)		1.0 (0.4, 2.3)			
Participates in group	0.4 (0.2, 1.1)	+	0.5 (0.2, 1.2)	#	0.7 (0.3, 1.5)	
2+ monthly contacts	0.6 (0.3, 1.2)	#	0.8 (0.4, 1.6)			
<2 of above ties	1.7 (0.9, 3.4)	#	1.2 (0.6, 2.5)			
No. of ties	0.7 (0.6, 0.9)	**	0.9 (0.7, 1.2)			
Lives alone	0.3 (0.1, 0.8)	*	0.2 (0.1, 0.6)	**	0.3 (0.1, 0.8)	*

[a]See text for further description of this multivariate model.
[b]OR = odds ratio.
#$p < .20$; +$p < 0.1$; *$p < .05$; **$p < .01$.

risk factors for experiencing reported elder abuse or neglect, or both, at any time during the follow-up period. Among sociodemographic features, non-White race, low income, and advanced age at interval inception were significantly associated with experiencing reported elder abuse and neglect. With respect to the functional status domain, the presence of any ADL impairment as well as the number of ADL impairments at interval inception were both associated with the outcome. Mistreated subjects also had nearly twice the prevalence of higher impairments as measured by standardized instruments (Nagi, 1976; Rosow & Breslau, 1966) such as doing housework, climbing stairs, and writing or handling small objects ($p < .01$). Similarly, cognitive impairment as measured by the Mental Status Questionnaire (MSQ; Pfeiffer, 1975) was associated with the outcome, while depressive symptomatology as measured by the Center for Epidemiological Studies–Depression Scale (CES–D; Radloff, 1977) and urinary incontinence at interval inception were not.

Despite the bivariate association between functional status and the outcome of corroborated elder mistreatment, the prevalence of chronic disease (as measured by a standard inventory that included arthritis, diabetes, hypertension, hip fracture, myocardial infarction, cancer, and stroke), was actually higher in the non-mistreated group. Finally, for social network variables, mistreated cohort members were more likely to be living with someone at interval inception ($p < .01$), but also have fewer social ties ($p < .005$).

Table 2 shows the results of multivariate analysis after adjusting first only for the interval of observation, followed by adjustment for demographic features and income. The last column shows results from a single model in which the interval, demographic features, and income were included as well as other statistically significant risk factors ($p < 0.2$) from each domain. When two parameterizations of the same risk factor were available (e.g., any ADL impairment vs number of ADL impairments), the stronger contributor from the earlier models was selected. Several variables achieve statistical significance in the final model, with each domain having at least one independently contributing risk factor. The most robust were non-White race (OR 4.0, 95% CI 2.2, 7.2), number of ADL impairments (OR 1.3 per impairment, 95% CI 1.0, 1.8), cognitive impairment defined as four or more errors on the Pfeiffer Mental Status Questionnaire (OR 3.0, 95% CI 1.1, 7.7),

Table 3. Change in Cognitive and Physical Function as Risk Factors for Reported Elder Abuse and Neglect

Variable	OR (95% CI) Adjusted for Interval	OR (95% CI) Adjusted for Age, Sex, Race, and Income
Change in ADL Function		
No impairment	1.0 (referent)	1.0 (referent)
New impairment	2.9 (1.0, 8.0)*	1.4 (0.4, 4.6)
Impaired previously	1.2 (0.5, 2.8)	0.5 (0.2, 1.5)
Change in Cognitive Function		
No impairment	1.0 (referent)	1.0 (referent)
New impairment	11.6 (4.1, 33.0)***	5.1 (2.0, 12.7)***
Impaired previously	4.0 (0.9, 22.1)+	1.9 (0.4, 9.8)

+$p < 0.1$; *$p < .05$; **$p < .001$.

and living alone (OR 0.3, 95% CI 0.1, 0.8). As in bivariate analysis, the number of chronic conditions showed an inverse association with reported elder abuse and neglect (OR 0.6, 95% CI 0.4, 0.8).

Because our clinical experience has been that the trajectory of functional and cognitive decline has more of a bearing on mistreatment than "stable" impairments, we analyzed the impact of developing new ADL or cognitive impairment over consecutive intervals (Table 3). In these analyses, change is assessed by comparing ADL and cognitive function from the start of a given interval to these functions at the start of a prior interval. The referent group members are those with no impairment in the prior interval and no new impairment in the subsequent interval. Interval one is not included because no data on prior impairment were available. Those subjects who began a prior interval non-ADL impaired and then subsequently developed new ADL impairment were at increased risk for reported mistreatment (OR 2.9, 95% CI 1.0, 8.0), but these associations became smaller and nonsignificant after adjusting for demographic and socioeconomic features. On the other hand, those subjects who began an interval cognitively intact and became subsequently impaired were at high risk for the outcome (OR 11.6, 95% CI 4.1, 33.0), and these differences remained highly significant after making the same adjustments (OR 5.1, 95% CI 2.0, 12.7).

Discussion

Elder abuse theorists have speculated about the causes of mistreatment and have tested these hypotheses in a variety of risk factor studies, all of which have been either retrospective or cross-sectional. Not surprisingly, the resulting picture of the older adult at risk has varied considerably. At first the "typical" elder abuse victim was reproducibly frail, female, and cognitively and functionally impaired. Subsequent studies found no relationship between gender, frailty, cognitive and functional status, and marital status. In pilot work we have argued that the source of these divergent findings may be methodologic (Lachs et al., 1994). In this first prospective, longitudinal study of elder mistreatment based on a large, well characterized community-based sample, risk factor data were obtained repeatedly using standardized instruments. Several risk factors emerged as potent predictors of reported elder mistreatment including poverty, race, functional and cognitive impairment, worsening cognitive impairment, and living with someone.

One limitation of our study is the mechanism of elder mistreatment case-finding, which is essentially a social welfare system (adult protective services). This probably influences the finding of race and poverty as important risk factors, in all likelihood overestimating their contribution due to (a) reporting bias and (b) the potential confounding of poverty and race. The more developed literature on child abuse has examined the relationship between sociocultural factors and child abuse, and these have recently been reviewed by Korbin (1995). With respect to reporting bias, sociodemographic features are believed to influence physician attribution of child abuse in suspected cases (O'Toole, Turbett, & Nalepka, 1983). In the hospital setting, for example, almost half of cases meeting criteria for child abuse were not reported to protective service agencies in one study, and non-White race was among the factors associated with preferential reporting (Hampton & Newberger, 1985). Although some studies have shown minority families to be overrepresented in child abuse protective service registries (Lauderdale, Valiunas, & Anderson, 1980), the relative contribution of reporting biases has also been challenged (Jason, Andereck, Marks, & Tyler, 1982). With respect to the potential confounding between race and poverty in the study of family violence, at least one study of child abuse involving families receiving Aid to Dependent Families With Children (AFDC) found that Black families tended to be the more materially deprived than White families participating in the program (Horowitz & Wolock, 1981). This would suggest that in some settings, poverty is indeed a confounder with respect to race. Our results also suggest that there is some similar economic confounding in elder mistreatment, but poverty and minority status remained significant when other sociodemographic features were included in multivariate models. The degree to which reporting and ascertainment bias additionally affect our results is unknown, but clearly a social welfare system that preferentially enrolls low-income minority cases will cause an overestimate of the influence of these features. With respect to other sociodemographic variables, age was an additional risk factor for mistreatment in this study, but gender conferred no additional risk. This is consistent with more recent case-control studies of elder abuse.

In addition to its influence on sociodemographic risk factors, reporting bias is probably responsible for the relatively low prevalence (1.6%) of mistreatment in the cohort in comparison to community-based prevalence studies that have used self-report as the basis for point prevalence calculations (3.2%

in the most widely quoted study [Pillemer & Finkelhor, 1988]). Adult protective service registries probably detect only a fraction of actual cases, as many may not be reported to official agencies. The net effect of this decreased sensitivity is to lower the power of the study to detect statistically significant odds ratios given the finite sample site of the cohort. However, many odds ratios reached statistical significance in this research, which is likely to be the largest cohort study of elder mistreatment of any conducted in the near future.

Functional status is perhaps the most controversial of elder abuse risk factors. This study found that the number of ADL impairments, higher functional impairment, and cognitive impairment were risk factors for mistreatment. Additionally, the development of worsening cognitive impairment was an especially potent predictor. As for the role that functional impairments play in the genesis of mistreatment, some experts have argued that they are directly causative, whereas others contend that it permits the perpetuation of abuse as the victimized older adult with functional disability is incapable of defending him- or herself. Unlike sociodemographic features, we do not believe reporting bias to substantially influence these findings; if mistreated subjects exist within the group of cohort members currently identified as "non-abused," the effect would be to underestimate the magnitude of the risk conferred by predictors such as cognitive impairment.

With respect to social network factors, only living alone was significantly associated with protecting older adults from mistreatment. Obviously, to be abused or neglected requires the presence of a perpetrator, but some have argued for the isolation theory of mistreatment, wherein mistreatment is prompted by a dwindling social network that comes ultimately to include only the abuser or neglecter. Our data provide some support for this theory as the number of social ties (measured by standardized social network instruments) was lower in mistreated subjects in bivariate analysis, yet 80% of mistreated subjects lived with another party.

We recognize other limitations of our study. First and foremost, this study considered only characteristics of the victims of mistreatment and not the perpetrators. Abuser-specific theories of mistreatment abound, and there are certainly traits of abusers (e.g., alcohol and substance abuse, prior history of violence, prior history of family violence) that should alert clinicians to high-risk situations beyond the factors already identified. Unfortunately, we do not have abuser data in the same detail as for victims of mistreatment. Second, the outcome in this study included abuse, neglect, and exploitation; it is conceivable that risk factors might be different for each and that our study is measuring an "average" effect. The relatively low event rate prevents us from looking at these outcomes individually, and also causes many of the parameter estimates for individual risk factors to be unstable. We also chose to exclude cases of "self-neglect" in our study, a large part of the work of adult protective service agencies in addition to elder abuse and neglect. We did this based on our clinical experience with protective service clients, as we believe self-neglect to be a distinct entity with a likely different "risk factor profile" (i.e., a higher prevalence of cognitive and functional impairment).

In summary, poverty, minority status, functional disability, and worsening cognitive impairment were risk factors for reported elder mistreatment in this 9-year longitudinal study of elder mistreatment, and the influence of race and poverty were probably overestimated by reporting bias. Clinicians should be particularly aware of high-risk situations in which functional and/or cognitive impairment are present, especially in circumstances where violent behavior has been known to exist previously.

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