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Mistreatment and Self-Reported Emotional Symptoms: Results from the National Elder Mistreatment Study

Josh M. Cisler, M.A., **Angela M. Begle, Ph.D.**, **Ananda B. Amstadter, Ph.D.**, and **Ron Acierno, Ph.D.**
Medical University of South Carolina

Abstract

Significant numbers of community-residing older adults in the United States report some form of past year mistreatment; however, little is known about mental health correlates of elder abuse. The present study represents an initial investigation of whether a recent history of emotional, physical, or sexual abuse is associated with self-reported emotional symptoms (e.g., anxiety and depression) among a nationally representative sample of 5,777 older adults residing in the continental United States. Results demonstrated that each abuse type independently increased likelihood of reporting emotional symptoms; however, when other known correlates (social support, physical health, traumatic event exposure) were controlled only emotional abuse remained a significant predictor. These results indicate a need for additional study of mistreatment-related correlates of depression and anxiety, with a particular focus on the often overlooked category of emotional mistreatment.

Keywords

elder abuse; depression; anxiety; interpersonal violence

Elder mistreatment refers to intentional actions that result in harm or serious risk of harm to an elder, or failure to protect the elder from harm or meet the elder's basic needs (National Research Council (NRC), 2003). While the NRC definition centers on a formal, designated, or expected caregiver as the potential perpetrator, most definitions employed in epidemiological studies of both older and younger adults expand the base of potential perpetrators to include any individual in the older adults' proximal environment (e.g., Acierno et al., 2010; Laumann, Leitsch, & Waite, 2008). Common types of elder mistreatment include physical, emotional, and sexual abuse, neglect, and financial exploitation (e.g., Acierno et al., 2010; Biggs, Manthorpe, Tinker, Doyle, & Erens, 2009; McCreadie et al., 2006). Several studies provide estimates of elder mistreatment prevalence, ranging from 1.4% to 10% in the general population (Biggs et al., 2009; Acierno et al., 2010; Laumann, Leitsch, & Waite, 2008).

Investigating correlates of elder mistreatment is an important first step in elucidating both its causes and consequences. Emerging research suggests several characteristics that increase probability of abuse, including health status (poorer health relative to fair or good health), infrequent participation in social activities, younger age, and female sex (Biggs et al., 2007; Laumann et al., 2008; Pillemer & Finkelhor, 1988; Racic, Kusmuk, Kozomara, Develnogic, & Tepic, 2006; Yaffe, Weiss, Wolfson, Lithwick, 2007). Despite growing research in this

Address correspondence to Ananda B. Amstadter, PhD, National Crime Victims Research and Treatment Center, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, 67 President Street, 2-S, Charleston, SC 29425; amstadt@musc.edu.

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area, little is known about the mental health correlates of elder mistreatment. Predictably, elder mistreatment will be associated with a range of negative emotional symptoms, including anxiety and depression, based on similar findings among middle aged adults exposed to interpersonal violence (e.g., Resnick, Acierno, & Kilpatrick, 1997). However, existing research indicates age-based differences in emotional responding to severe stress events, thus findings related to interpersonal violence or mistreatment from the general adult population may not necessarily extend to older adults. Indeed, Acierno, Ruggiero, Kilpatrick, Resnick, and Galea (2006) found that older adults exposed to Florida hurricanes had lower rates of posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and major depression relative to younger adults (see also Norris et al., 2002). Therefore, it is important to investigate the mental health correlates of elder mistreatment specifically.

Large surveys in Europe (Cooper et al., 2006; Garre-Olmo et al., 2009) and India (Chokkanathan & Lee, 2005) show that depression is significantly greater among older adults who reported mistreatment. This relationship has also been found using face-to-face interviews (Fulmer et al., 2005), and a small study found that older adults with medical referrals for neglect had higher rates of depression and dementia relative to older adults with medical referrals for other reasons (Dyer, Pavlik, Murphy, & Hyman, 2000). However, one community-based study in China One found that the relationship between mistreatment and depression was accounted for by levels of social support among men, but not women (Dong, Beck, & Simon, in press). Additionally, a study conducted in the state of Iowa found that, among older adults who received help from a caregiver in completing the survey, elder mistreatment was not positively associated with depression (Buri, Daly, Hartz, & Jogerst, 2006). By contrast, elder mistreatment was associated with depression among older adults who completed the survey without caregiver assistance. The observation that the relation between depression and mistreatment is moderated by a third party's involvement in data collection raises questions about data validity (e.g., older adults' reluctance to report abuse or depression in the presence of a caregiver). Further, whether the different types of elder mistreatment (e.g., emotional, physical, and sexual abuse) are differentially associated with emotional symptoms among older adults is not clearly established in the literature. Accordingly, data examining the relationship between elder mistreatment and emotional symptoms is generally limited.

The present study was designed to address these gaps in the literature and examine 1) whether specific types of elder mistreatment (physical abuse, emotional abuse, sexual abuse) correlate with self-reported emotional symptoms (i.e., depression and anxiety) among a nationally representative sample of older adults residing in the continental United States, and 2) whether the relation between elder mistreatment and emotional symptoms remains when controlling for other established correlates (e.g., income, sex, social support)..

Method

Sampling—The survey sample was derived using stratified random digit dialing (RDD) with an area probability sample based on Census-defined 'size of place' parameters (e.g., rural, urban, etc.) in the continental US. Interviews were conducted in either English or Spanish, depending on participant preference. To increase participant privacy and protection, respondents were asked if they were in a place where they could talk privately, and sensitive questions were worded to elicit a "yes/no" response, rather than a description of the mistreatment event. Participants were compensated for participation.

This method yielded a representative sample (based on age and gender) of 5,777 older adults age 60 or above (60% of respondents were female). Interviewers used standardized

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computer assisted telephone interviewing (CATI) procedures to ask participants about emotional symptoms and potential correlates (e.g., mistreatment experiences, dependency variables, demographics). The field interviewing commenced on February 6, 2008. The cooperation rate was 69%. See Acierno and colleagues (in press) for full methodological details.

Variable Definitions

Emotional Symptoms—The National Elder Mistreatment Study (Acierno et al., 2010) used a brief interview (average duration 16 minutes); thus, diagnostic interviewing was not possible. Participants were first asked "During the past 4 weeks, how much have you been bothered by emotional problems such as feeling anxious, depressed, or irritable?" (range 1 = not at all, 5 = completely). This item was dichotomized (not at all/slightly vs moderately/quite a lot/completely). 1072 (19%) indicated moderately/quite a lot/completely to this question. Participants were next asked "During the past 4 weeks, how much did personal or emotional problems keep you from doing your usual work, school, or other daily activities (range 1 = not at all, 5 = completely). 865 (15%) indicated moderately/quite a lot/completely to this question.

A dichotomous variable was created that consisted of older adults who endorsed both elevated emotional symptoms (i.e., indicated moderately/quite a lot/completely) and functional impairment (i.e., indicated moderately/quite a lot/completely). 552 (9.7%) participants indicated both emotional symptoms and functional impairment. The frequency of older adults reporting both emotional symptoms and functional impairment resulting from these emotional symptoms corresponds well to recent prevalence rates of emotional disorders in older adults (e.g., 8.5% of 1461 adults aged 65 or older met criteria for past year mood or anxiety disorder; Gum et al., 2009).

Demographic Variables—Standard demographic variables were assessed, including age (dichotomized into 60–70 and 71+), ethnicity (categorized into Caucasian and non-Caucasian), employment status (dichotomized into employed and unemployed), marital status (in three categories: married/cohabitating, single/divorced/separated, and widowed), income (categorized as an annual household income of $35,000 and below, and $35,001 and above), and gender (as male and female).

Mistreatment Variables—Emotional, physical, and sexual mistreatment were assessed. After respondents indicated that such an event had occurred, the timeframe was ascertained (i.e., since age 60).

Emotional mistreatment was defined as an affirmative answer to any one of the following: "Has anyone ever verbally attacked, scolded, or yelled at you so that you felt afraid for your safety, threatened or intimidated?; has anyone ever made you feel humiliated or embarrassed by calling you names such as stupid, or telling you that you or your opinion was worthless?; has anyone ever forcefully or repeatedly asked you to do something so much that you felt harassed or coerced into doing something against your will?; has anyone close to you ever completely refused to talk to you or ignored you for days at a time, even when you wanted to talk to them?"

Physical mistreatment was defined as an affirmative answer to any one of the following: "Has anyone ever hit you with their hand or object, slapped you, or threatened you with a weapon?; has anyone ever tried to restrain you by holding you down, tying you up, or locking you in your room or house?; has anyone ever physically hurt you so that you suffered some degree of injury, including cuts, bruises, or other marks?"

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Sexual mistreatment was defined as an affirmative answer to any one of the following three questions: (for females) "Has anyone ever made you have sex or oral sex by using force or threatening to harm you or someone close to you?; has anyone ever touched your breasts or pubic area or made you touch his penis by using force or threat of force?; and has anyone ever forced you to undress or expose your breasts or pubic area when you didn't want to?" (for males) "Has anyone ever made you have sex or oral sex by using force or threatening to harm you or someone close to you?; has anyone ever forced you to undress or expose your pubic area when you didn't want to?; has anyone ever touched your pubic area or made you touch their pubic area by using force or threat of force?"

Experience of Prior Traumatic Events (PTE) (Yes vs No)—Participants were asked to report if they had been exposed to the following events *and* indicated fear that they would be killed or seriously injured during this exposure: natural disasters such as earthquake, hurricane, flood, or tornado; serious accident at work, in a car, or somewhere else; or being in any other situation where you thought you would be killed.

Social/Dependency Variables—Social support, social service use, activities of daily living (ADL) need, and being bothered by emotional symptoms were assessed.

Perceived social support during the past month was assessed via a modified five-item version of the Medical Outcomes Study module for social support (Sherbourne & Stewart, 1991). Participants were asked about emotional (e.g., "someone available to love you and make you feel wanted"); instrumental (e.g., "someone available to help you if you were confined to bed"); and appraisal (e.g., "someone available to give you good advice in a crisis") social support and responded to items using a four-point scale from "none of the time" to "all of the time" (sample range=0–20; M=15.9 [SD=4.8]). Low social support was operationalized as a score in the lower quartile of the sample ratings, and the comparison high social support was operationalized as a score in the upper quartile of sample ratings.

Social Service Utilization—Participants were asked if they had used any of the following programs or services: senior centers or day programs; physical rehabilitation; meals on wheels or any other meal service, social services or health services provided to the home; hospice; formal senior friends services, church group home visits, or any other program or service. This item was used dichotomously (yes vs no).

Requires ADL Assistance—Participants were asked if they needed help from time to time with the following activities of daily living (ADLs): shopping for groceries or medicines; going to the doctor; transportation to friends, church or temple; paying bills or doing related paperwork; taking medicines, getting dressed, bathing, and eating. This item was used dichotomously (yes vs no).

Physical Health—Physical health status over the prior month was assessed using the general health question number 1 from the World Health Organization Short-Form 36 Health Questionnaire (Ware & Gandek, 1998). Participants were asked to rate the following question: "In general, would you say your health is Excellent, Very good, Good, Fair, or Poor." These responses were dichotomized into Poor Health (self rating of fair or poor) and Good Health (self rating of excellent, very good, or good)..

Statistical Analyses

The dependent variable was the aforementioned dichotomous variable indicating self-reported emotional symptoms and functional interference related to emotional symptoms. Logistic regression analyses were conducted to identify variables that were associated with

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the dependent variable within each theoretically-defined predictor set: demographics (age, ethnicity, employment status, marital status, income, gender), mistreatment (sexual abuse, physical abuse, emotional abuse), PTE exposure, and dependency (physical health, social support, use of social services, ADL needs). Significant predictors emerging from these analyses were entered into a final multivariable logistic regression analysis (e.g., Amstadter et al., in press). SUDAAN (version 10.0) was used for all regression analyses to account for sample weighting.

Results

Readers are referred to Acierno and colleagues (2010) and Amstadter, Begle, Cisler, Muzzy, and Acierno (in press) for full descriptive information on the present study's variables and mistreatment prevalence. A summary of the logistic regression analyses is provided in Table 1.

Demographics

Lower age, low income, and unemployment were significant correlates of emotional symptoms and functional impairment. Ethnicity, marital status, and biological sex were not related to the dependent variable.

Mistreatment

Sexual abuse since age 60, physical abuse since age 60, and emotional abuse since age 60 were each significantly associated with greater emotional symptoms and functional impairment. It should be noted that sexual abuse had a low frequency (n=16).

Trauma Exposure

Lifetime history of PTE exposure (compared to no exposure) was significantly associated with greater self-reported emotional symptoms and functional impairment.

Social/Dependency Model

Low levels of social support, needing help with ADLs, and poor physical health were each significantly associated with endorsement emotional symptoms with functional impairment. Use of social services was not related to the dependent variable.

Final Model

All significant predictors from the individual models were entered into a final multivariable model for each dependent variable (Table 1). Lower age, emotional abuse since age 60, PTE, poor physical health, low social support, and needing help with ADLs each remained a significant correlate.

Discussion

Elder mistreatment (e.g., physical, emotional, and sexual abuse) is an important public health concern based upon prevalence rates as high as 10% among the general population (Cooper et al., 2008). As only limited research has focused on mental health correlates of elder mistreatment, the current study aimed to address gaps in the literature by examining associations between mistreatment and emotional symptoms, after accounting for other well-established predictors (e.g., demographic characteristics, social support, physical health). This study adds to the extant literature by investigating these important relationships among a nationally representative sample of older adults.

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Results from the individual models suggest that demographic characteristics were related to self-reported emotional symptoms and functional impairment. Specifically, lower age, low income, and unemployment all increased odds of experiencing emotional symptoms with impairment. Overall, the older age group (age 71 and older) was less likely to report emotional symptoms, which is consistent with research indicating that older age may serve as a protective factor against psychological distress (Acierno et al., 2006; Creamer & Parslow, 2008). Specifically, researchers have hypothesized that as adults become older, they may bring greater wisdom to bear on issues they confront or may develop more effective coping strategies and thus, may exhibit less distress when coping with stressors or mental health symptoms (Creamer & Parslow, 2008); or, conversely, those individuals with systemically negative responses to extreme stress are less likely to live long enough to participate in surveys as older adults.

Findings from the individual regression models indicated that all three types of abuse (i.e., sexual abuse, physical abuse, and emotional abuse), lifetime history of PTE exposure, and social/dependency variables (i.e., low levels of social support, needing help with ADLs, and poor physical health) were related to greater self-reported emotional symptoms and functional impairment. These results from the initial models were consistent with the literature on elder emotional symptoms, as other researchers have found evidence for the link between poor emotional status and mistreatment (Cooper et al, 2006; Garre-Olmo et al., 2009), history of PTE exposure (Acierno et al., 2004), and low levels of social support and needing help with ADLs (Penninx et al., 1997).

Results from the final model in which the effects of all factors were controlled demonstrated that emotional abuse, history of PTE exposure, poor physical health, younger age, low social support, and needing help with ADLs were associated with increased likelihood of reporting emotional symptoms and functional impairment among older adults. While mistreatment variables were all significant in their own initial models, only emotional abuse remained significant in the final model. This suggests that emotional abuse may have a more potent and direct effect on mental health, whereas the effects of sexual and physical mistreatment are shared with other factors in the environment, such as social support and physical health. Indeed, evidence suggests that the impact of stressful events on emotional symptoms is largely dependent on which coping strategies (i.e., problem solving and social support) are employed (Cornijs, Penninx, Knipscheer, & van Tilburg, 1999; Lazarus & Folkman, 1984). Further, research on younger populations has demonstrated that, although emotional abuse and physical abuse are strongly correlated, emotional abuse was a stronger predictor of emotional symptoms (i.e., anxiety and depression) than physical abuse (Baldry, 2003). More research is needed in this area to clarify precisely why emotional abuse has a direct relationship with mental health, whereas the relationship between mental health and physical and sexual abuse is accounted for by other demographic, dependency, and environmental variables.

Findings supporting the relationship between poor physical health and emotional symptoms are consistent with extant literature investigating these constructs among elderly victims of interpersonal violence (Amstadter et al., in press). Further, it is not surprising that lack of social support and needing more help with ADLs were associated with increased likelihood of experiencing negative emotional symptoms, given evidence for this link within the literature on older adults (i.e., stress-buffering hypothesis; Cohen & Willis, 1985). According to the stress-buffering hypothesis, an individual's coping responses may moderate the impact of stressful events on mental health consequences. Applied directly to the present study, our findings suggest that social support may serve as a protective factor for the negative effects of elder mistreatment on psychological health.

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Policy and practice implications

Results from this study demonstrated that several potentially modifiable variables (e.g., social support, elder mistreatment) are related to negative emotional symptoms and functional impairment among older adults. From a policy perspective, it may be important to identify which variables can be modified for specific individuals and to inform public health efforts to reduce their incidence. This is especially relevant given evidence for adverse consequences of poor emotional symptoms in the elderly population, such as poor self-rated physical health (Amstadter et al., in press). Thus, directly targeting prevention and/or intervention efforts towards improving these modifiable variables may directly improve emotional symptoms and functional impairment, while also having the long-term benefit of reducing adverse consequences that typically develop following negative emotional symptoms.

More specifically, results indicate that social support may serve as an important target for prevention/intervention efforts aimed at decreasing the impact of elder mistreatment. Cognitive-behavioral interventions for emotional symptoms (i.e., anxiety and depression) have been validated for older adults (Pinquart, Duberstein, & Lyness, 2007; Stanley, Wilson, Novy, et al., 2009) and typically include a behavioral activation component (Domidjian et al., 2006; Jacobson et al., 1996), aimed at increasing an individual's activity level through involvement in appropriate social activities (i.e., structured social groups, neighborhood activities, etc). Providing interventions for mistreated elder adults may serve to reduce the emotional consequences of abuse, such as depression and anxiety, but also to prevent later adverse consequences such as poor physical health, that have been significantly related to mistreatment and poor emotional symptoms (Amstadter et al., in press).

Limitations

This study is not without limitations. First, given time constraints, a thorough assessment of mental health functioning was precluded. However, the percentage of older adults reporting both emotional symptoms and functional impairment corresponds well to prevalence rates of anxiety and mood disorders among older adults (Gum et al., 2009). Second, extant literature suggests a general tendency among an elderly population to underreport psychiatric symptoms (Creamer & Parslow, 2008). While this was certainly a possibility within this study, our conclusions are related to broad emotional symptoms with a large prevalence among the U.S. population and are not as likely to be as affected as when studying more severe mental disorders. Third, the present study did not assess for cognitive functioning, and thus did not include this variable as a covariate. Rather, the interviews were discontinued if the interviewers had any doubt regarding the ability of the respondents to understand and respond to questions. As this study includes only data from a cognitively healthy, community residing sub-population of older adults, results should not be generalized to groups most at risk of elder mistreatment or cognitively impaired individuals. In addition, although our data is nationally representative and is weighted based on Census estimates, the study did not include individuals with no hme phone (i.e., those with only cell phones). Finally, this study employed a cross-sectional design and thus, causal inferences cannot be made based upon these results. We are unable to determine whether elder mistreatment, history of PTE exposure, or social/dependency variables served as causes or consequences of poor mental health. This highlights the importance of longitudinal and experimental investigations of these constructs.

Future directions

These initial findings regarding broad emotional symptoms justify more refined assessment of the link between elder mistreatment and specific mental health outcomes (e.g., PTSD, GAD, depression) in order to further understand the mental health implications of elder

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mistreatment. In addition, future research should include prospective, longitudinal, and experimental investigations of the consequences of elder mistreatment, to allow for better inferences regarding causality and mediators/moderators within these relationships. Finally, future research on emotional symptoms should include interactions among risk factors and associated variables, in attempt to more accurately identify risk for emotional symptoms among victims of elder mistreatment, and thus to incorporate these variables into intervention efforts aimed at decreasing the adverse consequences following abuse.

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Table 1

Results of Logistic Regression Analyses Predicting Emotional Symptoms plus Functional Impairment

	Emotional Symptoms plus Fx Impairment		
Predictor	**OR**	**95% CI**	**p-value**
Model 1. Demographics			
Age			
60–70 years	1.00		.001
71 years and over	0.62	0.48–0.80	
Ethnic Categories			
White	1.00		.112
All other groups	1.29	0.94–1.76	
Employment			
Employed	1.00		.001
Not Employed	1.75	1.25–2.47	
Marital Status			
Married/Cohabitating	1.00		.124
Single/Divorced/Separated	1.33	1.01–1.76	
Widowed	1.13	0.85–1.51	
Income			
$35,000	1.00		.001
>$35,000	0.43	0.33–0.56	
Sex			
Male	1.00		.458
Female	1.10	0.86–1.40	
Model 2. Mistreatment			
Physical Abuse since Age 60			
No	1.00		.044
Yes	2.07	1.02–4.21	
Emotional Abuse since Age 60			
No	1.00		.001
Yes	2.57	1.89–3.51	
Sexual Abuse since Age 60			
No	1.00		.036
Yes	3.83	1.10–13.37	
Model 3. PTE			
Prior PTE			
No	1.00	-	.001
Yes	2.28	1.85–2.81	
Model 4. Dependency variables			
Level of Social Support			
High	1.00	-	.001
Low	4.01	2.92–5.51	

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	Emotional Symptoms plus Fx Impairment		
Predictor	**OR**	**95% CI**	**p-value**
Use of Social Services			
No	1.00	-	.808
Yes	0.97	0.73–1.28	
Needs ADL Help			
No	1.00	-	.001
Yes	2.19	1.63–2.94	
Physical Health			
Good	1.00	-	.001
Poor	5.00	3.80–6.57	
Final Model			
Age			
60–70 years	1.00	-	.037
71 years and over	0.66	0.44–0.98	
Employment			
Employed	1.00	-	.632
Not Employed	1.16	0.63–2.14	
Income			
$35,000	1.00		.604
>$35,000	0.89	0.57–1.39	
Sexual Abuse			
No	1.00	-	.247
Yes	2.93	0.47–18.10	
Physical Abuse			
No	1.00	-	.645
Yes	1.27	0.46–3.48	
Emotional Abuse			
No	1.00	-	.026
Yes	1.72	1.07–2.78	
PTE			
No	1.00	-	.001
Yes	2.05	1.35–3.10	
Physical Health			
Good	1.00	-	.001
Poor	5.54	3.66–8.38	
Social Support			
High	1.00	-	.001
Low	3.37	2.08–5.47	
Needs ADL Help			
No	1.00	-	.018
Yes		1.63	1.09–2.45