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Elder mistreatment and emotional symptoms among older adults in a largely rural population: The South Carolina Elder Mistreatment Study

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Abstract

While two recent major studies provide some insight into the prevalence and correlates of elder mistreatment, the relationship between elder mistreatment and mental health remains unclear. This study begins to address this issue by examining the relationship between elder mistreatment (i.e., a recent history of emotional and physical abuse) and negative emotional symptoms (e.g., anxiety and depression) among 902 older adults aged 60 and above residing in South Carolina. Results demonstrate that emotional, but not physical abuse is, significantly correlated with higher levels of emotional symptoms. This relationship is sustained when controlling for established demographic and social/dependency risk factors. These data suggest that mistreated older adults also suffer from greater emotional symptoms and highlight the need for more research in this area.

Keywords

Elder; mistreatment; emotion; rural

Elder mistreatment is a public health problem in the United States, with prevalence rates as high as 1.4% to 10% in the general population (Podnieks et al., 1989; Biggs, Manthorpe, Tinker, Doyle, & Erens, 2009; Acierno et al., in press; Laumann, Leitsch, & Waite, 2008). In attempting to understand the causes and consequences of elder mistreatment, recent findings have identified associations with mental health characteristics including negative emotional symptoms (Cisler, Begle, Amstadter, & Acierno, under review), building upon the link between emotional symptoms and interpersonal violence among middle aged (Resnick, Acierno, & Kilpatrick, 1997) and older adults (Acierno, Ruggiero, Kilpatrick, Resnick, & Galae, 2006). Specifically, Cisler and colleagues (under review) examined a nationally representative sample of older adults and found a significant relationship between elder mistreatment and self-reported emotional symptoms (i.e., depression and anxiety), after controlling for established correlates including income, sex, and social support.

Although few studies have systematically compared the prevalence and correlates of mistreatment among older adults living in rural areas to those living urban areas, rural-residing older adults appear to experience risk factors that may increase the likelihood of

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mistreatment and psychological health problems. Specifically, compared to their urban counterparts, rural-residing elders are more likely to have functional impairments (Probst, Moore, Baxley, & Lammie, 2002), live at or below the poverty line (Jensen & Mclaughlin, 1999), and experience lower social support (Johnson, 1996). These factors, combined with the barriers to psychiatric care that are commonly faced by rural residents (e.g., geographic distance from healthcare facility, lack of transportation, lack of available services), suggest that older adults living in rural communities may be especially vulnerable to the psychological effects of mistreatment.

South Carolina is one of only 11 states in the nation in which more than 50% of the population lives in federally designated rural areas (US Census, 1990). Thus, to the extent that rural residents are often underrepresented in research, the present study represents a unique opportunity to examine the relationship between elder mistreatment and emotional problems in a sample where rural residency is over-represented. We hypothesize a significant relationship between elder mistreatment and self-reported emotional symptoms, after accounting for other established correlates of elder mistreatment and emotional symptoms (e.g., income, sex, poor health, low social support, needing help with activities of daily living). Results will help to elucidate whether results from large national studies generalize to more specific rural populations, where victims are typically underserved in terms of mental health services.

Method

Sampling—The sampling methodology is a direct replication of the National Elder Mistreatment Study, albeit confined to the State of South Carolina (NEMS; see Acierno et al., in press for full methodological details). The sample was obtained 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 South Carolina. Interviews were conducted in either English or Spanish, depending on participant preference.

This method yielded a sample of 902 older adults age 60 or above. Interviewers used standardized computer assisted telephone interviewing (CATI) procedures to ask participants about emotional health and potential correlates of mistreatment. The cooperation rate was 82%. Data were weighted to approximate the 2005 South Carolina census data (US Census, 2005).

Participants—Participants were 902 older adults residing in South Carolina. Average age was 71 years (SD = 8; range = 60 - 97 years). 59.9% (n = 540) of the older adults were women. 56.8% (n = 512) were married or cohabitating, 26.8% (n = 242) were widowed, and 3.9% (n = 35) were never married, 11.6% (n = 105) were separated or divorced. Participants' racial demographics were: 77% (n = 695) White, 17.3% (n = 156) Black, 1.9% (n = 18) American Indian or Alaskan Native, 0% Asian, 0.1% (n = 1) Pacific Islander, and the remainder chose not to identify. For ethnicity, 1.1% (n = 10) indicated that they were of Hispanic or Latino origin. These distributions approximated those of South Carolina.

Variable Definitions

Negative Emotional Symptoms—Participants were 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). 166 (18.7%) indicated moderately/ quite a lot/completely to this question.

Demographic Variables—Standard demographic variables were assessed, including age, ethnicity (categorized into Caucasian and non-Caucasian), employment status (dichotomized into employed and unemployed), marital status (married/cohabitating, single/divorced/separated, and widowed), income (income of $35,000 and below vs $35,001 and above), and gender.

Mistreatment Variables—Emotional, physical, and sexual mistreatment were assessed in the timeframe reference of since age 60. For full description of the assessment measures, including exact interview questions, see Acierno et al., in press.

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

Social/Dependency Variables—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 answered 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).

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, instrumental, and appraisal 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*=15.7 [*SD*=4.1]). 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.

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).

Participants were asked if they needed help 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).

Statistical Analyses

Logistic regression analyses were conducted to identify variables within each theoretically-defined predictor set: demographics (age, ethnicity, employment status, marital status, income, gender), mistreatment[1] (physical and emotional abuse), PTE exposure, and dependency (physical health, social support, use of social services, ADL needs) that were associated with self-reported emotional symptoms. Significant correlates emerging from these analyses were entered into a final multivariable logistic regression analysis with presence of emotional symptoms as the dependent variable. SUDAAN (version 10.0) was used for all regression analyses to account for complex survey design and sample weighting.

Results

Negative emotional symptoms were reported by 18.7% (n=166) participants. Table 1 presents the results of the individual regression models and the final regression model.

Demographics

Within the demographic variable set, marital status and income were related to negative emotional symptoms. Single, divorced, or separated older adults were at increased risk compared to married or cohabitating older adults of endorsing negative emotional states. Those with an annual household income of less than $35,000 were also more likely to report emotional problems.

Mistreatment

The frequency of sexual mistreatment was too low to permit use in the logistic regression. A recent history of emotional abuse was significantly associated with increased risk of negative emotional symptoms, whereas a recent history of physical abuse was unrelated to emotional symptoms.

Prior Traumatic Events

A history of PTE exposure was significantly related to an increased likelihood of reporting emotional problems.

Social/Dependency Model

Poor health, low social support, and needing ADL help were all significantly associated with a greater risk of having emotional symptoms. Use of social services was not related.

Final Model

All significant predictors from the individual models were entered into a final multivariable model (Table 1). Emotional abuse, poor physical health, low social support, and needing ADL help were all associated with a greater likelihood of endorsing negative emotional symptoms. Marital status, income, and a prior PTE exposure history did not remain significant.

Discussion

Consistent with previous research, emotional abuse, poor physical health, low social support and functional impairment were associated with higher rates of self-reported emotional distress (e.g., Cooper et al., 2006). Interestingly, although the low incidence of sexual mistreatment reported by the current sample prevented further data analysis, only emotional mistreatment, not physical mistreatment, remained significant in the final model. This suggests that the relationship between physical mistreatment and emotional symptoms may be better accounted for by the association of physical mistreatment with other known correlates of psychological distress in older adult populations (i.e., low social support, poor health status, functional impairment). That the relationship between emotional mistreatment and emotional symptoms remained significant after controlling for the other correlates of distress suggests that emotional mistreatment may have a direct and salient impact on the psychological health of older adults. It is somewhat counter-intuitive that emotional mistreatment is more likely to be associated with negative mental health outcomes than physical mistreatment, and this finding highlights the need to consider this abuse type when developing services, policies, and criminal justice system responses. Verbally abusive behavior directed toward older adults is too often overlooked or considered inert next to

more objectively identifiable acts such as physical abuse, and this appears to be an incorrect conceptualization. Older adults who experience chronic emotional mistreatment may internalize their abuser's verbal aggressions leading to lower sense of self-efficacy, learned helplessness, and an external locus of control, factors associated with depression and anxiety. In turn, negative beliefs about self-efficacy may lead emotionally mistreated older adults to interpret potentially neutral interpersonal interactions as hostile and coercive, further perpetuating emotional distress.

Implications for the Development of Intervention and Prevention Programs

Results from the current study underscore the need for routine screening for mistreatment and psychological symptoms in the elderly by health care professionals. Although research suggests that older adults living in rural areas may be less likely to receive routine medical care than their urban counterparts, rates of emergent care utilization for acute health problems among rural and urban-residing elders are comparable (Probst et al., 2006). Thus, it may be especially important for emergency medical departments in rural areas to implement universal screening policies that would require all patients over the age of 60 to be assessed for emotional, physical, and financial mistreatment and associated psychological symptoms. To the extent that rural elders face barriers to care, community outreach programs that seek to identify at-risk older adults and facilitate service utilization may provide cost-effective, albeit “grass-roots,” interventions.

Furthermore, the significant associations between low social support, poor functional status, and emotional symptoms have implications for the development of intervention programs. Comijs and colleagues (1999) found that strong social support and sense of self-efficacy were associated with lower levels of psychological distress in a sample of older adults who had experienced chronic verbal aggression, physical aggression, and/or physical mistreatment. Thus, programs that aim to increase socialization and functional status may provide simple, effective, low-stigma interventions for a population who may be unlikely to disclose mistreatment and/or mental health problems or to seek psychiatric care. A benefit of such interventions is that they are “low threshold” in terms of inclusion criteria and “high threshold” in terms of benefit. Unlike physical mistreatment which can result in visible injury and which may be more readily reportable by victims, the perpetrators, and the community as “abuse,” emotional mistreatment most often occurs beneath public awareness and bystanders may be more likely to tolerate a victim's ambivalence as to whether or not emotional mistreatment constitutes a reportable offense. Thus, health providers, family members, and community members need not “confirm” cases of emotional mistreatment to facilitate increased social interaction among socially isolated older adults or to improve sense of self-efficacy among functionally-impaired older adults.

Importantly, the alleviation of emotional distress, an important treatment target notwithstanding, may lead to other benefits. Recently, Amstadter et al. (in press) found that emotional symptoms mediated the relationship between physical and emotional mistreatment and self-reported poor health status; of older adults who endorsed physical and/or emotional mistreatment, those who reported emotional symptoms reported poorer health, suggesting that the reduction of emotional distress may lead to improved sense of physical well-being, which could reduce costly overutilization of health care services and contribute to increased quality of life.

Limitations and Future Directions

Several limitations are noteworthy. First, the assessment of emotional symptoms was not comprehensive. Thus, we cannot infer mental health diagnosis; future research should expand the number and diagnostic specificity of questions related to the psychological

health correlates of mistreatment. Second, the temporal direction of the relationship between emotional mistreatment, emotional symptoms, poor health status, requiring assistance with ADL's, and low social support cannot be determined by this cross sectional study. As previously discussed, it may be that older adults who experience emotional distress, including depressive symptoms, are more likely to have negative attributional biases and to endorse an external locus of control, leading them to interpret social interactions as "emotional mistreatment." Furthermore, older adults who are physically impaired and have functional limitations may have a low sense of self-efficacy which can serve to exacerbate depressive symptoms; future investigations should attempt to establish a timeline between mistreatment incidents, emotional distress, and poor health and functional status. Finally, the current study did not stratify participants according to county of residence; thus, no comparisons can be made regarding the prevalence of elder mistreatment and emotional symptoms between older adults living in urban versus rural counties; future research should include rural/urban residence classification as a dependent variable and assess whether residential locality mediates or moderates the relationship between elder mistreatment and other identified risk factors.

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Table 1
Individual and Final Model Logistic Regression Results Predicting Emotional Symptoms

Predictor	OR	95% CI	p-value
Model 1: Demographics			
Age			
60-70	1.00	-	.321
71+	1.26	0.79-2.01	
Ethnic Categories			
White	1.00	-	.466
All other groups	0.82	0.48-1.40	
Employment			
Employed	1.00	-	.410
Not Employed	0.78	0.43-1.41	
Marital Status			
Married/Cohabitating	1.00	-	.019
Single/Divorced/Separated	2.17	1.22-3.86	
Widowed	1.11	0.64-1.94	
Income			
≤$35,000	1.00	-	<.001
>$35,000	0.41	0.25-0.68	
Gender			
Male	1.00	-	.285
Female	1.29	0.81-2.04	
Model 2: Mistreatment			
Physical Abuse since Age 60			
No	1.00	-	.480
Yes	0.67	0.22-2.03	
Emotional Abuse since Age 60			
No	1.00	-	<.001
Yes	4.03	2.35-6.92	
Model 3: Prior PTE			
Prior PTE			
No	1.00	-	.007
Yes	1.66	1.14-2.39	
Model 3: Dependency Variables			
Physical Health			
Good	1.00	-	<.001
Poor	3.69	2.15-6.32	
Level of Social Support			
High	1.00	-	<.001
Low	4.35	2.47-7.67	
Use of Social Services			

Predictor	OR	95% CI	p-value
No	1.00	-	.545
Yes	1.19	0.68-2.07	
Needs ADL Help			
No	1.00	-	<.001
Yes	2.79	1.61-4.85	
Model 4: Final Model			
Marital Status			
Married/Cohabitating	1.00	-	.572
Single/Divorced/Separated	0.66	0.26-1.72	
Widowed	1.07	0.47-2.39	
Income			
≤$35,000	1.00	-	.324
>$35,000	0.66	0.29-1.50	
Emotional Abuse since Age 60			
No	1.00	-	.037
Yes	2.13	1.04-4.36	
Prior PTE			
No	1.00	-	.235
Yes	1.52	0.76-3.02	
Physical Health			
Good	1.00	-	<.001
Poor	3.59	1.88-6.86	
Level of Social Support			
High	1.00	-	.003
Low	3.54	1.56-8.05	
Needs ADL Help			
No	1.00	-	.005
Yes	2.72	1.36-5.46	

Notes for logistic regression results: The level of the variable given represents the value of the variable, which is also the level of the variable hypothesized to be associated with increased risk. Confidence Intervals that do not cross the value 1.00 indicate increased (if CI ranges above 1.00) or reduced (if CI ranges below 1.00) risk for the reference value of the variable.