Childhood Sexual Abuse and Psychiatric Disorders in Middle-Aged and Older Adults: Evidence From the 2007 Adult Psychiatric Morbidity Survey

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ABSTRACT

Objective: This study aimed (1) to assess the relationship of childhood sexual abuse and revictimization with 6 common mental disorders, alcohol and drug dependence, posttraumatic stress disorder, eating disorders, and suicidal behavior; (2) to test whether gender moderates the relationship between childhood sexual abuse and psychiatric comorbidity; and (3) to assess the association of childhood sexual abuse with health care service use among middle-aged and older adults.

Method: The author conducted secondary analyses of data from a population-based, nationally representative sample of 3,493 community-dwelling adults aged 50 years and above who were interviewed in England in 2006 and 2007 as part of the 2007 Adult Psychiatric Morbidity Survey. The survey assessed childhood sexual abuse (sexual touching and sexual intercourse), sexual abuse revictimization (experiencing both childhood and adult sexual abuse), demographics, health care service use, 6 common mental disorders according to *ICD-10* diagnostic criteria (depressive episode, mixed anxiety and depression, generalized anxiety disorder, panic disorder, phobia, and obsessive-compulsive disorder), eating disorders, posttraumatic stress disorder, alcohol and drug dependence, and suicidal behavior.

Results: After weighting, the prevalence of childhood sexual abuse was 8.0%, and the prevalence of revictimization was 1.9%. Multivariate analyses revealed that childhood sexual abuse was significantly associated with mixed anxiety and depression (adjusted odds ratio [AOR] = 1.69; 95% CI, 1.09–2.63), generalized anxiety disorder (AOR = 1.78; 95% CI, 1.01–3.11), eating disorders (AOR = 2.04; 95% CI, 1.12–3.75), posttraumatic stress disorder (AOR = 2.45; 95% CI, 1.20–4.99), and suicidal ideation (AOR = 2.32; 95% CI, 1.27–4.27). Revictimization was significantly related to mixed anxiety and depression (AOR = 3.21; 95% CI, 1.63–6.32), generalized anxiety disorder (AOR = 2.60; 95% CI, 1.07–6.35), phobia (AOR = 4.07; 95% CI, 1.23–13.46), posttraumatic stress disorder (AOR = 8.88; 95% CI, 3.68–21.40), and suicidal ideation (AOR = 3.03; 95% CI, 1.08–8.51). Gender did not moderate the association of childhood sexual abuse or revictimization with psychiatric disorders. Finally, both childhood sexual abuse (AOR = 3.73; 95% CI, 2.03–6.86) and revictimization (AOR = 7.54; 95% CI, 3.09–17.42) were significantly associated with psychiatric hospitalization.

Conclusions: The prevalence of childhood sexual abuse in this sample was comparable to the prevalence rates identified in previous studies. The associations of childhood sexual abuse and revictimization with a wide range of psychiatric disorders raises further questions about the underlying mechanisms in the elderly. This study also supports the notion that childhood sexual abuse and revictimization are associated with a higher rate of utilization of mental health services.

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Although numerous studies have demonstrated an association between childhood sexual abuse and psychiatric disorders in adulthood,[1–4] studies have not systematically examined the link in older adults. Most studies on the impact of childhood sexual abuse have focused on adolescents and young adults, and only a handful of studies have extended this line of investigation to older adulthood.[5–7] This present study fills that gap by testing the effects of childhood sexual abuse on specific psychiatric disorders in a nationally representative sample of middle-aged and older adults aged 50 years and over in England.

A history of childhood sexual abuse in older adults is more common than people may think; the prevalence of childhood sexual abuse ranges from 2.4% to 6.5% depending on the definition of abuse, the reporting instrument used, and the characteristics of the samples.[5,7,8] In the general population, studies[1–3,9–16] have repeatedly found that childhood sexual abuse is associated with detrimental but relatively nonspecific psychiatric conditions in adulthood. Specifically, childhood sexual abuse has been found to be highly associated with depression, posttraumatic stress disorder (PTSD), drug and alcohol abuse, suicidal behavior, personality disorders, and psychosis.[1–3,9–16] However, few studies have explored its comorbidity with other psychiatric disorders in the aged population, even though 1 study[17] of older adults found an association between childhood sexual abuse and medical illness burden, poor physical functioning, and greater bodily pain.

A study[6] of 17,337 American health care users aged 65 years and above found that adverse childhood experiences (including emotional, physical, and sexual abuse, as well as household dysfunction such as substance abuse, incarcerated family members, and family members with mental illnesses or violent behavior) were positively associated with depressed affect, lifetime suicide attempts, and alcoholism.[6] In another sample of 21,000 adults aged 60 years and above who were under the care of general practitioners in a study of suicide prevention,[5] childhood sexual abuse was associated with symptoms of anxiety and depression as measured by the Patient Health Questionnaire and the Hospital Anxiety and Depression Scale. However, the samples of both of these studies were not representative or random. Therefore, to my knowledge, there have been no studies of the comorbidity pattern of childhood sexual abuse in representative samples

Clinical Points

- Early detection of childhood sexual abuse and sexual abuse revictimization is crucial for prevention or alleviation of psychiatric disorders in later life.
- Public health education initiatives should be launched to emphasize the long-term adverse effects in middle and older age of childhood sexual abuse.

of the elderly population. The first objective of this study was to assess the association of childhood sexual abuse with 6 common mental disorders (depressive episode, mixed anxiety and depression, generalized anxiety disorder [GAD], panic disorder, phobia, and obsessive-compulsive disorder), alcohol and drug dependence, symptoms of PTSD, eating disorder symptoms, and suicidal behavior in middle-aged and older adults.

In addition to being associated with mental disorders, childhood sexual abuse appears to be positively associated with the persistence of abuse into adulthood.[4,18,19] Studies have also suggested that persistence into adulthood is more prevalent and may have a stronger impact in women than in men.[19,20] In line with a previous study,[4] this study defined sexual abuse revictimization as the repetition of sexual abuse in childhood and adulthood. Therefore, to expand on prior research, this study also assessed the relationship of sexual abuse revictimization with specific psychiatric disorders and whether gender moderates the effects of childhood sexual abuse and revictimization, with greater effects in older women.

Furthermore, to my knowledge, no published study has evaluated the association of childhood sexual abuse with health care service use (such as outpatient clinic visits) and hospitalization in later life. To fill this gap in research, the last objective of this study was to examine the impact of childhood sexual abuse on health care use in middle-aged and older adults.

METHOD

Data Source

The data came from the 2007 Adult Psychiatric Morbidity Survey, which was carried out between October 2006 and December 2007. The UK National Centre for Social Research carried out the survey with community-dwelling adults aged 16 years or older residing in England. Ethical approval for the 2007 Adult Psychiatric Morbidity Survey was obtained from the Royal Free Hospital and Medical School Research Ethics Committee, London, United Kingdom. The study design has been documented elsewhere.[2,4,8,21–23] In brief, the study used a multistage, stratified, probability-sampling design. The sampling frame was the Small User Postcode Address File, and the primary sampling units were postcode sectors. Although the survey involved 2 phases of interviewing, this study focuses only on phase 1 data. In phase 1 interviews, 7,403 of 12,988 selected respondents completed a computer-assisted personal interview, yielding a response rate of 57%. Data were then weighted to represent the household population aged 16 years and older in England by taking nonresponses into account. This study focuses on respondents aged 50 years or above (N = 3,800). This study follows the inclusion criteria of a previous study that examined eating disorders in older adults.[7,17] Because some questionnaires were incomplete, this study reports results from the 3,493 people who provided full data on the variables examined in this study.

Sexual Abuse

Sexual abuse data were derived from data collected in the computer-assisted self-interview component of the computer-assisted personal interviews, which has participants input data directly. Participants were told that the results of the self-completed parts of the interview would be strictly confidential, such that even the interviewers would not have access to it. Respondents were asked the following 4 questions: (1) "Before the age of 16, did anyone touch you, or get you to touch them, in a sexual way without your consent?" (2) "Before the age of 16, did anyone have sexual intercourse with you without your consent?" (3) "Since the age of 16, has anyone touched you, or got you to touch them, in a sexual way without your consent?" and (4) "Since the age of 16, has anyone had sexual intercourse with you without your consent?" Respondents were classified as victims of childhood sexual abuse if they gave a positive response to the first or second item. They were classified as victims of adult sexual abuse if they gave a positive response to the third or fourth item. Those who had been abused in both childhood and adulthood were classified as having experienced sexual abuse revictimization.

Common Mental Disorders

Six categories of common mental disorders—depressive episode, mixed anxiety and depression, GAD, panic disorder, phobia, and obsessive-compulsive disorder—were assessed with the revised Clinical Interview Schedule,[24] which captures symptoms in the week prior to assessment and is administered by non–clinically trained interviewers. Respondents' responses to the revised Clinical Interview Schedule were used to produce specific *ICD-10* diagnoses for these 6 neurotic disorders in the week prior to the interview.

Dependence Disorders

Alcohol dependence in the 6 months prior to the interview was determined by responses to 2 questionnaires: the Alcohol Use Disorder Identification Test,[25] which consists of 10 items on a 5-point scale ranging from 0 to 4, and the community version of the Severity of Alcohol Dependence Questionnaire,[26] which consists of 20 items on a 4-point scale ranging from 0 to 3. Respondents were classified as having mild alcohol dependence in the past 6 months if they had a total score of 10 or more on the Alcohol Use Disorder Identification Test and/or a total score of 4 or more on the Severity of Alcohol Dependence Questionnaire.

Questions to measure drug dependence in the past year were asked during the computer-assisted self-interview. Respondents who had used any of 8 drugs (cannabis, amphetamines, crack, cocaine, ecstasy, tranquilizers, opiates, or volatile substances) answered 5 questions based on the Diagnostic Interview Schedule[27] to assess drug dependence. Those items measured sense of dependence, inability to abstain, increased tolerance, and withdrawal symptoms. A positive response to any of the items for the past year was used to indicate drug dependence.

Table 1. Sociodemographic Characteristics of Middle-Aged and Older Adults (aged 50 years or above) With and Without Childhood Sexual Abuse (N = 3,493)[a]

Demographic Characteristic	Victims of Childhood Sexual Abuse (n = 276), %	Nonvictims of Childhood Sexual Abuse (n = 3,217), %	OR (95% CI)
Age, y			
50–59	52.7	35.6	1.00 (1.00–1.00)
60–69	32.7	31.0	0.71 (0.52–0.96)*
70+	14.6	33.4	0.29 (0.20–0.44)**
Gender			
Male	36.7	47.5	1.00 (1.00–1.00)
Female	63.3	52.5	1.55 (1.17–2.05)**
Race			
White	99.1	95.6	4.26 (1.19–15.20)*
Nonwhite	0.9	4.4	1.00 (1.00–1.00)
Marital status			
Married/cohabiting	72.1	69.5	1.00 (1.00–1.00)
Single	3.5	5.4	0.66 (0.32–1.35)
Widowed	8.8	16.5	0.51 (0.31–0.82)**
Separated/divorced	15.5	8.6	1.75 (1.19–2.59)**
Education			
Less than A-level[b]	57.3	70.6	1.00 (1.00–1.00)
A-level[b]	7.0	8.6	1.02 (0.59–1.74)
Teaching, HND, nursing	7.5	7.2	1.31 (0.78–2.22)
Degree or higher	28.2	13.6	2.55 (1.85–3.51)**

[a]All Ns are unweighted.
[b]A-level refers to 2-year education after high school, focusing on traditional academics.
*$P < .05$. **$P < .01$.
Abbreviations: HND = Higher National Diploma, OR = odds ratio.

Screening for Eating Disorders and PTSD

The 5 items of the SCOFF eating disorder screening tool (the acronym SCOFF was derived from the 5 questions) were used to estimate the prevalence of possible eating disorders.[28–30] In the computer-assisted self-interview, respondents indicated whether in the past year they (1) had lost more than 1 stone (6.35 kg) in a 3-month period; (2) had made themselves sick because they felt uncomfortably full; (3) worried they had lost control over how much they eat; (4) believed themselves to be fat, even though others said they were too thin; and (5) would say that food dominated their life. A positive screening for eating disorders in the past year was indicated by 2 or more positive responses on these 5 items. The SCOFF questionnaire is not a diagnostic instrument, although it has been found to have good specificity and sensitivity, as demonstrated by strong concordance with clinical diagnosis.[28–30]

Screening for PTSD was conducted using the Trauma Screening Questionnaire[31] in the computer-assisted self-interview. Respondents reported whether they had experienced a traumatic event after the age of 16 years. If they had, they rated 10 items about PTSD symptoms in the past week. Six or more positive responses were used to indicate PTSD in the past week.

Suicidal Ideation and Suicide Attempts

All respondents were asked 2 questions about suicidal thoughts and suicide attempts in the face-to-face interview. Respondents were asked to indicate whether they had ever thought of taking their life "even though you would not actually do it" (suicidal ideation) and whether they had ever made an attempt to take their life (suicide attempt). A positive response to either item was followed up with a question on whether it had last occurred in the past year. Past-year suicidal ideation and suicide attempt variables were created on the basis of responses to these items.

Health Care Use

Respondents were asked to indicate whether they (1) were currently undergoing any counseling or therapy for mental, nervous, or emotional problems; (2) had consulted a general practitioner for a mental, nervous, or emotional complaint in the past year; (3) had ever been admitted to a hospital or ward specializing in mental health problems; (4) had visited an outpatient clinic for medical treatment and/or a checkup in the past year; or (5) had stayed overnight in the hospital for medical treatment and/or a checkup in the past year.

Sociodemographics

Age, gender, ethnicity, marital status, and education were used as sociodemographic variables.

Statistical Analysis

Weighted percentages were computed to tally sociodemographic and clinical characteristics of respondents with and without childhood sexual abuse and sexual abuse revictimization. Two sets of logistic regressions tested for associations between childhood sexual abuse and comorbid psychiatric disorders. The first set was unadjusted, and the second set was adjusted for sociodemographic characteristics that differed between people with and without childhood sexual abuse. Similar analyses were conducted to test the association between sexual abuse revictimization and comorbid psychiatric disorders by excluding those who had experienced only childhood or adult sexual abuse.

To reduce the number of statistical tests, the second set of logistic regressions used only comorbid psychiatric disorders that were significantly associated with childhood sexual abuse or sexual abuse revictimization in the bivariate analyses (ie, unadjusted odds ratios [ORs]). Finally, ORs were derived from a series of logistic regression analyses and used to evaluate the associations of childhood sexual abuse and sexual abuse revictimization with health care use. Data were analyzed using SPSS statistical software, version 17.0.[32]

Table 2. Psychiatric Comorbidity in Middle-Aged and Older Adults (aged 50 years or above) With and Without Childhood Sexual Abuse (N = 3,493)[a]

Comorbid Disorder	Victims of Childhood Sexual Abuse (n = 276), %	Nonvictims of Childhood Sexual Abuse (n = 3,217), %	OR (95% CI)	Adjusted for Sociodemographic Characteristics, AOR (95% CI)[b,c]
Any common mental disorder (past week)	21.7	12.3	1.98 (1.41–2.77)**	1.73 (1.22–2.47)**
Depressive episode	3.1	1.6	1.88 (0.83–4.23)	NA
Mixed anxiety and depression	11.9	6.9	1.85 (1.20–2.83)**	1.69 (1.09–2.63)*
Generalized anxiety disorder	7.1	3.6	2.06 (1.19–3.55)**	1.78 (1.01–3.11)*
Panic disorder	1.8	0.7	2.25 (0.72–7.03)	NA
Phobia	2.2	0.9	2.62 (1.02–6.73)*	1.60 (0.61–4.21)
Obsessive-compulsive disorder	1.3	0.6	2.01 (0.54–7.55)	NA
Dependence disorder	4.4	3.0	1.48 (0.75–2.91)	NA
Alcohol dependence (past 6 months)	3.1	2.2	1.50 (0.69–3.29)	NA
Drug dependence (past year)	1.3	0.8	1.39 (0.38–5.10)	NA
Disorders established from screening				
Eating disorder (past year)	6.6	2.3	2.87 (1.59–5.17)**	2.04 (1.12–3.75)*
Posttraumatic stress disorder (past week)	4.8	1.5	3.22 (1.62–6.39)**	2.45 (1.20–4.99)*
Suicidal behavior (past year)				
Suicidal ideation	6.2	2.4	2.74 (1.52–4.95)**	2.32 (1.27–4.27)**
Attempted suicide	0.4	0.1	3.78 (0.41–35.01)	NA

[a]All Ns are unweighted.
[b]Odds ratios are adjusted for sex, age, marital status, education, and race.
[c]Items shown as NA are so noted because the unadjusted odds ratios for these variables were not statistically significant.
*$P < .05$. **$P < .01$.
Abbreviations: AOR = adjusted odds ratio, NA = not applicable, OR = odds ratio.

RESULTS

Prevalence of Childhood Sexual Abuse

After weighting, the overall prevalence of childhood sexual abuse was 8.0%. This rate fell to 4.8% after restricting the sample to adults aged 65 years and older. As can be seen in Table 1, the odds of experiencing childhood sexual abuse were significantly higher in women than in men. Whites had higher odds of childhood sexual abuse than nonwhites. People who were separated or divorced were more likely to have experienced childhood sexual abuse, while people who were older or widowed were less likely to have experienced childhood sexual abuse. Childhood sexual abuse was significantly more prevalent in people with at least some college education.

Childhood Sexual Abuse and Psychiatric Disorders

Table 2 shows that, after adjusting for demographic variables, childhood sexual abuse was still significantly associated with any common mental disorders, mixed anxiety and depression, GAD, eating disorders, PTSD, and suicidal ideation. To examine the moderating role of gender in the relationship between childhood sexual abuse and psychiatric disorders, logistic regression models were used to test the association of psychiatric disorders with childhood sexual abuse, gender, and their interaction term. There was no significant interaction between gender and childhood sexual abuse.

Sexual Abuse Revictimization and Psychiatric Disorders

After weighting, the prevalence of sexual abuse revictimization was 1.9%. After weighting, 23.9% of those who reported childhood sexual abuse also reported adult sexual abuse. Table 3 indicates that, after the analysis was controlled for demographic characteristics, people who had experienced sexual abuse revictimization were still more likely to report any common mental disorders, mixed anxiety and depression, GAD, phobia, PTSD, and suicidal ideation. Again, the moderating role of gender was tested, but none of the interaction terms between gender and sexual abuse revictimization for any psychological disorders were significant. Ad hoc analyses indicated that the prevalence rates for any common mental disorders among those who reported childhood sexual abuse only (16.3%) and adult sexual abuse only (31.4%) were lower than the rates for those who reported sexual abuse revictimization (38.9%), as shown in Table 3.

Sexual Abuse and Health Care Use

After the analysis was controlled for demographic characteristics, both childhood sexual abuse and sexual abuse revictimization were significantly associated with inpatient psychiatric treatment, and sexual abuse revictimization was significantly related to consultation of general practitioners for mental health problems and to outpatient clinic visits (Table 4). The lifetime inpatient psychiatric treatment rate was almost 7 times higher among those with sexual abuse revictimization compared to those without any sexual abuse victimization.

DISCUSSION

To my knowledge, this is the first national study to report on rates of childhood sexual abuse and sexual abuse revictimization among a population-based sample of middle-aged and older adults. A distinct strength of this study is its large representative sample. This study found that it is more common than some might think for middle-aged and older adults to have experienced childhood sexual abuse and that the abuse

Table 3. Psychiatric Comorbidity in Middle-Aged and Older Adults (aged 50 years or above) With and Without Sexual Abuse Revictimization (N = 3,199)[a]

Comorbid Disorder	Experienced Sexual Abuse Revictimization (n = 69), %	Nonvictims of Sexual Abuse (n = 3,130), %	OR (95% CI)	Adjusted for Sociodemographic Characteristics, AOR (95% CI)[b,c]
Any common mental disorder (past week)	38.9	11.8	4.75 (2.71–8.30)**	3.62 (2.01–6.51)**
Depressive episode	5.6	1.6	3.47 (1.01–11.93)*	2.07 (0.58–7.44)
Mixed anxiety and depression	22.2	6.7	4.07 (2.12–7.84)**	3.21 (1.63–6.32)**
Generalized anxiety disorder	11.1	3.5	3.55 (1.50–8.42)**	2.60 (1.07–6.35)*
Panic disorder	1.9	0.6	3.89 (0.63–24.20)	NA
Phobia	7.3	0.9	8.05 (2.56–25.34)**	4.07 (1.23–13.46)*
Obsessive-compulsive disorder	1.8	0.6	2.06 (0.15–27.72)	NA
Dependence disorder	7.4	2.9	2.74 (0.98–7.65)	NA
Alcohol dependence (past 6 months)	5.6	2.2	2.59 (0.77–8.67)	NA
Drug dependence (past year)	1.9	0.8	2.94 (0.47–18.48)	NA
Disorders established from screening				
Eating disorder (past year)	5.5	2.2	2.31 (0.66–8.06)	NA
Posttraumatic stress disorder (past week)	14.8	1.3	12.89 (5.63–29.52)**	8.88 (3.68–21.40)**
Suicidal behavior (past year)				
Suicidal ideation	7.4	2.2	4.06 (1.49–11.07)**	3.03 (1.08–8.51)*
Attempted suicide	1.9	0.1	15.57 (1.66–145.98)*	7.14 (0.66–76.70)

[a]All Ns are unweighted.
[b]Odds ratios are adjusted for sex, age, marital status, education, and race.
[c]Items shown as NA are so noted because the unadjusted odds ratios for these variables were not statistically significant.
*$P < .05$. **$P < .01$.
Abbreviations: AOR = adjusted odds ratio, NA = not applicable, OR = odds ratio.

Table 4. Treatment Correlates in Middle-Aged and Older Adults (aged 50 years or above) With and Without Childhood Sexual Abuse (N = 3,493), as Well as With and Without Sexual Abuse Revictimization (N = 3,199)[a]

Treatment	Victims of Childhood Sexual Abuse (n = 276), %	Nonvictims of Childhood Sexual Abuse (n = 3,217), %	OR (95% CI)	Adjusted for Sociodemographic Characteristics, AOR (95% CI)[b,c]
Counseling (current)	3.1	1.3	2.53 (1.13–5.65)*	1.83 (0.80–4.17)
Consulting general practitioners for mental health problems (past year)	13.7	8.8	1.63 (1.09–2.45)*	1.24 (0.81–1.89)
Outpatient (past year)	50.4	47.0	1.15 (0.87–1.50)	NA
Inpatient (past year)	13.2	12.4	1.08 (0.72–1.61)	NA
Psychiatric hospitalization (lifetime)	6.6	1.9	3.75 (2.09–6.75)**	3.73 (2.03–6.86)**
	Experienced Sexual Abuse Revictimization (n = 69), %	Nonvictims of Sexual Abuse (n = 3,130), %		
Counseling (current)	5.6	1.3	4.40 (1.30–14.93)*	2.87 (0.82–10.05)
Consulting general practitioners for mental health problems (past year)	25.9	8.5	3.76 (2.01–7.01)**	2.41 (1.25–4.62)**
Outpatient (past year)	31.5	46.8	0.53 (0.30–0.95)*	0.56 (0.31–0.99)*
Inpatient (past year)	16.4	12.4	1.36 (0.65–2.83)	NA
Psychiatric hospitalization (lifetime)	13.0	1.8	7.96 (3.39–18.71)**	7.54 (3.09–17.42)**

[a]All Ns are unweighted.
[b]Odds ratios are adjusted for sex, age, marital status, education, and race.
[c]Items shown as NA are so noted because the unadjusted odds ratios for these variables were not statistically significant.
*$P < .05$. **$P < .01$.
Abbreviations: AOR = adjusted odds ratio, NA = not applicable, OR = odds ratio.

is associated with high rates of mixed anxiety and depression, GAD, eating disorders, PTSD, and suicidal ideation, as well as an elevated rate of lifetime psychiatric hospitalization.

This study found a prevalence of childhood sexual abuse of approximately 8% in those aged 50 years and above. This rate decreased to 4.8% when the sample was limited to those aged 65 years and older. This estimate is comparable to prevalence rates found in previous studies of middle-aged and older adults (from 2.4% to 6.5%).[5,7] However, previous rates may be underestimated because the studies did not use nationally representative samples or detailed assessments of childhood sexual abuse.[5,7] However, it should be noted that recall bias in the 2007 Adult Psychiatric Morbidity Survey may have led to an underestimation of past abuse.

Childhood sexual abuse occurred across all sociodemographic strata. However, it was reported more frequently among those with higher education, women, and those who were divorced or separated. It was also reported more frequently among whites than among nonwhites. As expected, the prevalence of having experienced childhood sexual abuse

decreased with age. All of these findings are consistent with a previous study[5] of 21,000 older primary care patients, except for the findings on ethnic differences. However, it is too early to draw the conclusion that childhood sexual abuse is reported more frequently in whites than nonwhites because only about 4.2% of the sample in this study was nonwhite. Future studies must be undertaken to replicate this finding with a large sample of nonwhite respondents.

To my knowledge, there have been no published reports to date on psychopathology associated with childhood sexual abuse in middle-aged and older adults. This study found that childhood sexual abuse was associated with a wide range of psychiatric disorders, including mixed anxiety and depression, GAD, eating disorder, PTSD, and suicidal ideation. The findings of this study are consistent with a previous study[5] of older primary care patients, in which childhood sexual abuse was significantly associated with symptoms of anxiety and depression, as well as lifetime suicide attempts. However, the results of the current study confirm these findings with diagnostic measures of mixed anxiety/depression and GAD, and the results extend the findings to past-year suicidal ideation.

The results are also consistent with findings in the general population. Research[1,3,4] has found that childhood sexual abuse is a risk factor contributing to eating disorders, PTSD, and suicidal ideation in the general population. The results of the current study extend this link to the elderly population. Future studies should attempt to delineate the potential mechanisms underlying the link between childhood sexual abuse and these psychiatric disorders in old age. In particular, it has been argued that symptoms of eating disorders may function as a regulator for distress following the abusive experience or to express the anger against the experience of sexual abuse in adulthood.[33]

My findings suggest that childhood sexual abuse significantly increased the risk of adult sexual abuse, since almost one-fourth of those who had experienced childhood sexual abuse also reported sexual abuse after the age of 16 years. The relationship between sexual abuse and psychiatric disorder is strong and, in some cases, dose-related. Specifically, revictimization is associated with an increased frequency of particular disorders: mixed anxiety and depression, GAD, phobia, PTSD, and suicidal ideation. The combination of childhood sexual abuse with later sexual abuse in adulthood shows a strong association with phobia (AOR = 4.07) and PTSD (AOR = 8.88). Revictimization seems to increase the risk of some psychiatric disorders over and above the experience of childhood sexual abuse alone.

My findings are consistent with previous studies[4,34,35] that found that revictimization is a stronger predictor of psychiatric disorders than childhood sexual abuse alone. However, it is still unclear why this is the case. One plausible explanation is that the increased risk is the direct consequence of repeated sexual abuse.[36] Another explanation is that revictimization is a marker of the severity of the childhood sexual abuse.[37]

In general, males tend to respond to trauma such as childhood sexual abuse less severely than females.[38,39] Therefore, it was anticipated that gender would moderate the relationship between sexual abuse and psychiatric disorders. However, gender did not moderate the relationships of childhood sexual abuse and revictimization with psychiatric disorder. The failure to demonstrate moderation is consistent with a previous study[4] of the relationship between childhood sexual abuse and psychiatric disorders in the general population (using the same dataset). One possible explanation is a lack of statistical power required to reliably detect significant interaction terms. Another feasible reason is that men might be more likely to respond to childhood sexual abuse with criminal actions rather than psychiatric disorders. Criminal behavior would make men less likely to participate in community surveys like this because they would be incarcerated during the survey.

The findings of this study could well have crucial service implications for treating older adults with childhood sexual abuse. Early detection of older adults' childhood sexual abuse histories may inform targeted interventions to prevent or alleviate the progression of psychiatric comorbidity. Given the complex relationship between the physiologic, psychological, behavioral, and social processes that may be aggravated by childhood sexual abuse, no single form of intervention is likely to be sufficient for effective prevention in the aged population. Educational, psychotherapeutic, psychosocial, pharmacologic, and medical interventions across primary health care and community care settings could be used as screening points for prevention and treatment. Public health advertisements that emphasize the long-term impact of childhood sexual abuse on mental health in later life would help increase public awareness of this issue.

A number of limitations to this study should be noted. First, this research is based on cross-sectional data. Consequently, the associations are statistical, not necessarily causal. Longitudinal data are needed to further elucidate the causal and temporal relations between specific disorders and the correlates examined in this study.

Second, this study relied on lifetime retrospective self-reports of childhood sexual abuse experiences. Although this measurement is more convenient and practical than official substantial reports of childhood sexual abuse, the validity and consistency of this measurement have been questioned.[40,41]

Third, although the sample size in this study was large, there were very few people diagnosed with panic disorder, phobia, drug dependence, or suicide attempts. Therefore, it is possible that some odds ratios reported in this study were overestimated. Further studies with larger sample sizes are needed to confirm my findings for these disorders.

Fourth, this study did not examine a number of important confounding variables, such as measures of physical health, smoking, high-risk sexual behavior, self-esteem, psychological distress, social support, health risk behavior, functional capacity, and health perception. Future studies must be conducted to investigate whether the link between childhood sexual abuse and psychiatric disorders is mediated through behavioral, social, and cognitive pathways.

Fifth, this study did not examine the effects of childhood sexual abuse on psychiatric disorders after adjusting for other types of childhood and lifetime traumas and adversities. Therefore, this study could not assess the specific effects of childhood sexual abuse on psychiatric disorder in later life.

Last, the instruments used in this study to assess eating disorders and PTSD are screening tools for identifying possible cases in a community sample. A full clinical examination is needed to formally diagnose these disorders. Therefore, caution must be taken in interpreting these data since the prevalence rates for this study are likely to be higher than the prevalence rates found by clinical assessment.

Despite the limitations, this study used a representative sample of older adults in England to provide information that sheds light on several important issues regarding the impact of childhood sexual abuse on mental health and health care use in later life.

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