The Role of Childhood and Adulthood Abuse Among Women Presenting for Chronic Pain Management

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Abstract:

Objective: This study investigated the association between repeated childhood and adulthood abuse and somatic symptom reporting, mental health care use, and substance use among women with chronic pain.

Design: A survey of a consecutive sample.

Patients: Ninety consecutive women patients presenting for chronic pain management at a multidisciplinary pain management center.

Outcome Measures: The authors assessed the presence or absence of physical or sexual abuse (using the Drossman Physical-Sexual Abuse Survey), period of abuse, demographics, mental health care use, drug or alcohol use and substance abuse, and the presence or absence of physical, pain, and anxiety (somatic) symptoms.

Results: The response rate among patients surveyed was 64%. Of the 43 respondents (48%) who reported abuse, 17 (40%) cited childhood abuse, 12 (28%) cited adulthood abuse, and 14 (33%) cited repeated abuse. Women describing long-term abuse reported a significantly greater number of physical, pain, and anxiety symptoms and were more likely to report a history of substance abuse than women reporting abuse during childhood or adulthood alone.

Conclusions: These data indicate a significant association between health status and reported abuse among women presenting to a multidisciplinary pain center for pain management. This finding is consistent with those of previous investigators, and emphasizes the importance of routine evaluation of the presence of long-term abuse as a possible predictor of the onset of chronic pain states.

Key Words: Chronic pain—Healthcare use—Physical and somatic symptoms—Anxiety symptoms—Physical and sexual abuse.

Clinical research exploring the role of abuse in women chronic pain patients has focused primarily on the relation between childhood abuse and the development of chronic pain in adulthood. No study has examined the effects of adulthood abuse on chronic pain. An estimated 15 to 52% of girls in the U.S. report abuse, and become women who are significantly more likely than their counterparts to sustain adulthood abuse. Although sexual and physical abuse often occur concomitantly, sexual abuse appears to be more common at an early age.

Women who have experienced childhood abuse have greater physical and psychological problems and a greater tendency to abuse alcohol than those without this history. Such women also may be more likely to develop specific chronic pain conditions, such as headache, pelvic pain, and gastrointestinal pain.

Most studies relating early abuse to chronic adulthood pain dichotomize the abuse variable as “abused” versus “nonabused,” or focus on one type of abuse (predominantly sexual abuse). No study has explored the relation between adulthood abuse and chronic pain, making this an essential and important step toward understanding the...
“whole picture.” Furthermore, little is known about the effects of repeated abuse on the presentation of chronic pain.

To distinguish the effects of childhood and adulthood abuse on the development of chronic pain, and to assess whether repeated lifetime abuse predisposes patients to chronic pain states, we obtained the lifetime history of reported abuse from female patients presenting for management of chronic pain. Initially, we gathered descriptive data regarding the prevalence of reported abuse during childhood and adulthood among female chronic pain patients. We then determined whether women describing a more limited history of abuse (i.e., those reporting abuse during childhood or adulthood only) differed from those reporting chronic abuse in a number of demographic, somatic, and mental healthcare-use variables. We expected to find a greater number of somatic symptoms among patients reporting sustained abuse. Finally, we expected that women describing a history of ongoing abuse would have more somatic symptoms, more frequent use of mental healthcare resources, and greater abuse of alcohol and cigarettes than those with a more limited history.

**METHODS**

**Subjects**

The University of Michigan Medical Center Internal Review Board approved this study. From March to August 1997, we conducted a survey of 140 women patients who presented consecutively to the University of Michigan Multidisciplinary Pain Center for chronic pain management. Before their scheduled clinical appointment, English-speaking women patients were asked to complete an anonymous and confidential questionnaire packet. Participants completed the questionnaire during their clinic visit and deposited it in a locked box before leaving.

**Instruments**

The questionnaire contained measures of physical and sexual abuse (Drossman Physical-Sexual Abuse Questionnaire1), and was designed to obtain data regarding demographics (age, ethnic status, level of education, and employment status), somatic symptoms, mental health care use, and substance abuse.

**Abuse history**

A modified version of the physical and sexual abuse inventory designed by Drossman et al.1 was used to assess abuse history (Appendix). For the purposes of this study, childhood abuse was defined as any act of sexual exposure, sexual contact, or physical injury inflicted by an older person and experienced before the age of 14 years. Physical abuse was defined as an act beyond that considered to be a culturally normal form of discipline (e.g., spanking). Adulthood abuse was defined as any act of physical injury or unwanted sexual contact experienced at the age of 14 years or older.

Based on their responses, participants were classified into four abuse-history groups. The childhood-abuse group consisted of women who responded affirmatively to any of the questions regarding physical or sexual abuse during childhood, and negatively to all questions regarding adulthood abuse. The adulthood-abuse group comprised women who responded affirmatively to any question regarding physical or sexual abuse during adulthood, and negatively to any childhood experience of abuse. Women who reported either physical or sexual abuse as children and adults comprised the repeated-abuse group, and patients reporting no history of abuse comprised the nonabused group. For each patient who reported abuse, we noted whether the abuse was physical or sexual or both.

**Somatic symptoms**

To evaluate the relation between reported abuse and reports of somatic symptoms, the questionnaire contained a symptom checklist. Using items from the Hopkins Symptom Checklist24 and items that we added based on clinical experience, we designed the Somatic Symptom Scale, which elicited symptoms for the previous 12 months and consisted of three symptom categories: physical (e.g., dysmenorrhea, shortness of breath, and being “sickly” for entire life), pain (e.g., pelvic, back, and head pain), and anxiety (e.g., difficulty concentrating, worry, and nervousness). For each of the three symptom categories, we summed the number of items to which the patient responded affirmatively. The 31 items explored included 21 questions about physical symptoms, 5 regarding pain problems, and 5 regarding anxiety symptoms.

**Substance abuse**

Four questionnaire items evaluated substance abuse. Patients were asked whether they currently used street drugs or smoked cigarettes, and if they ever had undergone counseling for a substance-abuse problem. Alcohol use was based on the number of alcoholic beverages consumed on a yearly, monthly, and daily basis.

**Mental health care use**

The questionnaire elicited data regarding how often mental healthcare professionals were visited during the previous 12 months (never, 1–5 times, 6–10 times, and 11 or more times). Patients also were asked to indicate whether they had ever undergone counseling for reasons...
directly related to the experience of physical or sexual abuse.

Data analysis
First, demographic and somatic symptom variables of abused and nonabused patients were compared using $\chi^2$ and $t$ tests. Second, the relation between a self-reported history of chronic abuse and somatic reports was examined. To test our prediction, three planned comparison tests were performed.25 Women who described repeated abuse were expected to report a greater number of physical, pain, and anxiety symptoms than those in the childhood-abuse or adulthood-abuse groups. Three planned comparisons were performed using ANOVA contrasts. To decrease the risk of type I error, a weight of $-2$ was assigned to the mean physical symptom score of the repeated-abuse group, and weights of $+1$ were assigned to the mean physical symptom scores of the other two abuse groups. This procedure was repeated to compare the mean pain and anxiety scores of the repeated-abuse group with those of the other two abuse groups. Finally, we compared the three abuse groups by abuse type (i.e., physical or sexual abuse), mental health care use, and substance abuse variables using the $\chi^2$ tests.

RESULTS
Of the 140 women approached, 104 agreed to participate in the study. The responses of 90 participants (64%) were available for analysis because 14 women did not complete the questionnaire.

Demographics
The mean ± SD age of respondents was 46.4 ± 15.5 years (range, 18–82 years) and the racial composition of the sample was 82% white, 14% black, and 4% other racial and ethnic categories. The majority of participants were married or in a partnership (51%), educated beyond high school (60%), currently working or retired (54%), and reported an annual household income between $10,000 and $40,000 (52%).

Abuse history
A total of 43 (48%) respondents reported abuse. Of these, 17 (40%) described childhood abuse, 12 (28%) cited adulthood abuse, and 14 (33%) reported repeated abuse. There were no significant demographic differences between the nonabused ($n = 47$) and abused groups.

Somatic symptom reporting
After collapsing across the three categories of abuse to form a “general abuse” category, mean somatic symptom scores were compared with those of the nonabused group. Significant differences were found between the abused and nonabused groups regarding the number of reported physical symptoms ($t [df = 88] = p < 0.001$), pain symptoms ($t [df = 88] = 2.08, p < 0.05$), and anxiety symptoms ($t [df = 88] = 2.19, p < 0.05$). Therefore, we conducted further analyses to determine whether somatic symptom scores differed among the three abuse groups.

Table 1 presents the mean physical, pain, and anxiety symptom scores for the childhood-abuse, adulthood-abuse, and repeated-abuse groups. The ANOVA contrast on the mean physical symptom scores was significant ($F [df = 1, 40] = 6.55, p < 0.05$), indicating that women in the repeated-abuse group tended to report a greater number of physical symptoms than women in the other abuse groups. Women in this group also had a significantly greater mean number of anxiety symptoms ($F [df = 1, 40] = 6.21, p < 0.05$) and tended to report a greater number of pain problems ($F [df = 1, 40] = 3.51, p = 0.07$); however, this effect was not significant.

Physical and sexual abuse responses
The type of abuse experienced differed significantly by group ($\chi^2 [df = 2] = 8.92, p < 0.05$ (Fig. 1). Compared with the repeated-abuse and adulthood-abuse groups, women describing childhood abuse were significantly more likely to report sexual abuse ($\chi^2 [df = 1] = 5.62, p < 0.05$); 10 of 17 (59%) childhood-abuse group respondents reported sexual abuse. Physical and sexual abuse were equally prevalent among women reporting adulthood abuse, with 41% (n = 5) reporting physical abuse and 41% (n = 5) reporting sexual abuse. Women describing repeated abuse were significantly more likely to report both physical and sexual abuse than those in the other two abuse groups ($\chi^2 [df = 1] = 13.23, p < 0.001$); 11 of 14 (79%) repeated-abuse group respondents reported both types of abuse.

Mental health care use
The women describing abuse reported a greater number of visits to mental healthcare professionals during the previous 12 months than those not reporting abuse ($\chi^2$ test).
[\(df = 1\)] = 6.37, \(p < 0.05\). However, comparison of use of this resource by the type of abuse history or period during which the abuse occurred also revealed no significant differences. Ninety percent of the women who reported abuse never sought counseling for an incident of physical or sexual abuse, and the remaining 10% did not differ in the number of times they had received such care.

Substance abuse comparisons

Women who reported abuse were more likely than nonabused women to smoke cigarettes \(\chi^2 [df = 1] = 8.63, p < 0.01\), and there was a significant association between a reported history of abuse and cigarette smoking \(\chi^2 [df = 2] = 8.95, p < 0.05\). Smoking was reported by 83% of the repeated-abuse group, 29% of the childhood-abuse group, and 33% of the adulthood-abuse group. There were no differences in smoking behavior based on physical or sexual abuse reporting. Although the patients reporting repeated abuse group did not consume more alcohol than those in the other abuse-history groups, there was a significant relation between abuse history and past substance abuse counseling \(\chi^2 [df = 2] = 6.47, p < 0.05\). For the repeated-abuse group, 77% of respondents had obtained counseling.

**DISCUSSION**

Our findings show the prevalence of reported repeated physical and sexual victimization among women presenting for treatment of chronic pain. Nearly one half of our sample (48%) reported a history of abuse. Reports of sexual abuse were predominant in victims of childhood abuse and were equivalent in incidence to reports of physical abuse during adulthood. Of the women describing childhood abuse, 46% reported further abuse as adults. Our data also illustrate that the symptoms of abused women differ from those of nonabused women. In this study, women describing abuse reported a greater number of somatic symptoms. The increased healthcare-seeking behavior and poorer adjustment to illness characteristic of chronic pain patients with a history of abuse may be attributable to increased symptomatology.\(^7\),\(^16\),\(^20\) These findings are consistent with those of Gross et al.,\(^26\) who demonstrated a significant incidence of childhood incest, psychopathology, and childhood family dysfunction among women being treated for chronic pelvic pain.

Recent research has found no differences in health status indicators (e.g., somatic symptom reporting) between survivors of childhood and adulthood abuse.\(^2\) Our results replicate and extend these findings; however, we also found that health status indicators for women describing repeated abuse differed significantly from those reporting childhood or adulthood abuse. Women who reported repeated abuse also reported a significantly greater number of physical, pain, and anxiety symptoms,
and were more likely to have a history of substance abuse and cigarette smoking.

Ideally, we would have examined the interactive effects of abuse history and type (i.e., physical or sexual abuse or both) on health status. It is plausible that health status may be differentially affected by abuse history, depending on whether the abuse is physical or sexual in nature, or if both types of abuse are present. We were unable to conduct this type of analysis because of the small numbers and unequal distribution of cases in our sample. For example, women describing childhood abuse were more likely to have experienced sexual abuse than those in the other abuse-history groups. Therefore, one possible caveat to interpreting our findings is that we were unable to isolate and examine the independent effects of abuse type on health status. Future studies, in addition to examining abuse history, should evaluate how other aspects of abuse, such as type and duration, challenge or affect the health status of women with chronic pain.

The potential limitations of this study involve issues of possible self-report bias, methodologic limitations associated with correlational data, possible self-selection bias, and nonresponse. In this study, self-report bias could manifest as the tendency of participants to underreport issues that may be sensitive or painful to them. In an attempt to limit self-report bias, the questionnaire was designed to be completed anonymously such that subjects may have been more willing to divulge sensitive issues. However, self-disclosure of the duration and frequency of consumption of alcohol or other substances have been scrutinized for both reliability and validity. Many studies have documented inconsistencies in data based on the method of data collection. Stacy et al. reported that a multimethod assessment of determination of any substance allows for greater accuracy of drug use, thus ensuring reliability and validity of the results. Despite these findings, one could assume that if self-report bias exists in this study, respondents would be more likely to underreport than to overreport the magnitude of physical or sexual abuse and substance use or abuse.

The response rate in our sample was 64%. It was not possible to accurately determine whether subjects chose not to participate because they did not want to report on their abuse history, or because they had no abuse history. It is possible that if the latter were true, that these women may have decided that their responses were of little interest. Thus, a response rate of 64% may not reliably reflect a reported abuse rate of 48% in this population. The nature of the data analysis suggests relations or associations between abuse and pain symptoms. The reader should be reminded that because our data are correlational, causal conclusions cannot be made. The findings from the current study could have been obtained if a history of abuse increases the risk for pain and health problems. The findings also could have occurred if reports of abuse and health problems were influenced by a third variable (e.g., a tendency to recall and fully describe past abuse and current distress). Additional research using longitudinal clinical designs that follow persons with and without a history of abuse will be necessary to help determine the influence of abuse on future health problems.

Studies consistently show that a reported childhood abuse history is strongly associated with recurring abuse in adulthood. Similarly, we found in the present sample that 54% of respondents who reported childhood abuse also described adulthood abuse. Thus, future research also might explore whether certain personality characteristics or socioeconomic factors differentiate women who are abused during childhood only from those who experience lifetime abuse.

Finally, despite the large number of women in our sample describing a history of abuse, 90% had never sought counseling for that abuse and were presumed to be recounting a history of abuse to a healthcare professionals for the first time. Given the many health consequences of abuse, it is essential and worthwhile for pain-management practitioners to routinely inquire about past and present abuse with all of their patients with chronic pain. If abuse is detected, appropriate referrals should be made to help survivors address the physical and psychological consequences of abuse as part of the management of their pain.

REFERENCES


**APPENDIX**

<table>
<thead>
<tr>
<th>Sexual abuse questions</th>
<th>As a child (13 and younger)</th>
<th>As an adult (14 and older)</th>
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<tbody>
<tr>
<td>Has anyone ever exposed the sexual organs of his or her body to you when you did not want it?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has anyone ever threatened to have sex with you when you did not want to?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has anyone ever touched the sex organs of your body when you did not want this?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has anyone ever forced you to have sex when you did not want this?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
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**Physical abuse questions**

| When you were a child (13 or younger), did an older person often | Yes | No |
| Hit, kick, or beat you? | Yes | No |
| Seriously threaten you life? | Yes | No |

Now that you are an adult (14 or older), has any other adult often

| Hit, kick, or beat you? | Yes | No |
| Seriously threatened your life? | Yes | No |