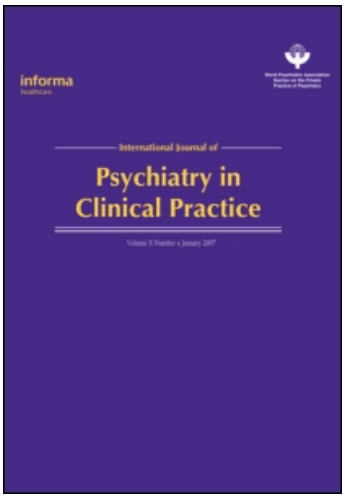


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# A re-examination of childhood trauma and somatic preoccupation

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**SHORT REPORT**

# A re-examination of childhood trauma and somatic preoccupation

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**Abstract**

In this study, we assessed five types of childhood trauma (i.e., physical, sexual, and emotional abuses; the witnessing of violence; physical neglect) and their relationship to somatic preoccupation in adulthood. Using a cross-sectional sample of convenience, we surveyed 113 individuals who were being seen as outpatients in an internal medicine setting and seeking non-emergent medical care. With yes/no response options, we inquired about five types of childhood trauma (i.e., physical, sexual, and emotional abuses; the witnessing of violence; physical neglect) and measured somatic preoccupation with the Bradford Somatic Inventory, a self-report measure. In this study, both physical and emotional abuses demonstrated significant correlations with scores on the Bradford Somatic Inventory. These findings suggest that physical and emotional abuses in childhood may have some relationship with somatic preoccupation in adulthood.

**Key Words:** *Somatic preoccupation, somatic, childhood adversity, childhood trauma*

## Introduction

Studies of childhood abuse have been typically concentrated in the area of psychological outcomes. However, a number of studies suggest that abuse in childhood has a non-specific relationship with somatic preoccupation in adulthood. In support of this perspective, in an overview article, Katon et al. [1] stated that adverse childhood experiences such as abuse or neglect are associated with an increased vulnerability in adulthood to somatization. In addition, they cite a substantial body of literature that links childhood maltreatment to several *specific* and persistent medical syndromes, such as irritable bowel syndrome and fibromyalgia.

As for the empirical literature in this area, in a non-clinical sample of college students, Bendixon et al. [2] found that sexual abuse in childhood was associated with a broad range of health problems in adulthood. Kinzl et al. [3] found among college students a relationship between sexual abuse in childhood and somatization in adulthood. In a clinical sample, Newman and colleagues examined the effects of both sexual and physical abuses in childhood, and found that abused participants demonstrated significantly more self-reported health symptoms and doctor visits than their non-abused counterparts [4]. In a study examining abuse in childhood *and* adulthood among women being treated in a pain center, Green and colleagues found that long-term abuse was significantly associated with a greater number of physical and pain symptoms [5]. Finally, in a sample of female veterans, Stein and colleagues found that sexual assault, either in childhood or adulthood, was associated with a significant increase in somatization scores and physical complaints [6]. However, the potential limitations of the preceding studies are the examination of non-clinical samples (i.e., college students), atypical samples (e.g., patients in a pain management clinic, veterans), and exploration of only two childhood trauma variables (i.e., sexual and physical abuses).

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In a previous study in an internal medicine outpatient setting, we examined 120 patients for broader childhood trauma: i.e., physical, sexual, and emotional abuses; the witnessing of violence; and physical neglect. We found a relatively substantial correlation between the *sum* of the five types of childhood trauma and somatic preoccupation [7]. However, in this previous study, we did not examine the individual contributions of each childhood trauma variable.

While the preceding studies all suggest relationships between childhood abuse and somatic preoccupation in adulthood, we must note that not all investigators have confirmed these findings. For example, Brawman-Mintzer et al. [8] found that, among a sample of patients with anxiety disorders, participants with histories of sexual assault actually endorsed *fewer* somatic symptoms in adulthood. This finding may relate to the methodology of the study, specifically the study population. All participants had anxiety disorders, which may have elevated the overall endorsement of somatic symptoms in the sample. As for the finding of fewer symptoms in those with sexual assault histories, this subsample may have been exposed to greater psychological and/or psychotropic-drug intervention in the aftermath of the assault, resulting in a subsequent diminution in somatic symptoms.

To summarize, while there are a number of studies of childhood trauma and their association with somatic preoccupation in adulthood, these have notable potential limitations (e.g., findings that are *specific* to particular medical syndromes such as fibromyalgia; atypical populations such as college students, female pain patients, and female veterans, for which findings may have limited generalization; a limited number of trauma variables under study, most commonly sexual and physical abuses). In addition, in our previous study, we did not examine *individual* trauma variables and their effect on somatic preoccupation. The aim of the current study was to examine, among a naturalistic clinical sample, the relationships between five individual types of childhood trauma and their possible unique correlations with general somatic preoccupation in adulthood.



## Method

### *Participants*

Participants in this study were male and female outpatients, between the ages of 18 and 87 years, who were being seen for non-emergent medical care in an outpatient internal medicine setting that is located in a mid-western, medium-sized city. Recruitment was undertaken by two residents in the Department of Internal Medicine, which is sponsored by a community hospital, and took place between November 2004 and August 2007. The sample was one of convenience. Exclusion criteria, which were determined by the recruiters, were cognitive, medical, or psychiatric impairment that would preclude an individual's successful completion of a survey.

The recruiters approached 118 patients about participation in this study; 113 agreed, for a response rate of 95.8%. The sample consisted of 36 males and 77 females who ranged in age from 18 to 87 years (Mean = 43.04, SD = 14.74). Most (85.8%) were white; 6.2% were black, 2.7% Hispanic, 3.5% Asian, and 1.8% "other". The large majority of respondents (91.1%) had at least graduated from high school and 15.2% had a college degree. Most were either currently married (36.6%), separated/divorced (39.3%), or widowed (6.3%); only 17.9% were never married.

### *Procedure*

At the time of service, two resident primary-care providers recruited participants from their clinical caseloads at the outpatient clinic. The resident outpatient clinic provides care for approximately 7300 patients per year, with the most common diagnoses (in order) being hypertension, diabetes, chronic obstructive pulmonary disease, and congestive heart failure. The payor mix is 65% government insurance (Medicaid/Medicare), 10% fee-for-service, and 25% "other" insurance.

Following recruitment, each participant was asked to complete a six-page research booklet. The cover page of the research booklet contained the various elements of informed consent and completion of the booklet was assumed to function as informed consent.

The content of the research booklet consisted of a demographic inquiry (i.e., sex, age, ethnic derivation, marital status, highest level of completed education), an author-developed brief inquiry about five types of childhood trauma, and a measure for somatic preoccupation.

*Childhood Trauma.* Participants were asked if, "Prior to the age of 12, did you *ever* experience ..." any of five types of trauma, with yes/no response options. Individual items were: (1) sexual abuse (defined as "any sexual activity against your will"); (2) physical abuse (defined as "any physical insult against you that would be considered inappropriate by either yourself or others and that left visible signs of damage on your body either temporarily or permanently or caused pain that persisted beyond the 'punishment'"); (3)

emotional abuse (defined as "verbal and nonverbal behaviors by another individual that were purposefully intended to hurt and control you, not kid or tease you"); (4) physical neglect (defined as "not having your basic life needs met"); and (5) the witnessing of violence (defined as "the first-hand observation of violence that did not directly involve you"). A brief query of trauma was elected because of the busy nature of the study setting.

*Somatic Preoccupation.* Somatic preoccupation was assessed with the Bradford Somatic Inventory [9], a 46-item questionnaire that consists of the somatic items most frequently endorsed by anxious and depressed patients. Sample items include, "Have you felt a burning sensation in your stomach? Has there been a choking sensation in your throat? Has your mouth or throat felt dry? Have you felt pain in your chest or heart?," and, "Have you been sweating a lot?" Two items, which relate solely to male respondents, were deleted due to their lack of applicability in a mixed-gender, US medical setting, leaving a total of 44 items. Items were scored as 0 = absent over the past month, 1 = present less than 15 days over the past month, and 2 = present more than 15 days over the past month. Scores are based on sums of the total number of items endorsed and represent an overall somatic profile or measure of somatic preoccupation. Using this approach, the highest possible score on the BSI is 88.

The statistical plan was to compare those with to those without each individual trauma type, and to determine if there were any significant differences in somatic scores on the BSI. The Institutional Review Boards of both the hospital (protocol #04-021) and university approved this project.

## Results

With regard to the prevalence of childhood trauma in the sample, 35 (31.0%) participants reported physical abuse, 24 (21.2%) sexual abuse, 52 (46.0%) emotional abuse, 47 (41.6%) the witnessing of violence, and 16 (14.2%) physical neglect. The mean scores on the Bradford Somatic Inventory as a function of each form of childhood trauma are shown in Table I. Note that the effect size for physical and emotional abuses, and their relationship to somatic preoccupation, is medium to medium-high, respectively.

## Discussion

In this study, two specific childhood-trauma variables—physical abuse and emotional abuse—evidenced significant relationships with somatic preoccupation in adulthood. That these two particular variables exhibited a relationship with somatic preoccupation is of special interest. Compared to the remaining childhood trauma variables, both physical and emotional abuses are characterized by their consistent and undeniable negative and malignant nature. There is no question of the victim's explicit and implicit "badness". In contrast, the other forms of childhood trauma may have more variation with regard to the emotional tone of the perpetrator. For example, with regard to childhood sexual abuse, while clearly inappropriate, oppressive, possibly violent and painful, and morally wrong, the perpetrator is not *necessarily* projecting a negative emotion onto the victim. In other words, this type of abuse is not necessarily accompanied by the message to the victim, "You are bad, despicable, and unworthy". Likewise, in witnessing violence, the negative behavior of the perpetrator is directed towards another individual. Finally, with physical neglect, as defined by not having one's physical needs fully met, there is no overtly negative interpersonal message, at all.

Why are these two forms of childhood trauma, and their characteristic negative overtones, particularly relevant to somatic preoccupation? It may be that the relationship between these two specific forms of childhood trauma and somatic preoccupation in adulthood is mediated by disturbances in body image. To explain, these forms of childhood

Table I. Mean scores on the Bradford Somatic Inventory as a function of having experienced each of five forms of childhood trauma.

| | Scores on the Bradford Somatic Inventory | | | | |
|---|---|---|---|---|---|
| | Experienced trauma | Did not experience | | | |
| Form of childhood trauma | M (SD) | M (SD) | $t^{\star}$ | $P <$ | $d$ |
| Sexual abuse | 27.25 (18.24) | 22.40 (19.04) | −1.12 | 0.27 | 0.21 |
| Physical abuse | 30.23 (21.34) | 20.38 (16.97) | −2.63 | 0.01 | 0.50 |
| Emotional abuse | 29.92 (19.90) | 17.90 (16.20) | −3.54 | 0.001 | 0.67 |
| Physical neglect | 30.56 (22.98) | 22.26 (18.01) | −1.64 | 0.11 | 0.31 |
| Witnessing violence | 27.70 (20.16) | 20.39 (17.47) | −2.06 | 0.05 | 0.39 |

$^{\star}df = 1,111$.

maltreatment may cause disturbances in body image at a young age (i.e., from the child's perspective, "I am bad" may be equal to "my body, which is me, is bad"), which in turn may result in the sense of a problematic or malfunctioning body. This latter development may set the stage in adulthood for the misperception of disturbances in body functioning and somatic preoccupation.

There are a handful of studies that have examined these specific forms of childhood maltreatment and their negative effects on body image. For example, Treuer et al. [10] found a correlation between physical abuse in childhood and severe body image distortion in adulthood. Among males, Meston et al. [11] found a correlation between emotional abuse in childhood and poor body image in adulthood. Finally, O'Toole [12] found a correlation between parental verbal abuse during childhood and body image disturbance in adulthood. Note that all of these studies, albeit few in number, indicate a correlation between various forms of intrusive abuse in childhood and body image difficulties in adulthood. In support of this impression, Cash [13] concluded that there appear to be bona fide relationships between various forms of childhood adversity and body image dissatisfaction.

Whatever the explanation, our findings indicate that specific types of childhood trauma, namely physical and emotional abuses, contribute to general somatic preoccupation, whereas sexual abuse, the witnessing of violence, and physical neglect do not. The finding of childhood emotional abuse is particularly novel as well as the finding that sexual abuse was non-contributory. Whether the relationship between physical and emotional abuses, and somatic preoccupation, is mediated by body image disturbances or not warrants further investigation.

On a side note, the overall levels of self-reported childhood trauma in this study population are relatively high. This may be explained in one of two ways. First, this sample was solicited from a trainee clinic, which is characterized by a high indigent population (e.g., government insurance, fee-for-service). If these data are accurate, this population is evidently highlighted by high levels of childhood trauma. As an alternative explanation, it may be that our self-report measure for childhood trauma is over-inclusive (i.e., the items are over-endorsed by respondents), which is known to occur with other types of self-report measures. These are not necessarily mutually exclusive explanations.

What are the potential impacts of this study? First, at a clinical level, it is important for clinicians to be aware that patients in general medical settings with high levels of somatic symptoms may oftentimes be victims of childhood abuse, particularly physical and emotional abuses. An awareness of this association by the clinician will hopefully facilitate patient assessment and, if necessary, referral to mental health services. Second, at the community level, the public should be fully apprised about the outgrowths of childhood abuse. Not only can childhood abuse result in a host of mental health and relational difficulties, but also in somatic preoccupation in adulthood. Third, at the national level, there needs to be some awareness that this adult residua of childhood trauma may be contributing to rising healthcare costs.

This study has a number of potential limitations. First, all data were self-report in nature and subject to the vicissitudes of self-report data. Second, the author-developed measure for the assessment of childhood trauma was fairly simplistic. Yet, we deemed this to be a practical measure to use in a busy clinical setting with medical patients. Third, the sample was one of convenience, although we do not suspect any sampling bias. Despite these potential limitations, to our knowledge, this is the second study to explicitly examine *five* types of childhood trauma and the first to report their individual relationships to general somatic preoccupation in adulthood. In addition, this is one of the few studies to confirm a relationship between emotional abuse in childhood and somatic preoccupation in adulthood. Future studies might confirm these findings, examine these findings in relationship to specific medical conditions such as fibromyalgia and irritable bowel syndrome, and/or explore mediating variables such as the role of body image disturbance. Indeed, there are a number of unanswered and provocative questions that warrant further study.

## Key points

- Previous studies have explored and confirmed relationships between physical and sexual abuses in childhood, and somatic preoccupation in adulthood
- Except for our own previous study, no other study to date has explored five types of childhood trauma in relationship to somatic preoccupation
- In this study, we found that, of the five types of childhood trauma, only physical and emotional abuses in childhood were related to somatic preoccupation in adulthood
- A mediating variable between physical and emotional abuses in childhood, and somatic preoccupation in adulthood, may be body image disturbance

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## Conflict of interest

The authors have no conflict of interest with any commercial or other associations in connection with the submitted article.

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