Childhood Abuse and Allostatic Load: The Moderating Influence of Gender
Northern Illinois University

Background

- Childhood abuse has wide-ranging negative effects on physical and psychological health later in life.1,2
- Stressful experiences can exacerbate subsequent stress responses in a cumulative manner, a process known as allostatic load (AL).3
- Few studies have specifically examined the relationship between childhood abuse and AL.
- The effects of childhood physical abuse (CPA) and childhood sexual abuse (CSA) appear to be moderated by gender, but the nature of this relationship is unclear.
  - CPA may be more detrimental to health in women than in men.4
  - Men may be more likely to develop externalizing problems, while women may show more internalizing symptoms following CSA.5
- Some studies have failed to find significant gender differences in the effects of CSA.6,7
- The goal of this study was to investigate potential gender differences in the effects of CPA and CSA on AL.

Methods

- 89 undergraduate students at Northern Illinois University participated in this study in exchange for psychology course credit
  - Mean age: 20.46
  - 37.3% Male / 62.7% Female
  - 48.8% Caucasian
  - 24.4% African American
  - 11.9% Hispanic
  - 6.3% Asian
  - 8.6% Other
- CPA and CSA were measured using the Childhood Trauma Questionnaire (CTQ).8
- AL was quantified using a five-item index:
  - Body mass index (BMI)
  - Heart rate variability (HRV)
  - Systolic blood pressure (SBP)
  - Diastolic blood pressure (DBP)
  - Pittsburgh Sleep Quality Index (PSQI)9
- Markers which fell within the highest risk quartile of the sample added one point to the AL index, yielding scores from zero to five

Regression analyses were conducted using IBM SPSS Statistics to determine whether gender moderated the relationship between CPA or CSA and AL.
- Relationship status10 and maternal education11 were controlled for, given their links to childhood adversity and cardiovascular health
- Due to the cumulative nature of AL, age was also used as a covariate

Results

- No relationship between CPA and AL was found after controlling for CSA, maternal education, and relationship status.
- Higher levels of CSA predicted elevated AL (b = 19.722, p = .005) after controlling for CPA, maternal education, and relationship status.
- This effect was qualified by a significant interaction (b = -9.451, p = .008):
  - CPA predicted AL in men (b = 10.271, p = .003)
  - CSA did not predict AL in women (b = .820, p = .370)

Figure 1

Relationship Between CPA and AL Among Men and Women

Table 1

Correlations Among Study Variables

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Childhood Physical Abuse</td>
<td>-</td>
<td>.491*</td>
<td>.135</td>
</tr>
<tr>
<td>2. Childhood Sexual Abuse</td>
<td>.197</td>
<td>-</td>
<td>.347*</td>
</tr>
<tr>
<td>3. Allostatic Load</td>
<td>-.078</td>
<td>.084</td>
<td>-</td>
</tr>
</tbody>
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Note: Lower triangle comprises correlations among women; upper triangle comprises correlations among men.  
*p < .1

Discussion

- These findings suggest that CSA, but not CPA, may cause greater AL in men than women, which may mediate gender differences in health outcomes.
- These results may be explained by differences in how young males and females experience and cope with CSA:
  - Males are less likely than females to disclose experiences of CSA, and females tend to disclose such experiences earlier than males.12
  - Lack of disclosure or delayed disclosure of CSA may negatively impact overall health.13
- Because AL is a gradual process, it is possible that an effect of CSA on women’s AL may be observed in an older sample
- Follow-up work should improve on this study’s methodological limitations, including:
  - Use of a convenience sample of college students
  - Reliance on self-reported history of childhood trauma
  - Absence of neuroendocrine measures of AL

Future studies should investigate gender differences in disclosure and other potential mediators of the relationship between CSA and AL.
- A better understanding of the impact of childhood abuse will assist clinicians in the treatment of abuse-related melodies.

References


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