Caregiver Self-Esteem: Relationships between Parenting Stress, Anxiety, and Depression in Parental Caregivers of Children with Autism

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Introduction
The implications for caregivers caring for a child with an Autism Spectrum Disorder (ASD) are well documented. Studies have found behavior problems often expressed by children with ASDs can lead to significant parenting stress (Lecavalier et al., 2006), and in turn, contribute to negative psychological outcomes for caregivers such as depression and anxiety (Biktska & Sharpley, 2004). However, other factors like self-esteem have been identified as playing a potentially important role between caregiver stress and negative outcomes in other caregiving populations. For example, caregiver low self-esteem has been associated with increased levels of clinical depression and anxiety, while high self-esteem has been associated with increased psychological well-being and has been viewed as a potential protective factor against the negative effects of caregiving (Aggar et al., 2011). In this study, we investigated caregiver self-esteem as a mediator and moderator between parenting stress, and caregiver anxiety and depression for parent caregivers of children with ASD. We hypothesized that self-esteem would be a significant mediator and moderator between parenting stress, and caregiver anxiety and depression.

Methods
Participants
• 70 caregivers providing care for their children with ASD
  • Gender: 94.3% women
  • Participant Age: M = 41.77; SD = 10.76
  • Child with ASD Age: M = 11.99; SD = 9.30
  • All participants were recruited online and completed the study survey using Survey Monkey

IV: Parenting Stress Index-SF is a 36-item self-report inventory investigating stress related to parenting. The Parental Distress (PD) subscale was used in this analysis to specifically look at the subjective amount of stress the caregiver was experiencing as a parent.

M: Rosenberg Self-Esteem Scale is a 10-item self-report inventory that measures global self-worth.

DV1: Beck Anxiety Inventory is a 21-item self-report inventory that measures common symptoms of anxiety.

DV2: Center for Epidemiologic Studies Depression Scale is a 20-item self-report inventory that measures common symptoms of depression.

Data Analysis
• Bootstrapping (5000 samples) analyses were conducted to investigate the mediating effect of self-esteem (SE) between parenting stress and anxiety or parental distress and depression
• Separate hierarchical regression analyses were conducted investigating SE as a moderator between parenting stress and anxiety or parental distress and depression
• Follow-up simple slopes were conducted for significant moderation results

Results
• Pearson correlations revealed that all variables were inter-correlated (p < .01) (Table 1)

Table 1. Correlations and Descriptive Statistics Between Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting Stress</td>
<td>36.16</td>
<td>8.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>18.35</td>
<td>4.53</td>
<td>-74**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Parental Anxiety</td>
<td>13.11</td>
<td>11.61</td>
<td>-62**</td>
<td>-64**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Parental Depression</td>
<td>26.99</td>
<td>13.20</td>
<td>-83**</td>
<td>51**</td>
<td>68**</td>
<td>-</td>
</tr>
</tbody>
</table>

N = 70, **p < .01

Caregiver Anxiety as Outcome Variable
• The partial mediating role of SE between parenting stress and anxiety was found. The indirect effect was estimated to lie between .130 and .616 with 95% confidence.
• The partial mediation of SE supported by a Sobel test, Z = 3.33, p < .01
• Moderating role of SE for the relationship between parenting stress and anxiety significant, p < .01 (Table 2)

R² increased from 53% to 63% when interaction between SE and parenting stress included
Simple slopes analyses were conducted by dichotomizing SE into values below and above the mean (z = 0); Low SE R² = .52, High SE R² = .65 (Graph)
Simple slopes analyses were also conducted statistically through 2 additional regression analyses (SE values 1 SD below and above the mean)
Low SE: relationship between parenting stress and anxiety for low SE was r = .899, p < .001
High SE: relationship between parenting stress and anxiety for high SE was r = .204, p < .05

Caregiver Depression as Outcome Variable
• The partial mediating role of SE between parenting stress and depression was found. The indirect effect was estimated to lie between .171 and .973 with 95% confidence.
• The partial mediation of SE supported by a Sobel test, Z = 3.65, p < .01
• No significant moderating effect of SE when depression was the outcome variable, p > .05

Table 2. Regression Analysis Examining Caregiver Self-Esteem as a Moderator between Parenting Stress and Caregiver Anxiety

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>R²</th>
<th>F change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Parenting Stress</td>
<td>.53</td>
<td>39.20</td>
<td></td>
</tr>
<tr>
<td>Parenting Stress</td>
<td>.38**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-.48**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2: Caregiver Anxiety</td>
<td>.63</td>
<td>18.55</td>
<td></td>
</tr>
<tr>
<td>Parental distress x Self-esteem</td>
<td>-1.15**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N = 70, **p < .01

Major Findings
Caregiver self-esteem acted as a mediator (partial) and moderator between parenting stress and anxiety. For caregivers with low self-esteem, anxiety increased as parenting stress increased. However, caregivers with high self-esteem experienced less anxiety, and there was no relationship between parenting stress and anxiety. Thus, it appears that high self-esteem acts as a stress-buffering factor where caregivers do not experience increased anxiety when coping with parenting stress.

While self-esteem was found to partially mediate the relationship between parenting stress and depression, it was not a significant moderator. For one, while previous studies have documented a relationship between self-esteem and depression (Sowislo & Orth, 2013), this has not been investigated in caregivers coping with parenting specific stress, which may be experienced differently than general stress. Additionally, while depression and anxiety are often experienced comorbidity, research suggests they are distinct constructs. For example, depressive cognitions tend to be past-oriented while anxious cognitions tend to be future-oriented (Beck & Perkins, 2001). Anxious cognitions may be particularly salient to parenting stress as parents may specifically be more focused on their duty to successfully parent their child rather than concern with their own attributes or self-worth.

Limitations & Implications
There were a few limitations associated with our study that should be considered. First, because this data was cross-sectional we cannot be certain of the causal relationships between our variables. Another limitation is our relatively small sample size of 70 participants. A larger sample size may have allowed us to see stronger effects, specifically moderation. Future research should seek to correct limitations.

Clinically, our results point to the importance of interventions that target increasing caregiver self-esteem as this may have a protective effect against the negative effects of parenting stress on anxiety.