The buffering effects of relationship quality on chronic pain: an examination of the relationship between chronic pain, depression and anxiety, and relationship quality

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Introduction

Background:
- Reports of family strain, but not intimate relationship strain, were found to be indirectly associated with chronic pain activity only when mediated by depression/anxiety (Signs & Woods, 2020).
- Individuals with chronic medical disorders/pain and depression or anxiety, compared to those with just chronic pain and no depression/anxiety, had an increase in symptom intensity and overall number of symptoms compared (Katon, Lin, & Kroenke, 2006).
- Participants with chronic pain experienced an increase in pain intensity when they reported lower levels of relationship quality, and this relationship only increased in the presence of depression (Campbell, Jordan, & Dunn, 2012).

Purpose:
- Examine how relationship quality and chronic pain activity/intensity are related, and then explore how this relationship is affected by the presence of depression/anxiety in individuals who are married or cohabitating.

Hypothesis: Relationship quality will be negatively correlated with chronic pain, and in a regression model, depression/anxiety will act as a moderating variable within this relationship.

Method

Measures:
- Data was collected from the Midlife in the United States II & III (MIDUS II & III), and participants included in this study were either married or cohabiting at the time of the survey (n=3705)
- 48.6% female, 51.4% male
- Depressive affect via self report on a 0-7 scale, with 7 being the most depressive affect.
- Anxiety was measure with a self-report scale of 0-10, with 10 being the most severe anxiety symptoms.
- Relationship quality was ased by participants rating their current relationship/marriage.
- Chronic pain was measured by how often participants experienced chronic pain.

Results

Table 1: Correlations between depressed affect, anxious affect, relationship satisfaction and chronic pain

<table>
<thead>
<tr>
<th></th>
<th>Depressed Affect</th>
<th>Anxiety Disorder</th>
<th>Chronic Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression Affect</td>
<td>--</td>
<td>.284**</td>
<td>--</td>
</tr>
<tr>
<td>Anxiety Disorder</td>
<td>.072</td>
<td>-.108**</td>
<td>--</td>
</tr>
<tr>
<td>Relationship satisfaction</td>
<td>-.142**</td>
<td>-.77**</td>
<td>.025</td>
</tr>
</tbody>
</table>

Main Finding: The regression of relationships satisfaction onto chronic pain experience was not significant and the interaction between depression, anxiety, and satisfaction on chronic pain was also not significant.

Table 2: Regression results for anxiety, depression, relationship satisfaction and pain

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig.</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.425</td>
<td>.063</td>
<td>38.732</td>
<td>.000</td>
<td>2.302</td>
<td>2.548</td>
</tr>
<tr>
<td>Anxiety and depression</td>
<td>-.057</td>
<td>.026</td>
<td>-2.181</td>
<td>.030</td>
<td>-.107</td>
<td>-.006</td>
</tr>
<tr>
<td>Relationship satisfaction</td>
<td>.12</td>
<td>.033</td>
<td>.358</td>
<td>.720</td>
<td>-.053</td>
<td>.076</td>
</tr>
<tr>
<td>Anxiety and depression x relationship satisfaction</td>
<td>-.002</td>
<td>.011</td>
<td>-.144</td>
<td>.144</td>
<td>-.024</td>
<td>.021</td>
</tr>
</tbody>
</table>

Conclusions

- A correlation was performed, and results indicate that relationship satisfaction and chronic pain are correlated, but not significantly (figure 1). This indicates that poor relationship quality may contribute to chronic pain, which confirms the hypothesis.
- A regression was then done, and results show that there is no significant between relationship satisfaction and chronic pain (Table 2), meaning that relationship quality is not a predictor of chronic pain. It was found that the interaction (Table 2) between depression/anxiety, relationship satisfaction, and chronic pain was nonsignificant.
- Limitations:
  - It is possible that the sample consisted of participants that were really satisfied in their relationships.
  - Failure to capture a significant number of individuals with anxiety and/or depression that also met other criteria.
- Exploring different factors that influence chronic pain as both psychological and medical implications. Through this research there is the possibility to improve not only individual’s physical health, but also their mental health by targeting individual factors that contribute to chronic pain experiences.