Associations Between Dimensions of Anxiety Sensitivity and PTSD Symptom Clusters in Active Duty Police Officers

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Outline

● General Overview
  – PTSD and its dimensions
  – AS and its dimensions
  – Prior research

● Purpose

● Method

● Findings and Implications
● Sometimes develops following exposure to an event that is perceived to be threatening to the well-being of oneself or another
  – 7%-12% lifetime prevalence in the general population
  – 10%-50% current prevalence in at risk populations

● Associated with emotional suffering, functional limitations, and poor physical health
PTSD Dimensions

Model 1
- PTSD Symptoms
  - Intrusion and Reexperiencing
  - Avoidance
  - Numbing
  - Hyperarousal

Model 2
- Intrusion and Reexperiencing
  - Avoidance
  - Numbing
  - Hyperarousal
Anxiety Sensitivity (AS)

- Elevated in most anxiety disorders
  - Panic disorder
  - PTSD
- Fear of being anxious
AS Lower-Order Dimensions

● Fear of mental incapacitation (psychological concerns)
  - *When I cannot keep my mind on a task, I worry that I may be going crazy*

● Fear of publicly observable symptoms (social concerns)
  - *It is important to me not to appear nervous*

● Fear of somatic symptoms (somatic concerns)
  - *It scares me when I feel ‘shaky’*
AS and PTSD

- Relatively new inquiry
- We and others have suggested that elevated AS may be a risk factor for PTSD
- Studies have shown
  - Degree of AS is positively correlated with PTSD symptom severity
  - Reductions in AS are associated with reductions in PTSD symptom severity
  - Interaction of the AS taxon and traumatic events confers emotional vulnerability specific to PTSD
AS and PTSD

- Few studies have examined the association between the lower order AS dimensions and PTSD symptom severity
Lang et al. (2002)

- Women with and without exposure to intimate partner violence
- Found
  - Depression and AS psychological concerns were significantly predictive of PTSD symptom severity
  - Non-significant finding emerged when only the trauma-exposed women were considered
  - AS psychological concerns only predictor of DSM PTSD symptoms clusters
Feldner et al. (2006)

- Rural dwellers reporting at least one traumatic event
- Found
  - *AS psychological concerns* and *somatic concerns* dimension scores made unique and significant contributions to the prediction of PTSD symptom severity
These studies suggest that AS psychological concerns and somatic concerns dimensions may be most closely associated with PTSD symptom severity.

No studies have examined the association between the lower order AS dimensions and the empirically-supported PTSD symptom clusters.
Purpose

- To replicate and extend preliminary findings in this area using a sample of active duty police officers
  - This group is considered high risk for exposure to traumatic events and, thus, for developing PTSD
- Active duty police officers are under-represented in the literature
  - We also sought to characterize the nature of trauma exposure and responses to it
Participants

- 138 active duty police officers
  - 70.7% female
  - mean age = 38.9 years
  - mean time policing = 173.8 months

- Completed measures of
  - trauma exposure (LTEC)
  - PTSD symptoms (PCL-C)
  - anxiety sensitivity (ASI)
  - depressive symptoms (CES-D)
Results

- Trauma exposure and proportion meeting criteria for a probable diagnosis of PTSD
- For AS and its dimensions
  - Comparisons between those classified with and without probable PTSD
  - Regression on PTSD total symptom severity and empirically-supported cluster scores
Trauma Exposure

- All participants reported experiencing at least one event that they perceived as traumatic
Table 1. Frequencies of reported traumatic events in percentages

<table>
<thead>
<tr>
<th>Event</th>
<th>Total endorsed</th>
<th>Most distressing event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural disaster</td>
<td>43.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Motor vehicle accident</td>
<td>98.8%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Other serious accident</td>
<td>68.9%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Fire</td>
<td>80.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Seeing someone being seriously injured or killed</td>
<td>76.6%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Sexual assault as a child</td>
<td>37.7%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Sexual assault as an adult</td>
<td>32.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Physical assault as a child</td>
<td>44.3%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Physical assault as an adult</td>
<td>56.3%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Military combat or peacekeeping in a war zone</td>
<td>5.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Civilian living in a war zone</td>
<td>3.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Terrorist attack</td>
<td>1.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Torture</td>
<td>4.2%</td>
<td>0%</td>
</tr>
<tr>
<td>Unexpected death of a loved one</td>
<td>55.7%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Armed robbery</td>
<td>21.0%</td>
<td>0%</td>
</tr>
<tr>
<td>Serious illness</td>
<td>47.9%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Other traumatic event (e.g., being shot at)</td>
<td>26.9%</td>
<td>13.2%</td>
</tr>
</tbody>
</table>
Prevalence of PTSD

- All participants reported experiencing at least one event that they perceived as traumatic

- Using a PCL-C cutoff score of 44 (Blanchard et al., 1996)
  - 44 (31.9%) screened positive for PTSD
  - Correspondence with random CAPS interviews remains to be calculated
# Between Groups Comparisons

Table 2. Means and standard deviations for the probable PTSD and no PTSD groups

<table>
<thead>
<tr>
<th></th>
<th>No PTSD</th>
<th>Probable PTSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>37.5 (8.8)</td>
<td>42.1 (8.9)**</td>
</tr>
<tr>
<td>Years of Education</td>
<td>14.9 (2.0)</td>
<td>13.9 (1.9)**</td>
</tr>
<tr>
<td>Total Time in Policing (in Months)</td>
<td>158.4 (121.1)</td>
<td>212.1 (109.0)*</td>
</tr>
<tr>
<td>Reported Traumatic Events</td>
<td>6.9 (3.3)</td>
<td>7.6 (3.2)</td>
</tr>
<tr>
<td>PCL-C Score</td>
<td>27.7 (7.1)</td>
<td>54.6 (9.7)***</td>
</tr>
<tr>
<td>CES-D Score</td>
<td>9.7 (8.3)</td>
<td>23.8 (14.2)***</td>
</tr>
<tr>
<td>ASI Total</td>
<td>13.7 (10.4)</td>
<td>24.6 (12.5)***</td>
</tr>
<tr>
<td>Somatic Concerns</td>
<td>5.5 (6.5)</td>
<td>12.4 (7.9)***</td>
</tr>
<tr>
<td>Psychological Concerns</td>
<td>1.3 (2.4)</td>
<td>4.7 (4.3)***</td>
</tr>
<tr>
<td>Social Concerns</td>
<td>6.9 (3.1)</td>
<td>7.8 (2.2)</td>
</tr>
<tr>
<td>Probable PD (percentages)</td>
<td>8%</td>
<td>34%</td>
</tr>
</tbody>
</table>

* Significant at the $p<.05$ level
** Significant at the $p<.01$ level
*** Significant at the $p<.001$ level
We entered depressive symptoms and number of reported traumatic events as control variables (Lang et al., 2002).

Statistically significant for:
- total PCL-C, $F(5, 99)=18.14$, $p<.001$, $R^2=.48$
- re-experiencing, $F(5, 99)=13.15$, $p<.001$, $R^2=.40$
- avoidance, $F(5, 99)=7.61$, $p<.001$, $R^2=.28$
- numbing, $F(5, 99)=17.08$, $p<.001$, $R^2=.46$
- hyper-arousal, $F(5, 99)=11.58$, $p<.001$, $R^2=.37$
More specifically

- Total PCL-C and re-experiencing predicted by
  - CES-D score, number of traumas reported, and AS somatic concerns subscale

- Avoidance predicted by
  - CES-D score and AS somatic concerns subscale

- Numbing and hyper-arousal predicted by
  - CES-D score
Conclusions

- All officers reported having experienced trauma but not all had PTSD
  - 31.9% screened positive for PTSD
  - between groups comparisons allowed us to draw conclusions regarding the role of AS and its dimensions in traumatized individuals with and without PTSD
Conclusion 1

- Cox et al. (1999) speculated that AS *psychological concerns* may be of particular importance to PTSD and, likely, to major depression as well
  - Lang et al. (2002) findings consistent

- Present finding suggest
  - AS *psychological concerns* may be a product of depression that often accompanies PTSD
  - AS *somatic concerns* may be more relevant in the context of PTSD
34% of those with PTSD versus only 8% without screened positive for panic disorder

- This is inconsistent with suggestions that experience of trauma is a salient risk factor for panic disorder (Leskin & Sheikh, 2002)
- 4 items of the Apfeldorf et al. (1994) screen are from the AS somatic concerns dimension
- It is plausible that the AS somatic concerns dimension denotes this mechanism of risk
Conclusion 3

- Regression results also support AS somatic concerns dimension as the most relevant to PTSD symptom severity
  - Particularly for overall severity and that of re-experiencing and avoidance

- Consistent with
  - evidence that avoidance and numbing are associated with distinct sets of correlates (see Asmundson et al., 2004)
  - evidence that IE is effective in alleviating PTSD severity (Wald & Taylor, 2005)
Future Research

- Future studies may improve understanding of the AS-PTSD connection and improve treatment effectiveness via replication and extension of the present findings

- Using
  - methods that incorporate clinician administered diagnostic interviews to confirm diagnoses
  - alternate measures of the AS construct
  - Participants selected from various high risk populations