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

Gordon J. G. Asmundson

Jennifer A. Stapleton

UNIVERSITY OF REGINA

Note: The authors have no financial affiliations with any commercial organizations supporting the program.

# Outline

- General Overview
  - PTSD and its dimensions
  - AS and its dimensions
  - Prior research
- Purpose
- Method
- Findings and Implications

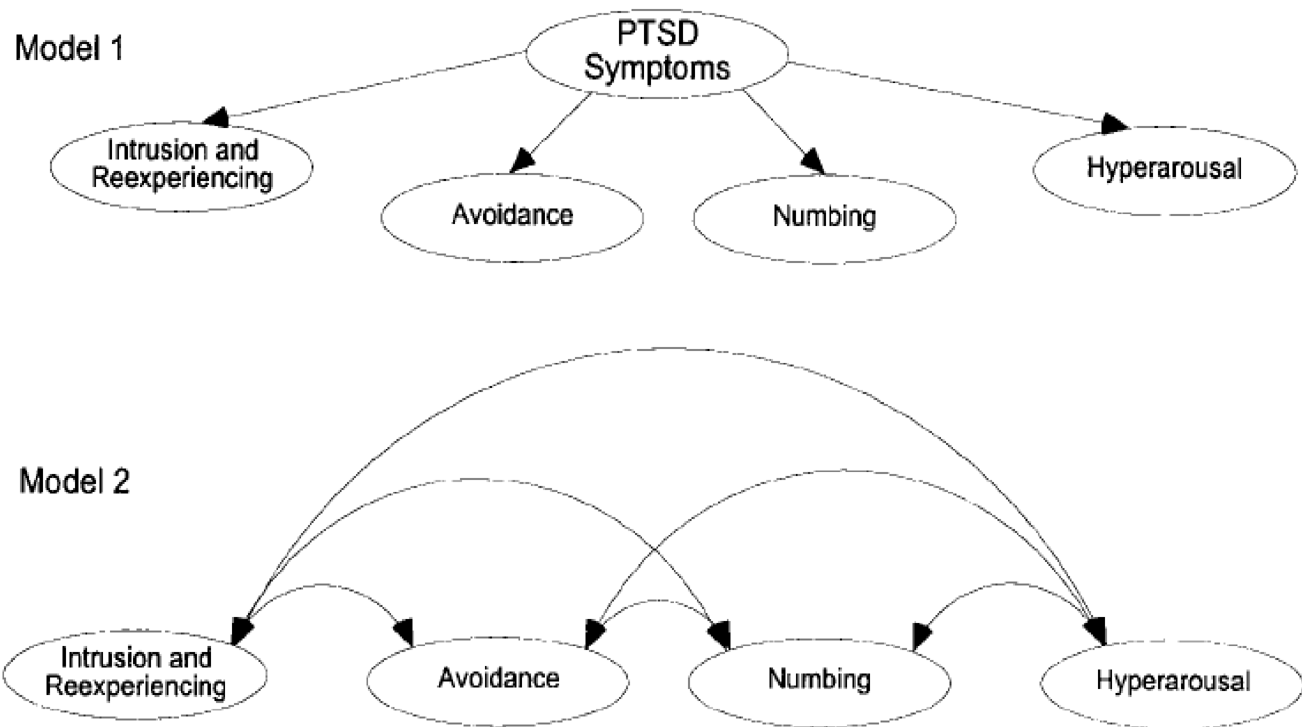
UNIVERSITY OF REGINA
AS ONE WHO SERVES

# PTSD

- 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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# PTSD Dimensions




UNIVERSITY OF REGINA

# Anxiety Sensitivity (AS)

- Elevated in most anxiety disorders
  - Panic disorder
  - PTSD
- Fear of being anxious

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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 PSTD symptom severity
  - Interaction of the AS taxon and traumatic events confers emotional vulnerability specific to PTSD

UNIVERSITY OF REGINA

# AS and PTSD

- Few studies have examined the association between the lower order AS dimensions and PTSD symptom severity

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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

UNIVERSITY OF REGINA

# 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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# Anxiety Sensitivity and PTSD

- 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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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

UNIVERSITY OF REGINA

# 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)

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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

UNIVERSITY OF REGINA

AS ONE WHO SERVES

# Trauma Exposure

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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# Trauma Exposure

Table 1. Frequencies of reported traumatic events in percentages

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

UNIVERSITY OF REGINA

# 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

UNIVERSITY OF REGINA

AS ONE WHO SERVES

# Between Groups Comparisons

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

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

* Significant at the $p < .05$ level

** Significant at the $p < .01$ level

*** Significant at the $p < .001$ level

UNIVERSITY OF REGINA

# Regression Analyses

- We entered depressive symptoms and number of reported traumatic events as control variables (Lang et al., 2002)
- Statistically significant for
  - total PCL-C, $F(5, 99)=18.14$, $p<.001$, $R2=.48$
  - re-experiencing, $F(5, 99)=13.15$, $p<.001$, $R2=.40$
  - avoidance, $F(5, 99)=7.61$, $p<.001$, $R2=.28$
  - numbing, $F(5, 99)=17.08$, $p<.001$, $R2=.46$
  - hyper-arousal, $F(5, 99)=11.58$, $p<.001$, $R2=.37$

UNIVERSITY OF REGINA

# 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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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

UNIVERSITY OF REGINA

# 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

UNIVERSITY OF REGINA

# Conclusion 2

- 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

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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)

UNIVERSITY OF REGINA
AS ONE WHO SERVES

# 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

UNIVERSITY OF REGINA