

The Contribution of Anxiety Sensitivity to

Posttraumatic Stress Disorder above and beyond Neuroticism

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Introduction

- Anxiety Sensitivity (AS) is the fear of anxiety-related sensations based on the belief that they have harmful consequences (McNally, 1999).
- Dimensions of AS include fears of cognitive dyscontrol, somatic sensations, and socially observable symptoms, which have been posited to contribute differentially to posttraumatic stress disorder (PTSD) and PTSD symptom clusters (e.g., hyperarousal, avoidance/numbing, reexperiencing; Collimore et al., 2008).
- Dimensions of AS have been shown to correlate differentially with neuroticism (Cox et al., 1999).
- Neurotic behaviours (e.g., increased anxiety) have also been recognized as being common amongst individuals with PTSD (Sexton et al., 2003).
- The contribution of AS to PTSD symptom severity and maintenance above and beyond neuroticism remains unclear.
- Given the overlap between AS and neuroticism, as well as their close relationship to PTSD, the current study examined the relationship between AS dimensions and PTSD symptoms (e.g., hyperarousal, avoidance, numbing, re-experiencing) while accounting for variance attributable to neuroticism.

Method

- Participants included community residents living in and around the Regina area ($n = 311$; women = 224 [$M_{age} = 30.36$; $SD = 10.90$]; men = 87 [$M_{age} = 29.93$; $SD = 10.89$]) recruited through community advertisements.
- Participants completed a battery of online questionnaires including:
 - The PTSD Checklist – Civilian Version (PCL-C; Weathers et al., 1994), a 17-item self-report measure assessing PTSD symptom severity (i.e., PCL-RXP, PCL-AVD, PCL-NMB, PCL-HYP).
 - The Anxiety Sensitivity Index – 3 (ASI-3; Taylor et al., 2007), an 18-item self-report measure and is comprised of three subscales: fear of cognitive dyscontrol (ASI-COG), fear of somatic sensations (ASI-SOM), and fear of socially observable symptoms (ASI-SOC).
 - The Positive and Negative Affect Scale – Expanded Form (PANAS; Watson et al., 1994), a 60-item self-report measure to assess an individual's tendency toward negative affect (PANAS-NEG) or positive affect (PANAS-POS) within "the past few weeks".
- Consistent with previous research (e.g., Rusting et al., 1997), negative affect (NA) was used as a proxy for neuroticism.
- A series of seven hierarchical regression analyses were run utilizing PCL-C total and symptom scores as dependent variables and ASI-3 and PANAS total and subscale scores as independent variables.

Results

- Subscales and total scores of the PCL-C, ASI-3 and PANAS significantly correlated with one another (all $ps < .01$).
- Women reported significantly higher scores than men on the avoidance, $t(311) = -4.01, p < .01$, numbing, $t(311) = -2.78, p < .05$, and hyperarousal, $t(311) = -3.36, p < .01$, symptom cluster scores; however, the effect sizes were small (.05, .01, and .04 respectively).
- The first two analyses utilized PCL-C total scores as the dependent variable and alternated ASI-3 total scores and PANAS subscale scores in the first step (see Table 1).
 - Each predictor variable contributed significantly to PCL-C total scores.
 - The order of inputting variables did not change the variance accounted for by each of the predictors in step 2 of the analysis.
- The remaining five analyses utilized PCL-C total and symptom cluster scores as dependent variables. PANAS subscale scores were inputted in step 1, and ASI-3 subscale scores in step 2 (see Table 2).
 - ASI-SOM was a significant predictor of all dependent variables except PCL-AVD.
 - ASI-COG only significantly predicted PCL-HYP.
 - ASI-SOC failed to significantly predict any dependent variables.
 - PANAS-NEG significantly predicted all dependent variables.

Discussion

- Neuroticism (as measured by PANAS-NEG) contributed significantly to the relationship between AS and PTSD ($\beta = .44, p < .01$).
- Neuroticism is highly associated with many behaviours commonly seen in PTSD presentation (Shiner et al., 2003).
- Consistent with previous research, ASI-SOM contributed differentially to reexperiencing, numbing, and hyperarousal symptoms, proving to be the more robust predictor of PTSD symptoms among AS dimensions.
- ASI-SOC contributed significantly to neither PCL-C total scores nor any of the PTSD symptom clusters.
 - Results were equivocal relative to previous research (Collimore et al., 2008), and may be due to trauma type within the sample population.
- These findings provide additional evidence of a robust link between somatic sensations and PTSD, and indirectly support treatment options such as interoceptive exposure when treating PTSD.
- Limitations include the cross sectional nature of the data, as well as differences in sample sizes amongst men and women. Given these differences, the findings may be more generalizable for samples of women.

Table 1: Total Score Hierarchical Regression Analyses

Model	Independent Variables	Dependent Variable			Independent Variables	Dependent Variable		
		PCL-TOT				PCL-TOT		
		β	R^2	F		β	R^2	F
1	PANAS-NEG	.57**	.38	92.72**	ASI-TOT	.52**	.27	111.41**
	PANAS-POS	-.12**						
2	PANAS-NEG	.44**	.42	72.54**	ASI-TOT	.24**	.15	72.54**
	PANAS-POS	-.09**			PANAS-NEG	.44**		
	ASI-TOT	-.24**			PANAS-POS	-.09**		

* $p < .05$; ** $p < .01$

Table 2: Subscale Hierarchical Regression Analyses

Model	Independent Variables	Dependent Variables														
		PCL-TOT			PCL-RXP			PCL-AVD			PCL-NMB			PCL-HYP		
		β	R^2	F	β	R^2	F	β	R^2	F	β	R^2	F	β	R^2	F
1	PANAS-NEG	.09**	.38	92.72**	.50**	.27	57.86**	.40**	.17	31.99**	.51**	.35	81.06**	.56**	.36	87.76**
	PANAS-POS	-.10**			-.06			-.10**			-.06			-.18**		
2	PANAS-NEG	.46**	.42	44.47**	.40**	.04	5.35**	.30**	.20	14.81**	.39**	.05	39.71**	.48**	.40	40.70**
	PANAS-POS	-.09**			-.03			-.04			-.15**			-.09		
	ASI-SOM	.16**			.14*			.09			.16**			.14*		
	ASI-COG	.12			.10			.04			.11			.13*		
	ASI-SOC	.01			.00			.09			.02			-.05		

* $p < .05$; ** $p < .01$