An Examination of How Anxiety Sensitivity Relates to PTSD Symptoms and Resting-State Functional Connectivity in a Trauma-Exposed Sample

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Abstract

The goal of this study was to explore the relationship between anxiety sensitivity (AS) and PTSD, focusing on symptom severity and resting-state functional connectivity.

Background

Anxiety sensitivity (AS), or “fear of fear”, is a potential risk factor of PTSD. AS tends to be higher in those with PTSD compared to patients with other psychiatric illnesses and is positively associated with PTSD symptoms. In addition, both are associated with hyperactivity in the Salience Network (SN). One region, the insula, is especially important due to its relationship with interoception and anxiety.

Methods

59 participants (23 with current PTSD and 36 TEHC) completed clinical and self-report measures, as well as a resting-state fMRI scan.

Statistical Analyses

1. Group comparisons using t-tests and ANCOVAs.
2. AS and symptom severity tested using Pearson correlations and multiple regressions
3. Functional connectivity of the SN and insular subregions using CONN analyses → seed-to-whole brain using the bilateral anterior insula seed

Results & Discussion

1. Significant group difference between PTSD and TEHC, but not when controlling for symptom severity
2. Total and avoidance symptoms positively associated with AS, not hyperarousal
3. No significant association between AS and functional connectivity
4. Future directions: whole brain analyses, longitudinal data, look at other factors, and advance treatment plans

Hypotheses

1. AS is higher in PTSD than Trauma Exposed Healthy Controls (TEHC)
2. AS is positively associated with PTSD symptoms
3. AS is positively associated with SN connectivity
4. AS is positively associated with insular subregion connectivity

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