

Posttraumatic stress disorder: Expecting the worst

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Posttraumatic stress disorder is characterized by exposure to a traumatic event, intrusion symptoms, avoidance, negative alterations to cognition and mood, and alterations in arousal.¹

Negative expectations of one's self, others or the world are a specific symptom reported within the negative alterations to mood and cognitions cluster. These appraisals lead to overgeneralized fear.²

- Eg. "The world is a dangerous place"
- This symptom is under scrutiny and is reported to be PTSD non-specific.³
- Some now suggest the elimination of the symptom cluster based on the overlap with depression and anxiety.⁴

Given the controversy, more evidence for negative expectations as part of the PTSD diagnosis is necessary.

Event-related potential studies using the "odd-ball" paradigm have looked at different neurological components underlying the discrimination between stimuli, specifically how mental representations are altered with the incoming of novel stimuli.⁵

Components to index expectations:

- P300: In the case where a new stimuli is detected, the updating of mental representations elicit a change in the neural activity and result in a larger P300 amplitude.⁶
- N400: If a stimulus contradicts a given context (an expectancy violation), more effort is required to access semantic memory and this results in a larger N400 amplitude.^{7,8}

Hypotheses: Assuming individuals with PTSD expect negative outcomes, we predict context violations (e.g negative image following a positive context) will elicit attenuated P300 and N400 amplitudes for subclinical PTSD participants as compared to healthy controls.