The Effect of Idiographic Worry on Emotional Processing

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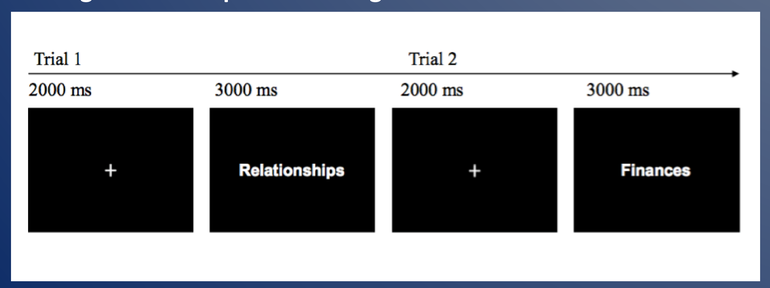
Introduction

- Worry is a form of avoidance that is reinforced by the prevention of negative emotional arousal and sudden emotional contrasts (Borkovec *et al.* 1990; Newman *et al*. 2011).
- This process may lower attentional control as it promotes stimulus-driven attention over goal-driven attention (Eysenck *et al.* 2007).
- Alternatively, some data suggest that high attentional control could increase symptoms due to a higher capacity for avoidance (Bardeen *et al*. 2017).
- Overall, the link between worry, attention and emotional processing is unclear.
- A number of studies have attempted to investigate this relationship by inducing a worried state through the viewing of threatening images (Moser *et al.* 2014; White *et al.* 2017)
- However, worry is a verbal-linguistic as opposed to imagery-based cognitive process and such studies do not evaluate the immediate consequences of individual's particular worries.

Purpose: The current study seeks to determine how a short worry episode effects emotional processing to verbal-linguistic cues after their emotional content has been manipulated. Emotion processing will be measured using event-related potentials (ERP), specifically the late-positive potential (LPP).

Hypothesis: An induction of idiographic worry as opposed to positive emotional content for verbal cues will result in an increased LPP amplitude.

Figure 1. Example of Viewing Task



Methods

Participants:

- Expected N = 40
- Expected age range: 18-22 years
- Primarily Caucasian (~60%) female (~60%) undergraduate students based on previous in-lab psychology studies

Procedures:

- Provide informed consent and instruct participants to complete Penn State Worry Questionnaire (PSWQ).
- Attach EEG electrodes.
- Collect a baseline EEG measurement.
- Administer Thought Content Manipulation
- Worry Group: Participants engage in a structured interview intended to induce ideographic worry about a variety of everyday topics (finances, school, relationships, etc.).
- Positive Group: Participants engage in a structured interview about the same topics intended to induce positive and/or neutral context.
- Viewing Task (See Figure 1): Verbal cues corresponding to each topic are displayed on a computer screen while EEG data are collected.
- Participants are disconnected from the EEG and debriefed.

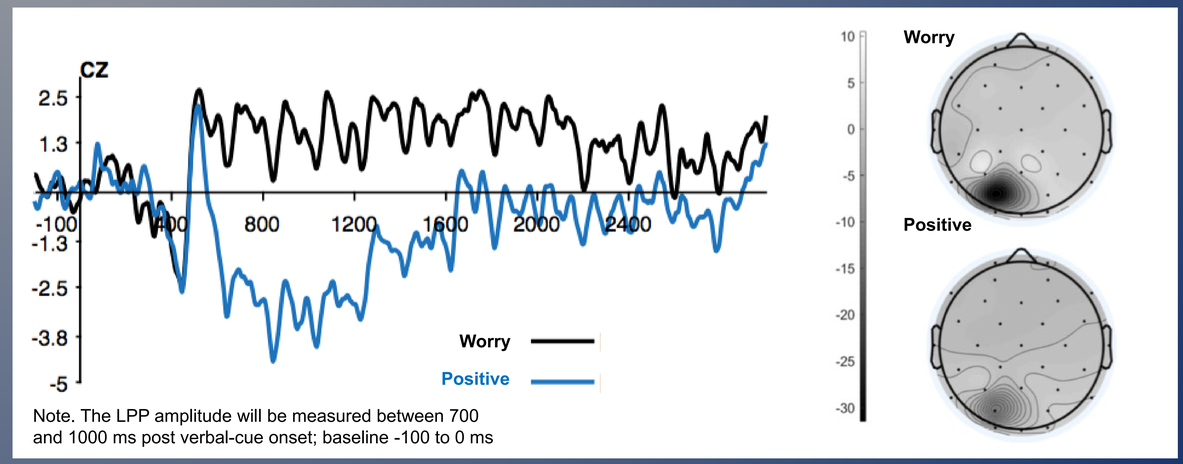
Expected Results

- 2 Group (Worry, Positive) ANOVA on the LPP amplitude with a PSWQ covariate
- After accounting for PSWQ, the Worry Group will have more positive LPP amplitude for verbal cues compared to the Positive Group

Discussion

- If the hypothesis is supported, the LPP amplitude will be greater for the Worry Group compared to the Positive Group.
- Such results would suggest that the presence of worry results in higher emotional processing of threat, in particular for otherwise neutral verbal cues.
- This would support current cognitive models which state that worry is maintained through the avoidance of negative emotions or strong emotional contrasts.
- Individuals with Generalized Anxiety Disorder (GAD) use worry to prepare for negative emotions, and our results would support that they use more emotional resources to process internal threat.
- Clinical implications could include improving therapies for GAD with a higher emphasis on increasing emotional processing abilities, such as focusing on reappraisal or cognitive challenging techniques.
- Such skills could serve to replace worry as the primary mechanism for avoiding negative emotions.

Figure 2. Expected LPP Amplitudes and Scalp Maps for Worry and Positive Groups



Note. The LPP amplitude will be measured between 700 and 1000 ms post verbal-cue onset; baseline -100 to 0 ms

Selected References

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