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Negative Affect and its Effect on Neural Activity and Reaction Time

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NEGATIVE AFFECT AND ITS EFFECT ON NEURAL ACTIVITY AND REACTION TIME

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The present study examined the relationship between negative affect, reaction time (RT), and the error-related negativity (ERN). Participants were twenty-six undergraduate students from Illinois Wesleyan University enrolled in General Psychology. Participants completed two blocks of emotional flanker task stimuli. Stimuli were selected from the International Affective Picture System (IAPS; Lang et al., 2005) and varied on arousal (high, low) and affect (negative, positive). Electroencephalogram data was collected and analyzed for the ERN and RT based on the stimuli's arousal. Results showed that the ERN and response accuracy (RA) were sensitive to the arousal levels, showing more negativity and RA to the non-arousing photographs. A high correlation was found between negative arousing stimuli and the ERN and RA. These findings indicate that arousal influences response monitoring and RA. However, RT appears to be sensitive to negative affective information, with differences seen across arousal levels.