

Neuroticism and attentional processing of sexual stimuli: An event-related potential study

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Rationale/Background : Neuroticism has been proposed as a vulnerability factor for sexual dysfunction in both men and women. Moreover, low neuroticism has been linked to low susceptibility to distraction. Considering the relevance of the attentional processes in the sexual response, it is possible that the lack of attention towards sexual stimuli predisposes individuals with high neuroticism to sexual problems.

Research Questions: This investigation aims to explore the influence of neuroticism on the attentional processes and its neurophysiological correlates during the perception of sexual and non-sexual images.

Methods: Event-related potentials (ERPs) were recorded during a modified oddball paradigm in which participants of both sexes visualized stimuli of three different categories (sexual; non-sexual positive; non-sexual negative) which varied in the arousal level (high and low arousal).

Results: Results have shown P1 and P3b amplitude to be enhanced in response to sexual – both pornographic (high arousal) and romantic (low arousal) stimuli – when compared to other negative or positive images. Also, enhanced P3b amplitudes were found in response to highly arousing when compared to low arousing stimuli. This P3b effect was particularly enhanced in participants scoring high in neuroticism. Regarding the P1 component, higher levels of neuroticism in women, but not in men, were associated with longer P1 latencies in response to pornographic images when compared to romantic images.

Conclusions: These results, contribute to a better understanding of the impact of neuroticism on the early phases of the psychological response to sexual stimuli. Particularly, findings seem to evidence that, at least in female participants, neuroticism can interfere in the early stages of attentional gain control towards sexual stimuli, differentiating pornographic from romantic images.

Key Words: Oddball task; ERPs; attention; neuroticism; sexual stimuli.

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