
Perceptual and motivational influences on facial processing in social phobia : An ERP investigation.

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Abstract

Social anxiety disorder (SAD) has been characterized by attentional biases towards social threat, including threatening faces. Recent studies have demonstrated early modulations of cognitive processing when patients high in social anxiety process emotional facial cues. To test whether perceptual and/or motivational factors may be involved in this emotion bias, event-related potentials (ERPs) were recorded while 18 SAD and 18 control participants performed an adapted emotional Stroop paradigm. First, they named the color of individual rectangles (control task). Second, they had to identify the emotional expression of faces displaying anger, happiness and neutrality (explicit emotional task). Third, they had to name the color of the frame surrounding the same facial stimuli (implicit emotional task). Stimuli included upright and inverted faces to explore the effects of perceptual changes on facial processing, while motivational factors were explored by comparing performance on the three tasks.

Results showed a clear enlargement of P1 amplitude among SAD participants, as compared to controls. However, this enhancement was consistent over the three tasks, and did not interact with task type or facial inversion.

These results provide electrophysiological support for a general amplification of early visual processes in social phobia, without the additional role of perceptual and motivational factors. Importantly, the P1 amplification observed in the control task rules out theories supporting a specificity of cognitive biases for facial stimuli in social anxiety, and suggests a general hypervigilance to incoming stimuli.

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