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# Alexithymia moderates the beneficial influence of arousal on attention: Evidence from the attentional blink

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## Abstract

Alexithymia is a multifaceted personality construct which encompasses difficulties in identifying and expressing feelings and an externally-oriented cognitive style. The influences of alexithymia and arousal on cognitive processing of emotion are now widely accepted. To test the influence of alexithymia and arousal on attention, participants realized two blocks of attentional blink (AB), once after a baseline (relaxed) session and once after a cycling (arousal) session. Many studies have documented that the second target (T2) of a pair is typically missed when presented within a time window of about 200-500 ms from the first to-be-detected target (AB effect). In this study, the T2 were neutral (e.g., Echo), low arousal (i.e., Emptiness, Sadness) or high arousal (e.g., Passion, Rape) words. Results show that participants reported significantly more T2 after cycling than at baseline, supporting the view that arousing states modify attentional processes. As well, word type moderated attentional capture with high arousing words being reported more so than low arousing words. Adding alexithymia in the model as a continuous variable (TAS-20) substantially decreased the explained variance of these two effects by about 15%. A new analysis of variance separating high versus low alexithymia scorers showed that alexithymia moderated the arousal effects so that cycling was beneficial only for low alexithymia scorers and high alexithymia scorers accurately reported the exact same proportion of high arousal, low arousal and neutral T2 words. These findings support the theoretical assumption that alexithymia may be related to an inability to link emotional arousal responses to symbols like words.

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