

# Electrophysiological evidence of an attentional bias towards appetitive and aversive words in adults with attention-deficit/hyperactivity disorder

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Abstract

## OBJECTIVE:

Emotional dysregulation has emerged as a core symptom domain in adults with Attention-Deficit/Hyperactivity Disorder (ADHD). However, the pathophysiological underpinnings remain poorly understood. This study investigated attentional biases to positive and negative emotional words as possible contributing mechanisms.

## METHODS:

Event-related potentials (ERPs) and behavioral attention bias indices were recorded from 39 adult patients with ADHD and 41 healthy controls during a verbal dot-probe task with positive-neutral, negative-neutral, and neutral-neutral word pairs.

## RESULTS:

Cue-locked N2pc amplitudes indicated a significant attentional bias towards emotional words in patients with ADHD and healthy controls. In healthy controls, the bias was only significant in positive trials. In patients, the bias was associated with ADHD severity and self-reported poor emotion regulation skills. ADHD patients also exhibited reduced target-locked P1 amplitudes and inferior behavioral performance compared with healthy controls.

## CONCLUSIONS:

Our findings provide evidence of an attention bias to positive and negative emotional stimuli in adult patients with ADHD and adverse effects of emotional stimuli on task performance.

## SIGNIFICANCE:

An attentional bias to emotional stimuli might contribute to emotional reactivity and dysregulation in adult patients with ADHD.