

## The effects of cognitive-behavioral therapy on social cognition of adolescents with intermittent explosive disorder

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### Introduction

Intermittent explosive disorder, as defined in DSM-5, is characterized by recurrent, problematic, impulsive aggressive behavior. Aggression in intermittent explosive disorder is impulsive, and/or anger-based. Intermittent explosive disorder appears in the social context and in response to social stimuli. Processing social stimuli and responding to them in different social contexts, has an important role in this disorder and effects its symptoms. According to the evidence, in intermittent explosive disorder, hostile cognitive distortions lead to misinterpretations of nonthreatening social-emotional cues as threatening and an inappropriately aggressive response. How to process and respond to social stimuli in each individual is related to her/ his social cognition. Accordingly, attention to social cognition and its improvement in intermittent explosive disorder can have positive therapeutic outcomes. This is possible with cognitive-behavioral therapy. Therefore, the purpose of this study was to find out the effect of cognitive-behavioral therapy on social cognition of adolescents with intermittent explosive disorder.

### Method

The present study is a field experiment with pretest-posttest design. The 38 male students with intermittent explosive disorder were selected by purposive sampling method through the screening questionnaire of intermittent explosive disorder and structured clinical interview based on DSM-5 criteria and they were randomly assigned to experimental and

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control groups. The two groups at the beginning and the end of the study, were interviewed and they all responded to the questionnaire for screening of intermittent explosive disorder (Coccaro et al, 2016) and social stories (Tur-Kaspa & Brayran, 1994). During the ten sessions, the intervention of cognitive-behavioral therapy was administered to the experimental group, once a week. To analyze the data, the covariance analysis (Ancova and Mancova) was used.

### Results

The mean (and standard deviation) of participants' age was 16 (0.07), in the age range of 15 to 17 years. The results of ANCOVA analysis showed that cognitive-behavioral therapy was effective in improving social cognition and reducing the symptoms of intermittent explosive disorder ( $p < 0.05$ ). Also, the results of MANCOVA showed that cognitive-behavioral therapy was effective in improving the steps of encoding signs, representing and interpreting information, and choosing response. On the other hand, during the structured clinical interview at the beginning and the end of the study, the experimental group, relative to the pre-intervention conditions, reported more control over the symptoms of the disorder and they showed better recovery.

### Discussion

The results showed that cognitive-behavioral therapy generally caused relative decrease in symptoms of the disorder and increased self-control through the improvement of social cognition. These results are in line with the findings of McCloskey et al. (2016), Barreto et al. (2009) and Osma et al. (2016). In explaining these findings, it can be said that the distorted processing of social stimuli can be involved in a variety of disorders and can have different negative emotional and behavioral consequences, which can also be seen in intermittent explosive disorder. On the other hand, CBT is aimed at identifying and modifying the client's maladaptive thought processes and problematic behaviors through cognitive restructuring and behavioral techniques to achieve change. Therefore, it seems that by using cognitive-behavioral therapy and generalizing them to various social contexts, it is possible to improve the social cognition of people with intermittent explosive disorder that act as an inhibitory capacity to prevent the symptoms of this disorder in social situations.

**Keywords:** Intermittent Explosive Disorder, Cognitive-Behavioral Therapy, Social Cognition.