



Research paper

Effectiveness of Acceptance and Commitment Therapy on Attention Bias to Threat and Safety Behaviors in Students with Social Anxiety Disorder

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Abstract

The study aimed to evaluate the effectiveness of acceptance and commitment therapy (ACT) on attention bias to threat and safety behaviors in students with social anxiety disorder (SAD). The research design was quasi-experimental, pretest-posttest, follow-up with the control group. The statistical population included all students aged 16-19 with SAD symptoms. By purposeful sampling, 28 students were selected and assigned equally to experimental and control groups. Pictorial Dot Probe Task and Social Phobia Safety Behaviors Scale were used. The experimental group received 8 treatment sessions. Data were analyzed by mixed analysis of variance with repeated measure. The results showed that there was a significant difference in the average scores of the two groups. Also, therapeutic gains had maintained in the follow-up stage. Therefore, to reduce attention bias and safety behaviors in students with this disorder, ACT can be used by psychotherapists.

Keywords: ACT, attention bias to threat, safety behavior, SAD

Introduction

Social anxiety disorder (SAD) is marked fear or anxiety about social situations in which the individual is exposed to possible scrutiny by others such as social interactions. The individual fears that he/she will act in a way or show anxiety symptoms that will be negatively evaluated. The person avoids social situations or endures with intense anxiety (Boland, et al, 2022). In cognitive models, a factor related to social anxiety, is attention bias to threat, which is the tendency to prioritize the processing of threats over benign or neutral stimuli. Research shows that people with social anxiety tend to focus on stimuli related to threat (Koster and Bogaerde, 2019). Also, the role of safety behaviors is very prominent in this disorder due to maintaining dysfunctional cognitions. Safety behaviors such as speaking less are behavioral strategies used by individuals with SAD to reduce distress and suppress anxiety symptoms in fear-inducing social situations. The research background shows that to overcome the deficiency of cognitive behavioral therapy in the treatment of social anxiety, ACT has been used (Caletti, et al., 2022). From the point of view of ACT, the difference between normal social anxiety and SAD is related to the reaction and the type of relationship that a person has with the experience of SAD (Alves, et al., 2022). Therefore, the main hypothesis of the current research is that the treatment

of acceptance and commitment is effective on threat attention bias and safety behavior in students with symptoms of SAD.

Method

The study method was quasi-experimental with pretest, posttest, and follow-up design. The statistical population included all female students aged 16-19 with SAD symptoms. By purposeful sampling, from among 35 individuals, 28 students were selected, assigned equally to experimental and control groups. Pictorial Dot Probe Task and Social Phobia Safety Behaviors Scale were used three times. The experimental group received 8 group therapy sessions of intervention. Data were analyzed by mixed analysis of variance with repeated measure and Bonferroni post-hoc test, using SPSS-25 software.

Pictorial Dot Probe Task: The task was based on the probe dot task to assess the attentional bias towards threatening faces by Mogg and Bradley (1999), were selected from NimStim face stimulus set (Bantin, et al., 2016). Meissel, et al. (2022) reported its reliability with Cronbach's alpha 0.76 and its validity with Varimax rotation, explaining 70% of the variance. In the current study, Cronbach's alpha coefficient was 0.76.

Social Phobia Safety Behaviors Scale: This 17-item scale, scored on a 4-point Likert, was designed by Pinto-Gouveia, et al. (2003) to evaluate safety behaviors in people with social anxiety. They reported its reliability with Cronbach's alpha of 0.82 and high differential validity with sensitivity of 0.96. In the present study, the reliability with Cronbach's alpha coefficient was 0.70

Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A): The scale monitors the severity of social anxiety symptom in children or adolescents. It has three sections, the total score is summed from 3 sections (Brooks and Kutcher, 2004). The reliability with Cronbach's alpha was reported between 0.74 and 0.96 and the convergent validity, with children's social anxiety 0.74 (Inam, et al., 2014). In the present study, Cronbach's alpha coefficient for the total score was 0.73.

Results

The results of mixed analysis of variance with repeated measure, over time (pre-test, post-test and follow-up), are presented in Table1.

Table1. Results of mixed analysis of variance with repeated measures

Variable	Source	Sum of Squares	df	F	Sig.	Partial Eta Squared
Attention bias to Threat	Time	10.87	2	26.49	.001	.50
	group	18.84	1	5.45	.002	.18
	Time * group	9.88	2	24.08	.001	.48
Safety Behaviors	Time	241.59	2	30.41	.001	.53
	group	887.25	1	7.90	.009	.24

Time * group	311.21	2	39.18	.001	.60
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The effects of time and time * group interaction are significant for attention bias to threat and safety behaviors at the level of 0.001 and for the group at the level of 0.05. Therefore, the results indicate that the scores, over time as well as the interaction of time * group are significant the difference between the averages in the experimental group in the post-test stage in the variables of attention bias and safety behaviors is significant (p=0.001).

Table2. Pairwise comparisons in Bonferroni test

Variable	Time	Mean Difference	Std. Error	Sig.
Attention bias	Pretest - posttest	0.75	0.12	.001
	Pretest - follow up	0.80	0.14	.001
	posttest follow-up	0.09	0.06	0.56
Safety behaviors	Pretest - posttest	3.32	0.58	.001
	Pretest – follow-up	3.82	0.62	.001
	posttest follow-up	0.51	0.35	0.51

The results of the Bonferroni test for comparing the means are given in Table 2. The difference between the means in the experimental group in post-test and follow-up stages compared to the control group is significant (p <0.001). Therefore, the research hypothesis is confirmed.

Discussion and Conclusion

By ACT, the person's reaction and relationship with experiencing SAD changes so that, instead of avoidance of disturbing thoughts, feelings, sensations and memories, here she accepts them without defense, trying to change or judgement and see them as only thoughts, feelings and memories and nothing more. By diffusion, she separates herself from disturbing thoughts, feelings, and memories related to social situations and no fusion with them to dominate her behavior. By contact with the present moment, she prevents the predominance of anxious thoughts. She learns to consider self as context in which thoughts and feelings exist because of her and she is not her thoughts, values and committed action provide conditions for a person's gradual exposure to anxiety-provoking situations. This provides the context for emotional processing of fear and changing anxious beliefs and decreases the avoidance of social situations. With this sample group, the limitations of this research were no gender segregation, and short-term follow-up. It is suggested to use ACT for treatment of social anxiety.

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Conflict of Interests

There is no conflict of interests for researchers.



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