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The effectiveness of group behavioral activation therapy on cognitive and emotional symptoms in social anxiety disorder

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Abstract

Introduction: The present study aims to assess the effectiveness of group behavioral activation therapy on anxiety and depression, negative evaluation and quality of life in patients with social anxiety disorder.

Materials and Methods: The statistical population of this clinical trial included all referrers to psychiatric services and private psychiatric clinics with the diagnosis of social anxiety disorder in the city of Mashhad (2016-2017). Number of 24 cases selected through convenient method and they assigned randomly into two experimental and control groups after evaluation. Group behavioral activation therapy sessions were performed only for experimental group in 8 sessions of 90 minutes. Social Phobia Inventory (SPIN), Beck Depression Inventory-II (BDI-II), Short Form Scale of Quality of Life (IRQOL), Consequences of Negative Social Events Questionnaire (CNSEQ) by Wilson and Rapee, before and after, and 3 months after group therapy with behavioral activation approach were evaluated for follow up. The statistical analysis of the current research data conducted using repeated measures of variance analysis method.

Results: The results of the data suggest that behavioral activation in post-therapy and follow-up stages had a significant correlation with reduction of fear and avoidance (of social anxiety component) and the component of depression and both the sub-components of fear of negative evaluation (P<0.05), and improvement of psychological components, however, there was no significant effect on physiological discomfort and social relationships and satisfaction from the status of life and physical health. The control group had not significant differences in different phases.

Conclusion: In overall, group behavioral activation therapy has impact on depression and anxiety, negative evaluation and quality of life among patients with social anxiety disorder.

Keywords: Behavioral activation, Cognition, Emotion, Quality of life, Social anxiety

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Introduction

Social anxiety is a perceived and persistent fear of one or more social situations or situations in which a person, or an unfamiliar and stranger, faces or may be curious. In such situations, a person is afraid to behave in such a way as to despise and embarrass himself (1). This disorder is associated with a number of obvious mental health problems that are common in young people, other anxiety

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disorders, and in the elderly, substance abuse (2). Social anxiety, in addition to high prevalence and occurrence of it in the age of 18 to 29 years old (3) because of the deficiency in establishing and maintaining interpersonal relationships and the difficulty in meeting social needs, it creates disruptions to academic performance and professionalism (4). They regard themselves as insignificant and consider their value to be positively evaluated by others (5). Additionally, they also believe that others see them as low-grade and these results in their negative evaluation (6) as well as the judgment of others as threatening, extreme and catastrophic (7). The concept of quality of life refers to the perception of individuals of expectations and standards concerns within the framework of the cultural and value system in which they live (8). Quality of life is a multi-dimensional concept that the effects of a disease and its treatment are perceived by the patient according to their physical, psychological, and social well-being, as these people estimate what they regard to themselves less than real life quality which they are experiencing (9). Behavioral Activation (BA) therapy can be one of the most useful and beneficial therapies. The purpose of this method is to re-establish the relationship of individuals with positive environmental enhancements if they previously avoided them (10). Behavioral activation emphasizes the use of techniques that contribute to less activity and less avoidance, but the avoidance of contact with positive reinforcement, over time and several cycles of this process, as well as the depression symptom, actually decreases (11). Scientific research has proven that there is a direct relationship between positive creation and participation in pleasurable activities (12-14). In relation to the effectiveness of behavioral activation therapy on depressive symptoms, it increases the patient's positive reinforcement. So that its purpose is to strengthen behaviors that have the potential for positive reinforcement and a reward for the patient that naturally leads to improved mood in the patient (15). From the perspective of behavioral activation, avoidance behaviors, short-term emotional regulation strategies are effective so that they first create a sense of pleasure in one person and suppresses anxiety, but over time, it avoids more, and it interferes with the outside world and its dominance and merit (16). From the point of view of behavioral activation, rumination is an expression of the factors preventing social situations in such a way that it forbids him from being with others. An activator therapist, with specialized techniques related to this approach, addresses references to thoughts and, subsequently, confronts his avoidance behavior and engages in social activism (17). In addition to the expertise and the strength of this technology, due to its ease of implementation, there is the ability to organize group therapy or individual treatment with this approach in health centers or other government agencies (19). The optimal number of treatment groups ranges from 8 to 12 has been reported (20).

Materials and Methods

The study design included pre-test, post-test and follow-up of 3 months with experimental and control groups. The statistical population of this study included all referrers to psychiatric services and private psychiatric clinics with the diagnosis of social anxiety disorder in the city of Mashhad. Twenty-four of these patients were selected voluntarily and voluntarily and randomly selected in groups. The size of the sample was determined according to Butler (2006) which states that an average of 9 cases can be group therapy. This research, approved by the Ethics Committee of the Azad University of Neyshabur, has provided participants with information about confidentiality and the right to withdraw from the inquiry provided information.

Criterion for research, having symptoms of social anxiety disorder that was examined by diagnostic interview based on DSM5, and higher education than the diploma and age range of 20 to 40 years old, and exclusion criteria included having another disorder, one or two axes based on statistical guidance and Diagnostic Psychiatric Disorders (DSM5) and having a debilitating physical disorder. In the present study, after the pre-test, only the experimental group has been undergone the eight sessions of the group's behavioral activation therapy.In brief the behavioral group therapy group sessions was based on Menal Guelan for the experimental group based: the basic principles of behavioral activation, the recording of their daily activities program within a week, and its application in Exposure to avoidance enjoying and mastering activities and charting pleasure and mastery activities, assessing skills, choosing, examining, joining, observing results, never give up. Also,

motivation skills, responsiveness, appropriate alternatives, coping methods and overcome stimuli, responses, avoidance patterns, self-esteem skills, self-expression, and courageous training and discussion.

Research instrument

A) Structured Clinical Interview for DSM5 Disorders: This is a structured clinical interview used to diagnose DSMI and II based on DSM5. Amini et al. have shown that the features of this tool are higher than 0.85 and in half of the cases above 0.9, which indicates a desirable feature.

B) Social Phobia Inventory (SPIN) by Connor et al. (2000): It was developed to assess social phobia. The questionnaire is a 17-item self-assessment scale with three subscales of fear (6 items), avoidance (7 items) and physiological discomfort (4 items). Connor et al. (2000) stated the cut-off point of the questionnaire 19. The alpha coefficient for each subtest was reported as follows: fear 0.74, avoidance 0.75, and physiological discomfort 0.75.

C) Beck Depression Inventory-II (BDI-II): This tool has 21 questions and its answers range from 0 to 3. The cutting points in (II-BDI) are as follows: 0 to 13 indicates a lack of depression, 14 to 19, mild depression, 20 to 28 moderate depression and 29 to 63 severe depression.

D) Consequences of Negative Social Events Questionnaire (CNSEQ) by Wilson and Rapee (2005): This is designed to interpret the consequences of negative social events. In this questionnaire, 16 negative social events have been described. The test reliability or internal consistency has been reported to be from 0.63 to 0.75 using Cronbach's alpha. The construct validity of this tool is also reported by factor analysis method (Wilson and Rapee, 2005). In Iran, Ostovar reported the reliability of alpha for the subscale of negative self-assessment, 0.89 and negative assessment by others 90% (21).

E) Short form of quality of life questionnaire (IRQOL): The number of questions is 24 in 4 areas, the first two questions of which do not belong to none of the areas and generally assess the health status and quality of life. Therefore, the questionnaire has 26 questions, which has 4 sub-scales in physical, psychological, and social health, as well as living environment. Cronbach's alpha coefficient is from 0.73 to 0.89 for the four subscales and the total scale. SPSS19 was used to analyze the results of the data. Mean and standard deviation were used in descriptive findings; frequency measures analysis variance test and Tukey post hoc test were used to explain the findings of the research.

Results

After the preliminary selection, among the applicants who were referred by psychiatrists and clinical psychologists working at the clinics and employees of the universities of the city of Mashhad to participate in the current research, 24 subjects were selected for inclusion criteria. Participants were randomly assigned into two groups of 12 cases. In the follow up sessions, two of the behavioral activation groups had two or more absences due to personal problems, and the study was left out of the question, and a total of 22 cases stayed in the following table shows the demographic variables by groups.

Table 1. Descriptive characteristics of research samples in experimental and control groups

$\chi 2$	**Control**		**BA**		**Variable**
$\chi 2$= 0.99	%	N	%	N	Sex
	58.3	7	60	6	Female
	41.7	5	40	4	Male
$\chi 2$= 0.98					Marital status
	41.7	5	50	5	Married
	41.7	5	40	4	Single
	6.16	2	10	1	Divorced
F= 0.11	(6.40) 30.5		(4.26) 38.2		Age

(P>0.05)

The group behavioral activation in post-therapy and follow-up stages had a significant correlation with reduction of fear and avoidance (of social anxiety component) and the depression and both the sub-components of negative evaluation (P<0.05) and improvement of psychological components, however, there was no significant effect on physiological discomfort and social relationships and satisfaction from the status of life and physical health the control group, there were no significant relationships.

Table 2. Average and standard deviations of dependent variables of experimental and control groups (N=22)

Follow up (σ)M	Post test (σ)M	Pretest (σ)M	Dependent Variables	
(2.11) 10.60	(2.69) 9.80	(2.40)21.00	Fear	
(3.04) 5.20	(3.33) 10.40	(2.51)25.10	Avoidance	
(2.70) 10.00	(1.17) 11.60	(1.58)13.50	Physiological discomfort	
(3.04)25.80	(4.91) 31.80	(3.68) 59.60	Total social anxiety score	
(3.17) 4.01	(5.12) 8.30	(1.49)24.00	Depression	
(1.07) 23.40	(3.06) 26.60	(1.49) 12.00	Psychological	BA
(1.13) 6.20	(1.47) 5.80	(1.07)5.40	Social relationships	
(6.81) 30.70	(1.81) 25.80	(1.71) 25.50	Satisfaction of life	
(1.03) 26.80	(1.17) 25.60	(1.68) 26.20	Physical health	
(8.04) 87.10	(4.70) 83.80	(2.92) 69.10	Total quality of life score	
(5.44) 11.50	(5.74) 13.90	(6.80) 106.10	Fear of negative evaluation of others	
(3.58) 4.80	(3.24) 3.90	(4.08) 49.00	Fear of self negative evaluation	
(8.66) 16.30	(6.77) 17.80	(7.96) 155.10	Total score of negative evaluation	
(2.90) 19.33	(2.10) 19.33	(3.01) 20.00	Fear	
(3.14) 19.41	(3.36) 21.25	(2.90) 24.08	Avoidance	
(1.60) 12.75	(2.45) 12.75	(1.64) 13.83	Physiological discomfort	
(4.73) 51.50	(5.36) 53.33	(3.89) 57.91	Total social anxiety score	
(2.87) 24.33	(4.50) 23.83	(2.75) 25.16	Depression	
(1.78) 12.50	(1.92) 14.41	(1.52) 11.83	Psychological	Control
(2.28) 5.75	(1.44) 6.41	(2.14) 5.33	Social relationships	
(6.57) 28.83	(2.64) 26.80	(1.34) 27.00	Satisfaction of life	
(1.07) 26.33	(1.27) 25.25	(1.67) 26.58	Physical health	
(7.19) 73.41	(3.43) 72.16	(2.13) 70.75	Total quality of life score	
(5.97) 106.41	(8.11) 100.75	(1.61) 105.66	Fear of negative evaluation of others	
(5.30) 52.00	(4.01) 54.83	(2.37) 54.00	Fear of self negative evaluation	
(9.69) 158.41	(7.37) 155.58	(2.38) 159.66	Total score of negative evaluation	

In Table 3, in relation to the effectiveness of behavioral activation therapy, each of the sub-components with 95% confidence, stated that behavioral activation therapy with a 74% effect size on fear reduction and a 67% effect on avoidance and size reduction 75% reduction in symptoms of depression and 97% effect on reducing the fear of negative evaluation of others and having a 93% effect on reducing the fear of their negative evaluation as well as

improving psychological symptoms in the quality of life component with a 77% effect rate in patients Social anxiety disorder has a significant effect on post-test and follow-up.

However, in the minor components of physiological discomfort from social anxiety, social relationships, and satisfaction with life and physical health in the dependent variable of quality of life, with the hypothesis of sprite, as well as by the correction of Epsilon Green Descent, grayscale, there was a significant difference in the relationship between the factors Three stages of test and group membership were not found, so there is no significant difference between the mean scores of this sub-component at different times.

Table 3. Analysis of variance of dimensions of the dependent variables of the experimental group

Partial η2	Sig.	F	MS	df	SS	Source of change
.741	.000	57.284	187.572	2	375.143	Fear
.676	.000	41.639	349.279	2	698.558	Avoidance
.125	.069	2.862	8.243	2	16.486	Physiological discomfort
.755	.000	61.631	538.208	2	1076.416	Depression
.767	.000	65.835	237.502	2	475.003	Psychological
.041	.432	.857	1.592	2	3.185	Social relationships
.050	.362	1.043	15.852	2	31.704	Satisfaction of life
.034	.505	.694	1.158	2	2.316	Physical health
.971	.000	676.720	15250.067	2	30500.134	Fear of negative evaluation of others
.932	.000	274.684	3549.681	2	7099.362	Fear of self negative evaluation

Discussion

In connection with the research question – does the group behavioral activation therapy have a significant effect on anxiety and depression, negative evaluation, and quality of life in patients with SAD?

It can be argued that people's strong fears of negative assessments of others in social anxiety clients make people avoid attending situations that are to be seen or judged.

Concerning the reduction of depression symptoms in people with social anxiety using this therapeutic approach, the studies show that with behavioral activation and reduction of avoidance, their mood status improves and the symptoms of depression decreases (20).

This is consistent with the results of the studies of Razorel, Lopez Dreimen, Peszel, Damijian et al., Sadock and Sadock, Rapee and Spence, Ollendick Hopko, Turner and Jakupcak (22-30).People with SAD choose an avoidance approach to reduce their anxiety, but regarding behavioral activation approach, this very same avoidance results in more severe symptoms of anxiety and depression and severe mood changes. Concerning the reduction of depression symptoms in people with social anxiety using this therapeutic approach, the studies show that with behavioral activation and reduction of avoidance, their mood status improves and the symptoms of depression decreases. This is consistent with the results of the studies of Barnahufar et al. (31), Williams, Foley et al. (32), Martel et al. (33), Lejoz et al. (34), Chisa (35), Murphy Latin (36), Kenhey et al. (37), and Briton et al. (38). Jakupak et al. argue that behavioral activation therapy is effective in the treatment of veterans with post traumatic stress disorder (39) as well as Cullon, Staines (40) confirmed the effectiveness of behavioral activation on the improvement of major depression. Moreover, in the analysis of the results of their study on depression associated with the anxiety disorder, Hoopko et al. (41) showed that treatment continued in the follow-up phase. Behavioral activation therapy in post-traumatic stress disorder and its association with depression symptoms also lead to reduced symptoms (42).

In Iranian research, Shareh also concluded that GBAT leads to improved documentary styles, quality of life, and depression in women with breast cancer (43). Moreover, Zemestani et al. confirmed the effect of short-term behavioral activation therapy on the improvement of symptoms of depression and anxiety and also the reduction of students' thought rumination (44).

Taheri reported the both cognitive therapy and behavioral activation had a positive effect on

the treatment of social anxiety disorder, but cognitive therapy had a more effective effect on negative evaluation and behavioral activation on depressive symptoms (45).From the research constraints, the statistical community with a minimum degree of education can be limited to limiting generalizability of results to other populations, and suggestions for future research, current research with larger sample sizes or the implementation of current research with the statistical society is comprised of illiterate people.

Conclusion

Based on the findings, behavioral activation can impact on emotional and cognitive symptoms in social phobia disorder.

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