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### Original Article

## Efficacy of group behavioral activation on social anxiety, avoidance and negative evaluations among individuals with social anxiety

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### Abstract

**Introduction:** Regarding to the importance of appropriate treatment for social anxiety, the present study aimed to assess the efficacy of group behavioral activation on social anxiety, avoidance and negative evaluations among individuals with social anxiety.

**Materials and Methods:** In this clinical trial in 2016, 30 cases with symptoms of social anxiety and other inclusion criteria entered to the research through convenient method of sampling and divided into two groups randomly. The experimental group received 8 weekly (ninety minutes) sessions of behavioral activation while control group received no treatment. The research instrument concluded social anxiety scale, cognitive-behavioral avoidance scale and questionnaire of negative social events fulfilled before and after intervention. Data analyzed through descriptive and explanatory statistics.

**Results:** Behavioral activation can impact significantly on symptoms of social anxiety, cognitive-behavioral avoidance and negative evaluations ( $P < 0.05$ ).

**Conclusion:** It seems that group behavioral activation is effective in social anxiety and it may be applied in prevention and treatment of social anxiety disorder.

**Keywords:** Avoidance, Behavioral activation, Social anxiety

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### Introduction

Social Anxiety Disorder (SAD) is concerned as a costly, common, and disabling disorder among psychiatric disorders. It is mentioned that this disorder may be accompanied by depression and other anxiety disorders and impacts most

dimensions of life (1-3). Social anxiety is a term for obvious and permanent fear of social and functional situations, which causes negative evaluation about participation in these situations, and it may lead to social isolation. Also, this disorder tends to become chronic without

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appropriate treatment and causes great stress even in daily relationships and activities (4-7).

At present, there are different treatments, such as pharmacotherapy and psychological interventions, and there are various opinions about each of the methods (8,9). One of the cognitive treatments which have been used for different psychiatric disorders is behavioral activation. This treatment is a structured process that increases contact with the environment, and it can enhance mood, thought, and quality of life (10,11). As yet, this method has been used for depression in children and adults (12,13), substance abuse disorders (14,15), and comorbidity of anxiety and depression (16,17), concluded to have positive effects. Regarding the effects of this treatment in reducing anxiety and enhancing of person's interaction with the environment, this study aimed to assess the effect of this method on social anxiety disorder according to its cost-effectiveness and efficacy of this method.

### Materials and Methods

The statistical community of this research included individuals who referred to consultancy centers of Mashhad. Sample as 30 cases were selected via a convenient method, and they were divided randomly into two groups, experimental (n=15) and control (n=15).

At first, the social anxiety inventory was used as a screening instrument. The cases with scores higher than 21, were selected. Then, they were assessed for other inclusion and exclusion criteria. Inclusion criteria concluded the diagnosis of social anxiety based on the questionnaire, while exclusion criteria concluded having other disorders in axes I and II based on DSM-IV, debilitating physical illness, and lack of tendency to participate in this research. The experimental group participated in group therapy (8 two-hour sessions). Both groups were controlled about receiving the other treatments. After ending the sessions, all participants fulfilled the research instruments again. Finally, data were analyzed.

#### Research instruments

A) *Behavioral activation*: At first, in this treatment, the introduction of members, expressing group rules, and introduction of BA

and its roles in depression and anxiety, specific functional dimensions in life, and grading them to improve these dimensions were conducted. The members were aware of the role of avoiding behaviors to achieve social and psychological aims through recorded daily activities and the level of enjoyment and mastery in these activities. They trained the functional analysis, ACTION, TRAP, TRAC techniques, and problem-solving focused on contact with social situations to combat the social avoidant patterns in the maintenance of social anxiety and behavioral encounter. The members were helped to identify the barriers and resolve them through problem-solving techniques.

B) *Social Anxiety Disorder*: This scale was provided by Connor et al. (2000) to evaluate social anxiety. This is a self-reporting that has 17 items, and it has three subscales of fear (6 components), avoidance (7 components), and physiological distress (4 components). The internal consistency was reported as 0.82-0.94. Also, the correlation between halves was calculated as 0.84. The total alpha coefficient was reported as fear 0.74, avoidance 0.75, and physiological distress 0.75 (18).

C) *Cognitive-behavioral avoidance scale*: This scale has 31 items that scored in the Lickert system (1-5), and the total score varies from 31 to 155, so the higher score indicates higher cognitive-behavioral avoidance. This scale has four components of avoidance of social behavior, avoidance of personal cognition, avoidance of social cognition, and avoidance of personal behavior. There is a medium internal correlation (0.39-0.57) between subscales. The internal consistency of the total scale is 0.91, and internal consistencies related to subscales of non-social cognition, non-social behavior, social behavior, and social cognition are calculated as 0.80, 0.75, 0.86, and 0.78 (19). In Iran, a high correlation between the subscales and the total score is reported (0.78 to 0.80). The alpha coefficients for 1-4 factors are 0.86, 0.80, 0.78, and 0.75, respectively, while this coefficient for the total score is 0.91. The reliability coefficient of the test-retest for the total scale is 0.92 (20).

D) *The consequences of negative social events questionnaire*: In this questionnaire, 16 negative social events were described, and four subscales: negative self-evaluations, negative evaluations by

others, and short-term and long-term negative consequences of social events were also included (21). In Iran, Ostovar used the two-scale form of this questionnaire and reported its reliability for the negative self-appraisal as 0.89 and the negative appraisal by others as 0.90 by calculating the alpha (22). In this research, data is analyzed through descriptive and relative statistics.

**Results**

The sample size of this research concluded 30 cases divided into two groups randomly. In the first session, one case of each group was not presented. In the process of the session, 1 of the controls was referred to a psychiatrist and

received clonazepam and propranolol, so this case was excluded from the research. Also, based on the 3 sessions of absence criterion, 2 cases were excluded from each group. Finally, 12 cases in the experimental group and 11 cases in the control group remained.

The demographic variables of each group are as follows: The mean ages of the experimental and control groups were  $21.42 \pm 3.25$  years and  $22.56 \pm 2.79$  years, respectively. In experimental control groups, there were 7 women (72.7%) and 5 men (27.2%) vs 6 women (60%) and 5 men (40%). None of the cases were married. There were not seen significant differences in demographic variables between the two groups.

**Table 1.** The mean and standard deviations of dependent variables in experimental and control groups

Variable	Behavioral activation		Control	
	Pre-test Mean (SD)	Post-test Mean (SD)	Pre-test Mean (SD)	Post-test Mean (SD)
Social anxiety	39.58 (5.25)	18.42 (5.35)	37.27 (5.43)	38.73 (4.15)
Aviodance	66.44 (3.26)	46.24 (4.55)	68.24 (3.82)	63.63 (5.08)
Negative self-evaluation	54.41 (6.70)	26.32 (4.55)	54.37 (7.63)	49.77 (3.68)
Perception of others evaluation	62.56 (6.55)	37.81 (5.35)	64.32 (8.43)	67.21 (5.31)

**Table 2.** The variance analysis of pre-test scores of dependent variables

Variable	Homogeneity of variances	F(1, 21)
Social anxiety	0.51	0.29
Aviodance	0.37	1.03
Negative self-evaluation	0.30	0.34
Perception of others evaluation	0.39	0.21

\*All statistics of F are not significant ( $P > 0.05$ ).

The covariance analysis was conducted to compare behavioral activation and control in reducing social anxiety symptoms. The pre-test scores of social anxiety were entered as a diffraction variable. Through controlling of pre-test effect ( $F(1,21)=1.48, P > 0.05$ ), covariance analysis indicated that there is a significant difference in reducing social anxiety symptoms between behavioral activation and control groups ( $F(1,21)=2.46, P < 0.05$ ). In addition, the effect size of behavioral activation compared to controls was 0.88, which is concerned as a great effect size.

Through controlling of pre-test effect ( $F(1,21)=7.21, P < 0.05$ ), the covariance analysis indicated that there is a significant difference between the two groups in reducing avoidance ( $F(1,21)=8.12, P < 0.05$ ) concerning the means of

post-test of avoidance scores indicates that group behavioral activation can decrease avoidance significantly. In addition, the effect size of group behavioral activation compared to the controls was calculated as -0.86, which is concerned as a great effect size.

Through controlling of pre-test effect ( $F(1,21)=12.53, P < 0.001$ ), the covariance analysis indicated that there is a significant difference between the two groups in reducing negative self-evaluation ( $F(1,21)=8.73, P < 0.001$ ) that concerning the means of post-test of negative self-evaluation scores indicates that group behavioral activation can decrease negative self-evaluation significantly. In addition, the effect size of group behavioral activation compared to the controls was calculated as 0.89.

Also, through controlling of pre-test effect ( $F(1,21)= 2.21, P < 0.05$ ), the covariance analysis indicated that there is a significant difference between the two groups in reducing the perception of negative other evaluation ( $F(1,21)=6.13, P < 0.001$ ) that concerning the means of two groups indicates that group behavioral activation can decrease the perception of negative others evaluation significantly. In addition, the effect size of group behavioral activation compared to the controls was calculated as 0.89.

## Discussion

In summary, the results indicated that group behavioral activation could decrease social anxiety symptoms, cognitive-behavioral avoidance, and negative evaluations.

The efficacy of group behavioral activation in reducing symptoms of social anxiety is concordant with the results of recent research which assessed the effect of behavioral activation on anxiety disorders (23).

In a study, the effect of this treatment on social anxiety disorder with depression in a 46-years old patient was assessed. The results after 9 sessions indicated that the symptoms of depression and anxiety decreased significantly (24).

In another study, 23 students with social anxiety disorder were treated with 8 sessions of cognitive-behavioral treatment or behavioral activation. The results indicated that both treatments had positive effects, but behavioral

activation had a greater effect in reducing depression and the scores of outcomes of negative social events, while there were no significant differences between the two groups in reducing anxiety and dysfunction. These results are concordant with the present study (25).

Although, Soleimani et al. study was conducted on 27 Iranian college students by 8 sessions of cognitive-behavioral treatment (13 cases) or behavioral activation (14 cases). The results based on the depression, anxiety, and stress scale indicated that symptoms of depression were lower significantly in the behavioral activation group, but there were no significant differences between the two groups in reducing anxiety and stress (26).

This is a pilot study that has various limitations. The samples of this research were college students with a social anxiety disorder that they were concerned as the special population with special psychological symptoms. This issue limited the generalization to other populations. Also, the structure of the treatment was brief compared to the original format, which may impact the long-time efficacy. The lack of follow-up is another limitation, especially for long-time effects.

## Conclusion

It seems that group behavioral activation can decrease social anxiety symptoms, cognitive-behavioral avoidance, and negative evaluations among patients with social anxiety.

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