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Full Length Research Paper

Effectiveness of cognitive-behavioral group therapy based on Heimberg's model of self-concept

Zahedeh Rahmanian M. A.[1]*, Bahram Mirzaian[2] and Khadije Panahande Vansofla[2]

[1]Jahrom Payam-e-Noor University, Fars, Jahrom, Postal code: 7416953557, Iran.
[2]Islamic Azad University of Sari, Mazandaran, Sari, Iran.

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The objective of this study is to review the effectiveness of cognitive-behavioral group therapy (CBGT) on girl students' self-concept based on Heimberg's model. The method of this study was an experimental type. Using Tennessee's self-concept questionnaire, 18 students (n = 9 for each group) were randomly selected into two groups: experimental group (cognitive behavioral group therapy) and control group (no treatment). After 12 session treatments (2 h per session), Tennessee's self-concept questionnaire was repeated as a post-test in both groups. Covariance test showed that CBGT based on Heimberg's model was more effective in experimental students' self-concept than in control group, with 99% confidence. Therefore, CBGT based on Heimberg's model was associated with a marked positive response in young students' self-concept.

Key words: Cognitive-behavioral group therapy, Heimberg's model, self-concept, young students.

INTRODUCTION

Self-concept, also called self-construction, self-identity or self-perspective, is a general term used in a multi-dimensional construct that refers to an individual's perception of "self" in relation to any number of characteristics that arises in early childhood and that develops a more differentiated and integrated life span. In other words, it is a person's evaluation of the self, including values, abilities, goals and personal worth (Corsini, 1999). Self-processes serve to provide organization, motivation and protection. It is like a stable core, and this perception indeed is crucial for our survival. Another order is accomplished through the linking of knowledge to motivation and feelings. Afterwards, the protection function of self-concept can be interpreted in a very loose sense, insofar as self-protection not only implies securing one's survival, maximizing pleasure and minimizing pain, but also ensuring the satisfaction of one's needs and goals in general. Furthermore, the function of the self-concept as an organizing element is linked to the social context. First, the same mechanisms that serve to establish a systematic mental representation of the inanimate world-namely by mentally positioning ourselves amidst all other objects - also operate when it comes to social invites, such as individuals, groups, and society. People perceive and judge not only matters, but also other people on the basis of self-relevant dimensions. The mental representation of our relations with others thus provides the base for the emergence of social structures. Second, many rules by which we construct our world and ourselves would not even exist without the social context. Thus, next to sufficient nourishment and hygiene, it may also be the acceptance of one's status within the group that we strive to protect, for example, by maintaining or restoring a favorable impression of ourselves by proving our superiority, or by demonstrating our solidarity with the group. The three functions of the self-concept describe the relationship between an individual and his or her environment: they describe the aims that underlay the perception, the mental processing, and the reactions called forth by any given stimulus.

Moreover, human beings have a capacity for self-reflection, that is, of themselves, and their own thoughts

*Corresponding author. E-mail: z7911529@yahoo.com. Tel: +987914441308. Fax: +9807913333353.

and actions can become the objects of their thinking. In addition, the three functions are deeply intertwined (Dorner, 2006). Therefore, having a strong self-will and self-assurance, powerful decision-making and initiative, creativity and innovation, healthy thinking and mental health have a positive correlation with the self-concept (Alaei Karhrudy et al., 2010; Mosharraf et al., 2008; Taheri and Magami, 2006; Yagmaei et al., 2006; Yar Mohammadian et al., 2004). It is clear that a student with strong self-concept has a better performance, academic achievement and creativity than their classmates, and he/she would play an important role in the society (Biabangard, 1994). Labouvie-vief's theory (1982) offers a lifespan of emotion that situates emotional development within the context of developing cognitive and ego processes. The theory suggests that emotional experiences are qualitatively restructured as the maturing individual (a) acquires a more complex form of cognition with which to reflect upon the world and (b) develops a more differentiated and integrated self-concept. Labouvie-vief (2002) recently extended her theory about modes of affect regulation, which are seen as an important component of successful self-regulation in general. It is assumed that there are two independent strategies to regulate emotion: affect optimization (AO) –" the tendency to constrain an effect to positive values" – and affect complexity (AC) – "the implication of affect in the search for differentiation and objectivity." Labouvie-vief assumes that self-regulation can be predicted by the conjoint operation of two modes, since both are vital for adaptive behavior (labouvie-vief and Meddler, 2002). One of the disorders that individuals with a low self-concept suffer from is social anxiety. Several researches showed that there is a relationship between self-concept and social anxiety in children and teenagers (Wilson and Rape, 2006; Chedoke, 2006).

One of the optimal treatments for anxiety disorders is cognitive-behavioral therapy (CBT) (Kendall, 2000), and among the various types of CBT, cognitive-behavioral group therapy (CBGT) is the best one that is manufactured by Heimberg and Becker (2002) and it is the best group of intervention that is specially set for social anxiety (Malyani et al., 2009). In other words, CBGT includes exposure in sessions, cognitive restruc-turing and homework, to help clients to get much more satisfactions in their interactions with themselves and others (Heimberg and Becker, 2002). A cognitive-behavioral view point claimed that the individuals with social anxiety have a higher criterion in their actions and ideas for their social behavioral consequences that are unreasonably negative, and they may become strict in their evaluation of their functions (Kring et al., 2009). Moreover, Spokas et al. (2004) disclosed that there is the likelihood that individuals with social phobia are faced with negative and minatory information from their surroundings, caused by the decrease in their ability to recognize and process information that may attend to understanding of threats.

There were many possibilities that they interpreted ambiguous information negatively, and memory biases play a role in social phobia. Also, it seemed that memory for information assessed negatively as well as the one related to one-self in public situations increased. Bogels and Mansell (2004) claimed that six mechanisms were involved in changing attention to processes of prevention, protection, and treatments of social phobia which were: decrease of centralization of self-attention, distraction, less consciousness, increase of accuracy control, and increase of self-confidence. Moreover, the individuals with social anxiety, in addition to having cognitive distortions and behavioral problems, are faced with low self-concept (Kendal, 2000). Biabangard (1994) clarified that the self-concept of different persons may not be influenced directly, but can be affected by changing one or several variables of behavior, cognition, affection or biology.

Salmany et al. (2005) expressed that group playing must be efficient in increasing self-concept of children in school ages. Another study on task concentration training versus applied relaxation, in combination with cognitive therapy, for patients with social phobia for blushing, trembling and sweating explained that this special cognitive-behavioral therapy was effective in social anxiety and other cognitive damages, social skills, self-consciousness, self-attention and notion deficiency (Bogels, 2006). Purbakhtiar and Golmohammadian (2009) had reported that REBT group counseling was effective in the self-concept of female college students.

Thereupon, attention is given to importance of self-concept, especially in children and teenagers in form of personality growth. Decrease in self-concept reduces an individual's capabilities, and it is a threat to public mental health. In addition, there is a relationship between social anxiety and self-concept. So, treatment such as CBGT which is a specialized remedy to SAD may have effect on the self-concept. Although several experimental researches had supported the effectiveness of CBT for psychological problems, little research has been done to support the effectiveness of CBGT on young students' self-concept. Especially, the deficiency of this area on personality growth problems has been done. This study used experimental method to answer this question, 'Is the cognitive-behavioral group therapy based on Heimberg's model effective on young students' self-concept or not?''.

METHODOLOGY

Population and sample

Several researches show that there is a relationship between self-concept and social anxiety (Christi Noriko et al., 2008). The prevalent of social anxiety at the end of childhood in girls is higher than that of boys, with estimates of 2.55 to 16% of the world and 14.6% of Iranian young students, with social anxiety that is very high (Ito et al., 2008; Essau et al., 1999; Nejad, 2002). Whereas, this study used CBGT based on Heimberg's model, a specialized

remedy to SAD. Intellectual growth in this age is more suitable than employing little children to complete the self-evaluation questionnaire. This study was intended to review the effectiveness of CBGT on self-concept of (Statistical Community) all fifth-grade elementary students (girls) in 2010 to 2011 academic year.

Statistical sample

For study of the sample number in cognitive-behavioral group therapy (in experimental group), Heimberg and Becker (2002), based on their experience, suggest that the ideal group size for CBGT is six clients. This number is small enough to allow frequent individualized attention. With six clients, each client can be under the focus of the group's effort at least one time in each session. With each additional client, this becomes increasingly more difficult to accomplish. Six clients assured not to leave sessions. Starting a group with fewer clients may increase the probability that size group may drop too low or the remaining group members may become discouraged. However, Bieling et al. (2006) typically aim to have five to seven patients per group because in their experience, participants in larger groups that tend to feel more socially-inhibited have higher rates of drop- out early in treatment, and may not get adequate attention during the session. So, by expecting the rates of drop-out in treatment, 10 members for experimental group and nine members for control group were selected; and after conducting the cognitive-behavioral group therapy, a subject from the trial group had to leave the study for being absent from session for more than three times.

Therapists

MA in Clinical Psychology was the leader in cognitive-behavioral group therapy that had passed the required courses and had experiences about CBT. Moreover, according to Heimberg and Becker (2002) and Bieling et al. (2006), it is very good to have help-therapist in CBGT, but it is not necessary. So, the leader should be able to handle sessions alone very well.

Sampling methods

In this study, random combinatory sampling method was used (cluster random sampling and simple random sampling). From all areas of Jahrom City (a city located in South part of Iran) including the central and countryside, five female elementary schools were chosen randomly and after recourse to these schools, Tennessee's self-concept questionnaire was administrated on all the fifth-grade students from the five schools; and the persons who had low rate of self-concept were chosen. After that, we told them to return the acceptance list if their parents allowed them to participate in the psychotherapy. Afterwards, 19 persons returned their acceptance list. They were set into two groups randomly and determined both as trial and control groups by lottery. The trial group participated in cognitive-behavioral group therapy for 12 sessions (2 h per session). Both groups completed Tennessee's self-concept questionnaires after and before treatments.

Instruments

Tennessee's self-concept questionnaire

This self-concept maturity questionnaire (SCM) is used for groups with 99 bits. It does not have any limitation for age and time; each item has 5 Likert scales, numbered from 1 to 5. The ranges of the scores varied from 99 to 495. In a study of Hoge and Renzulli (1993) on the self-concept of students using the Tennessee's self-concept questionnaire, it was recognized as the best tool for measurement and the reliability of the questionnaire was estimated at 0.95. The reliability of this questionnaire in Iran was examined by Chenari (2005) in a study where test-retest and interspaced used resulted in r=0.82. In another study on 30 samples of students in Bandar Torkaman (a city in Northern part of Iran), by using test-retest with interspaced, its reliability was r=0.83, and internal consistency of the questionnaire items was achieved at 0.89 (from Cronbach's alpha) (Morady, 2002).

Kavusian and Kadivar (2006) and Ostadi (2010) claim that family social situation is effective on children's self-concept. So, we intended to control family social situation, using the level of parent's propaedeutic study (higher level) as follows: 1- lower than cycle; 2- between cycle and diploma; 3-between Bachelor and Masters; 4- higher than Masters.

Procedure

The present research method is experimental using pretest - posttest with control group design. At first, Tennessee's self-concept questionnaires were administrated on all the fifth-grade students from several schools. After evaluation of the first outcomes, contribution of principal, moderator, and fifth-grade school teachers, the ability to conduct the group sessions was evaluated from the number and times of the sessions, and the sick students were randomly chosen and divided into two groups-experimental and control. Members of both groups notified their satisfaction for being in this project-therapy design. So, the information about the result of clients' tests was recorded in their files and made available to only the group therapists. At the first session, the groups were told how they would be handled and equipment was explained to them. All the persons in the groups were guaranteed of the secrecy of issues considered (secrecy principle). The blackboard and slide show was for the education of group members to help them understand issues better. The total plan was that at 20 min of the first sessions, the last session homework was checked and the problems of members were treated. After that, one hour was dedicated to the cognitive part of each sessions and cognitive restructuring and practice with members. After that, 10 min amusement and 30 min of the end of each session were dedicated to behavioral part of each session and practicing; and at the end, it was dedicated to summation and designing of the next session homework. At the end of 12 sessions (2 h per session), the Tennessee's self-concept questionnaires were performed. Outline of the meetings is as follows:

First Session: A- Member's introduction and explanation of rules of group, the program developed for the group, and briefly describing the problem and the aim of each member, representing clients' expectations of treatment outcomes. B – Brief presentation of cognitive-behavioral model and ABC model, relaxation exercise through guided mental imagery.
Session II: A - Presentation of emotional disturbance and cognitive restructuring theories, and ten styles of thinking with error, the classification of beliefs and thought processes, rest. B- Relaxation exercise through guided mental imagery.
Third session: A- survey of the behavioral consequences of beliefs, training of induction thinking, analysis of vertical downward arrows, rest. B - Relaxation practice through guided mental imagery.
Session IV: A - Advanced analysis of vertical downward arrows, content classification based on the totality of beliefs, rest. B - Relaxation practice through guided mental imagery.
Session V: A – Preparing of the original list of beliefs, cognitive maps, rest. B - Relaxation exercise through guided mental imagery.
Session VI: A - variability of beliefs, objective analysis of beliefs, analysis of standard beliefs, rest. B - Relaxation practice through guided mental imagery.

Table 1. Descriptive statistic for experimental and control group.

Groups	Type	N	Mean	Std. Deviation
Experimental group	Pre-test	9	274.77	34.390
	Post-test	9	297.44	38.464
Control group	Pre-test	9	275.33	44.619
	Post-test	9	276.46	40.258

Table 2. The effectiveness of CBGT on young students' self-concept by controlling family social situation.

Source		Type III sum of squares	DF	Mean square	F	Sig.	Partial Eta squared
Self-concept	Hypothesis	13.37	1	13.37	26.49	0.004	.848
	Error	2.39	4.74	.505[a]			
Family social situation (control)	Hypothesis	1.53	2	.763	2.39	0.130	.269
	Error	4.14	13	.319[b]			

[a]0.419 MS (social situation) + 0.581 MS (Error).
[b]MS (Error).

Session VII: A - analysis of efficacy beliefs, analysis of harmony of beliefs, rest. B- Conference presentations, role playing in social situations, providing feedback-orientation and focusing on active listening techniques.
Session VIII: A – Analysis of rational beliefs, rest. B - Conference presentations, role playing in social situations, providing feedback-orientation and focusing on active listening techniques.
Session IX: A- Creating a hierarchy of anxiety, opposite thinking, rest. B- Conference presentations, role playing in social situations, providing feedback orientation and focusing on assertive and decisive techniques.
Session X: A- perception of changes and cortical voluntary inhibition technique, rest. B- Conference presentations, role playing in social situations, providing feedback-orientation and focusing on assertive and decisive complementary techniques.
Eleventh and twelfth sessions: A – self-punishment/self- rewarding, lasting change, review and overview of recent discussions, exercises and discussion of difficult issues for members of this group, the overall content and presentation of strategies for continuing treatment after finishing the group therapy, rest. B - Conference presentations, role-playing and providing feedback-orientation focusing on the overall content, plan review (final summation), polling of members and giving a suggestion, surveying the aims of members at first session and the level of realizing them, oral and written feedback from strong and weak group points, preparing the group to finish the treatments and the closing.

RESULTS AND DISCUSSION

As it is seen in Table 1, average differences in the experimental group are more than that of the control group. That is, there has been a lot of difference in each person's pre-test and post-test and behavioral cognitive treatment increases the grades of pre-test; but in the control group, this difference is low.

Moreover, Table 2 shows that the significance of covariance test (ANCOVA) is lower than 0.01, so by 99% confidence, cognitive-behavioral group therapy is effective on the increase of young students' self-concept by controlling family social situation.

As labouvie-vief's (2002) theory assumes, developing cognitive and ego processes leads to a more differentiated and integrated self-concept. Based on the results of Bogels (2006) and Meshky et al. (2000), some techniques in cognitive-behavioral therapy are effective for cognitive damages and self-concept. This study discloses that cognitive-behavioral group therapy based on Heimberg's model for social anxiety will have a good impact both on group and individual; and it is a process that would increase young girls' self-concept. In other words, this research shows that although direct psychological techniques focusing on the self-concept are efficient (Ebrahimythaney and Hashemian, 2010; Bavy et al, 2009), some cognitive-behavioral intervene-tions indirectly can affect the self-concept by change in behavioral, cognitive and affection variables. Therefore, general hypothesis of this study is confirmed.

Generally, it is proposed that in prospective research, the effect of CBGT on other problems and disorders of young people can survive and would be assimilated with other techniques. In future, researchers can study the effectiveness of other indirect techniques for improving self-concept that may change one or several variables of behavior, cognition, affection or biological, indirectly improving public health.

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