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The effectiveness of coping strategies training with irrational beliefs (cognitive approach) on test anxiety of students

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Abstract

The purpose of this study was to investigate the effectiveness of coping strategies training the irrational beliefs (cognitive approach) on test anxiety of students in one graders of high school. The sample includes 60 students who were selected randomly, according to a multistage sampling method. They were then randomly assigned to experimental and control groups. The design of the study was of pretest-posttest control group type. Instrument used in this study was Ahvaz Test Anxiety Inventory and after and before intervention administrated to both groups. After 8 treatment sessions for experimental group and follow-up test, the result of Repeated Measure analysis revealed that the effects of coping strategies training process on decreasing test anxiety remained significant ($p < 0.05$) for 4 weeks.

Key words: coping strategies; irrational beliefs; test anxiety;

1 Introduction

In the process of growing up and changing, children and adolescents experience different kinds of anxieties and sometimes these anxieties are so severe, that make their education and daily life difficult and hard. One of these anxieties is test anxiety. Test anxiety as an important and usual instructional phenomenon has a close relationship with the children and adolescents' educational improvement and function (Abolghasemi, 2002).

Test anxiety is a morbid state of anxiety in educational situations, which can lead to decreasing the educational function, weakening the learning and decreasing the scores of lessons. And also, Ellice believes that anxiety and emotional disorders are the results of the way of illogical and unreasonable thinking (Shafi Abadi & Naseri, 2002). Test anxiety is one of the common obstacles in complete exploiting the previous information and knowing. Test anxiety is an unpleasant emotional expression that linked to behavioral and physiological matters and is experienced in formal tests or other assessment situations (Dusek, 1980, quoted from Abolghasemi, 2002). According to the estimation performed by researchers (Alisina-Jurnet, 2007; Troyn, 1980), the reported prevalence of test anxiety in students and students of university is between 10 to 30 percent. Meichenbaum emphasized on the importance of cognitive variants in curing test anxiety. He observed that the students who suffer from test anxiety had been distracted by negative self statements (Sobhi Gharaamakli, 2006). Researches (Wine, 1971; Troyn, 1980 ;Sarason, 1984; Meichenbaum, 2007) showed that persons who suffer from test anxiety, have negative self-estimations about themselves, which cause confuse them at the time of testing. Boutin & Tosi (1983, quoted from Abolghasemi, 2002) studied the effectiveness of the methods of Ellice's reasonable and excitement healing and hypnotism on the students who suffer from test anxiety. The results showed that the experiment group's test anxiety in post-test and tracking stages (two months later) decreases meaningfully. Ellice's excitement- reasonable way of cure was the most effective way and cause significant and positive changes in the students' reasonable thoughts and beliefs. Croker (2000) compared the effectiveness of reasonable-emotional-behavioral healing with curing the regular removing the

sensitiveness. The results showed that there is no difference between these two methods of healing and both of them have the same effect in decreasing the students' test anxiety. It is clear that as soon as we can recognize the students' test anxiety and decrease it by checking methods, it is more possible that we can prevent their falling in education, behavioral and emotional disorders. So, the aim of this research is studying the effects of educating different methods of facing with unreasonable beliefs (cognitive approach) on decreasing the students' anxiety in first class of high school.

2. Methodology

2.1. Research design

This study is experimental in design through the use of control and experimental group with pretest – posttest and follow up.

2.2. Sample and sampling method

The society of this research involves all boy students in first class of high school, who were taught in governmental high school in the province of Shahryar. The sample included 60 boy students in first class of high school who suffer from test anxiety and selected by the method of multi-stages random sampling.

2.3. Instrument

Ahvaz test anxiety inventory has been formed using the statistical method of analyzing the factor for measuring the symptoms of test anxiety by Abolghasemi, Asadi Moghadam, Najjaryan, and Shokr kon (1996). This questionnaire is a pencil-paper self-reported scale that has 25 items, and the students answer the questions by selecting one of the options (never, rarely, sometimes, and most often). These options have the points 0, 1, 2, 3, and getting the higher score shows that the test anxiety is high. And also, minimum and maximum scores in this test were 0 and 75. Abolghasemi et al. (1996) obtained the Alpha coefficient for the overall sample, which were girl students and boy students as 0.94, 0.95, and 0.92, respectively.

3. Results

Table 1 shows the statistics like mean and standard deviation in both control and experimental groups.

Table 1. The mean and standard deviations of students in three steps

Group	pretest		Post-test		Follow up		total	
	mean	Standard deviation	mean	Standard deviation	mean	Standard deviation	mean	Standard deviation
Experimental group	58/7	5/79	30/53	12/13	23/46	11/77	37/57	1/39
Control group	58/9	6/51	54/86	7/99	54/57	12/25	56/11	1/39
Total	58/8	6/11	42/70	15/95	39/02	19/69	-	-

As it can be seen in this table, the means of the scores of these two groups in pre-test step are almost similar to each other ($\bar{x}_1 = 58.7, \bar{x}_2 = 58.9$), whereas the mean of these groups in post-test step (after performing educational program in experimental group) showed meaningful differences ($\bar{x}_1 = 30.53, \bar{x}_2 = 54.86$) and also in follow up this decreasing procedure was continued in experimental group but there had been no significant difference in control group ($\bar{x}_1 = 23.46, \bar{x}_2 = 54.57$).

For studying the research hypothesis using analysis of variance with repeated measure, we compare the means of two experimental and control groups in three steps of pre-test, post-test and follow up (statistical program of one inside and one between), and finally, we study the results of the effect of ways of facing with unreasonable beliefs (cognitive approach) on the students' test anxiety.

Table 2: The effects of time interaction with the group and main effect of group

Source	Kind of test	sum of squares	df	Mean of Square s	f	significance	Size of effect	Power of test
Time and Group	Establishing the presumption of Kervit	7915/08	2	39/57	69/88	0/0001	0/55	1
	Green house giser	7915/8	1/84	4305/3	69/88	0/0001	0/55	1
	Hevin felet	7915/08	1/93	4104/02	69/88	0/0001	0/55	1
	The lower limit	7915/08	1	7915/08	69/88	0/0001	0/55	1
Group		15475/34	1	15475/34	88/63	0/0001	0/60	1

According to the results of table 2, we observed that there is meaningful difference between the anxious students' scores in steps of pre-test, post-test and follow up of the control and experimental groups ($F_{2, 116} = 69.88$, $P < 0.05$), and regarding the results of table 1 we can conclude that the experimental group's scores (which was 58.70 in pre-test) after teaching the ways of facing with unreasonable beliefs (cognitive approach) decreases in post-test, significantly (30.53) and this process was continued in follow up step (23.46). The control group's scores in these three tests had a decreasing trend but the acceleration of this process in comparison with the acceleration of decreasing trend in experimental group was gradually and it seems that there is no significant difference. These results suggested that teaching the ways of facing with unreasonable beliefs (cognitive approach) affect the students' test anxiety and its continuity, positively.

And also table 2 shows that there is meaningful difference between the students' scores in pre-test, post-test and follow up steps in two control and experimental groups ($F_{1, 58} = 88.63$, $P < 0.05$) and regarding the results of table 1, the experimental group's scores was lower than the control group's scores.

4. Discussion and conclusion

The results of this research suggested that the interventional methods affect the decrease in the boy students' test anxiety in first class of high school and the mentioned hypothesis is confirmed. It should be noted that the results of this research are parallel to the findings of researches (like Espilberger, 1976; Mouriss & Libert, 1967; Meichenbaum 1985; Benjamin et al, 1981; Feltcher & Espil berger, 1980; Boutin & Tosi, 1983; Amiri, 1996; Mojtahedi, 1998; Biabangard, 2000; Abolghasemi, 2005; Elahifard, 2008; Haghani, 2007). These researchers believe that the aim of cognitive healings is helping to persons or reaching the responses adopted with test anxiety. Cognitive healings help students to focus on assignment and not focusing on the unrelated responses. In cognitive healings, the therapists informed students the thoughts that cause test anxiety and instruct them to state their feelings and remove their defective cognitive responses, and also teach them to adopt reasonable ways through identifying cognitive distortions and negative self-statements in interpreting the feelings. And also researchers studied the effects of Ellice's emotional-reasonable healing on the other anxieties, like Procter & Hafner (2002) who studied the effect of this healing on general anxiety and Elko & Ostrow (1991) who studied the anxiety in sport competitions. Regarding the effects of way of thinking and type of assessment, which the students perform about their operations, it was attempt in interventional meetings that the anxious students know that the test is a result of their unreasonable thinking, because these thinking prevent them from reaching to their goals. Secondly the students should know that they inspire these unreasonable beliefs about test anxiety to themselves, because these trends help them to maintain their anxieties, so, they should try to change these unreasonable beliefs and this can affect their tests. The obtained findings show that by holding eight educational meetings, the level of students' awareness get higher about their anxieties. In these meetings, the ways of facing with unreasonable beliefs were taught that cause to decrease in anxiety. And emphasize was on the changing the defective cognition. This research was performed on the boy students in first class of high school and is not generalized to other groups. It is suggested that to consider a program for instructing the students' parents the ways for facing with unreasonable beliefs. And also it is proposed that

regarding that suffer from anxiety from a certain lesson; the anxiety of a certain lesson can be the subject matter of future researches.

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