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## Determining Effectiveness of Teaching Coping Skills and Stress Management in Increasing Academic Achievement of Nursing Students in Islamic Azad University

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**Abstract** The present study aimed to determine effectiveness of teaching coping skills and stress management in increasing academic achievement of nursing students in Islamic Azad University. For this purpose, 32 students who volunteered to participate in training sessions were selected and divided into experimental and control groups. For data collection, Coping Skills and Stress Management Questionnaire and GPA of the previous semesters before and after training were used. The results showed that teaching coping skills and stress management effectively increases the students' academic achievement during period of the project ( $P < 0.001$ ). It is concluded that teaching coping skills and stress management significantly and effectively increase the students' academic achievement.

**Keywords:** teaching coping skills, stress management, academic achievement

### Introduction

Stress is a natural and inevitable aspect of contemporary life, which is defined in different ways (Hockley, 1983). Some defined stress as mental pressure or stress. Others referred to stress as human physiological response to environmental threatening stimuli (Le Doux, 1998). Scholars have addressed that physical, cognitive or emotional factors cause stress. Cognitivists believe that body, mind and emotions are inseparable components of humans. This was regarded as a dominant approach in the contemporary psychology. It should be noted that each component, i.e. body, mind and emotions, consists of multiple integrally intertwined elements, which would develop behavior in an interactive network (Lazarus, 1999).

Education refers to knowledge transfer and individual capability to either undertake a task or a change ideas and feelings. Education aims to facilitate learning and create pleasant individual experience (Asadi Naghabi, Zandi and Nazari, 2010). The mission of educational system lies in development of diligent human beings who desire to be liberated from inherent numerous and diverse constraints and pave the way for evolution (Saberian and Haji Aghayi, 2006). Medical practitioners who attempt to save human life also deal with numerous stressors due to high psychological demands, small scope of decision-making practices in their careers, the need to learn multiple skills, knowledge for their different and extensive roles, especially students of School of Nursing and Midwifery (Rezai and Hosseini and Fallahi Khoshknab, 2006).

These student should deal with clinical environment stress in addition to the stress caused by a learning environment. This is because approximately 50% of the time of the students is devoted to clinical activities (Abazari, Arab, Abbaszadeh and Rashidi Nezhad, 2004). If the students fight stress, their motivation for learning will increase. However, high level of threatening stress can lead to academic failure and prevent emergence of potential talent and flourished creative ideas. This can also impair the students' efficient performance (Bandura, 1986).

Changes in relationships with family and friends, adjustment with new tasks and content, caring for ill and dying patients, tolerating the patients' suffering, fear of making a mistake at patients' beds, dealing with communicable and dangerous diseases can seriously affect these students and can even lead to anxiety and depression (Hayati and Mohammadian, 2008).

Coping refers to the efforts made to manage and control seemingly dangerous and stressful situations (Al klineke, 2001). Lazarus and Fullkman (1984) defined coping as intellectual, emotional and behavioral efforts in dealing with psychological pressure in order to overcome, tolerate or minimize the effects of stress (Dafei, 1999). In fact, coping resources are inherent individual characteristics prior to stress such as self-esteem, sense of control over the situation, cognitive styles, locus of control, self-efficacy and problem-solving capability (Vafayi Pour, 2000).

Lazarus and Fullkman believed that there are two of coping strategies as problem-focused and emotion-focused. Problem-focused coping strategies aim to dominate the situation and change the stressor. Emotion-focused coping strategies aim to reduce or rapidly convert emotional distress (Barahani, 2005).

In recent decades, the academics emphasized the practices to adapt to stress and their effects on various individual social functions such as educational and professional activities. The results of some studies have shown that students use different methods to deal with stress. One effective factor in academic achievement in high school les in the strategy an individual adopts to deal with stress (Maddi, 1984).

According to the above-mentioned materials, the present study aimed to determine the effectiveness of teaching stress management and coping skills in academic achievement of nursing students in Islamic Azad University, Bandar Abbas.

### Methodology

This was a semi-experimental study with pretest, posttest. The participants consisted of both male and female nursing students who were divided into control and experimental groups.

**Table 1.** Diagram of the project relevant to male participants

Groups	Random selection	Pretest	Independent variable	Posttest
<b>Experimental</b>	RE	T1	X	T2
<b>Control</b>	RC	T3	-	T4

**Table 2.** Diagram of the project relevant to female participants

Groups	Random selection	Pretest	Independent variable	Posttest
<b>Experimental</b>	RE	T5	X	T6
<b>Control</b>	RC	T7	-	T8

The statistical population consisted of 3862 male and female students in Bandar Abbas. In this study, 57 male and female students participated. These students volunteered to participate in the study after a call for students to participate in educational sessions whose contents encompassed stress management, coping skills and academic capabilities. The participants were interviewed in terms of daily life stress. Stress management questionnaire was applied to the participants. The

individuals whose mean scores on the questionnaire was lower than average had high levels of stress and were eligible to participate in the sessions. Therefore, 32 students with high levels of stress were selected as sample size. The subjects were randomly assigned to two experimental and control groups (16 individuals in the experimental group and 16 individuals in the control group). The collected data was analyzed.

**Research Tool**

**Coping Skills and Stress Management Questionnaire**

The main form of the questionnaire contained 45 items. The items are answered based on a five-point Likert scale. The questionnaire consisted of four factors as assessment of the situation, response to stress, resourcefulness, adaptability and flexibility. Khayer and Saif (2004) assessed internal consistency of four components of the questionnaire and the overall questionnaire using Cronbach's alpha. These results were obtained from 0.38 to 0.78 for the four subscales and as 0.77 for the entire questionnaire. The questionnaire had acceptable reliability. Nezami (2007) conducted a study on veterans and obtained reliability of the questionnaire as 0.82. In this study, reliability of the entire questionnaire was obtained as 0.89 through Cronbach's alpha.

**Research Training Sessions**

The intervention only involved the experimental group and no intervention was implemented in the control group. At beginning of the training sessions, academic achievement and stress levels were determined based on the students' GPA in previous semesters as well as Coping Skills and Stress Management Questionnaire. Then, 32 individuals were divided randomly into two experimental and control groups. Prior to sessions, academic achievement was determined in the two experimental and control groups (pretest). The pretest results were compared with post-test results (in terms of academic achievement at the new semester) in order to determine effectiveness of training sessions. Thus, the sessions were held in eight sessions for two months, each session lasted for one and a half hour. In the first month, coping skills were presented. In the second month, stress management methods were given.

**Table 3.** Effectiveness of coping skills and stress management training sessions in academic performance

Session	Content of each session
1	Getting familiar and establish relationships with the participants, explaining the benefits, objectives and rules of group counseling, identifying the effect of stress on participants, identifying stress-related symptoms in the participants, getting familiar with stress causing factors and stress symptoms, determining the role of behavior, cognitive and emotional stress
2	Understanding the relationship between stress and diet, identifying personality changes caused by stress and coping methods
3	Getting familiar with self-reliance, self-restraint methods, seeking social support, responsibility
4	Getting familiar with evasion or avoidance, strategic solution to a problem and re-evaluation
5	Identifying dysfunctional stressful thoughts and challenging them, identifying dysfunctional thoughts associated with academic achievement and factors related to anxiety, replacing irrational thoughts with rational ones in terms of academic stress
6	Stress management via relational training, muscular relaxation training
7	Stress management via assertiveness training (self-assertiveness) and problem-solving, checking how much the given trainings were applied, reassessing the participants with tools
8	Group discussions about contents of the previous group meetings, determining how and when to re-visit to be evaluated in terms of academic achievement in the new term - Conclusion

After a week, the individuals in both experimental and control groups were occupied with their final term exams. Their academic achievement was also measured in the new term in order to compare pre-test and post-test scores. The content of training sessions are separately given in the following.

The t-test and analysis of covariance were used to evaluate effectiveness of the interventions and control pre-test scores. SPSS was used for statistical operations.

### Results

Contents of Table 4 show that assumption of equality of variances for scores of both variables in experimental and control groups was confirmed. Thereby, analysis of covariance could be used for analytical statistics. In each variable, posttest scores, dependent variable and the effect of pre-test (as covariate) were controlled using analysis of covariance.

**Table 4.** Levin’s test results for assessing equality of variance of scores in experimental and control groups at posttest

Variable	F-value	df1	df2	Significance level
<b>Coping skills and stress management</b>	1.49	1	30	0.278
<b>Academic achievement</b>	2.14	1	30	0.176

**Table 5.** Results of analysis of covariance relevant to effect of coping skills and stress management on academic achievement among male students in experimental and control groups

Dependent variable	Source of variation	Sum of squares	Degree of freedom	Mean of squares	F	Significance level	Impact factor	Statistical power
<b>Academic achievement</b>	Pretest	6.67	1	6.67	7.11	0.01	0.35	0.69
	Group	31.55	1	31.55	32.62	0.001	0.72	1.00
	Error	12.19	13	0.93				

Analysis of covariance was used to examine this hypothesis. Contents of Table 5 show a significant difference between mean scores of experimental and control groups in terms of academic achievement at posttest after controlling pre-test scores ( $p=0.01$ ,  $F=7.11$ ). Moreover, the independent variable had a significant effect on the dependent variable (academic achievement). There was also a significant difference between experimental and control groups ( $P<0.001$ ,  $F=32.62$ ). Therefore, the third hypothesis claiming the significant effect of coping skills and stress management on academic achievement among male students was confirmed.

**Table 6.** Results of analysis of covariance relevant to the effects of coping skills and stress management on academic achievement of female students in experimental and control groups

Dependent variable	Source of variation	Sum of squares	Degree of freedom	Mean of squares	F	significance	Impact factor	Statistical power
<b>Academic achievement</b>	Pretest	1.97	1	1.97	1.11	0.30	0.08	0.16
	Group	27.29	1	27.29	26.18	0.001	0.66	0.99
	Error	13.55	13	1.04				
	Total	4014.00	16					

Analysis of covariance was used to examine this hypothesis. Table 6 show no significant difference between mean scores of experimental and control groups in terms of academic achievement at post-test ( $p=0.30$ ,  $F=1.14$ ). However, the independent variable had a significant effect on academic achievement. There was also a significant difference between the experimental and control group ( $P<0.001$ ,  $F=26.18$ ). Therefore, the fourth hypothesis was confirmed, which claimed significant effect of coping skills and stress management on academic achievement of students. The results showed that pre-test results had no significant effect on post-test results.

### **Discussion**

The present study aimed to determine the effectiveness of teaching coping skills and stress management on academic achievement. The effect of teaching coping skills and stress management on academic achievement of nursing male and female students of Islamic Azad University was studied. Analysis of covariance was used to evaluate the effectiveness of teaching coping skills and stress management on academic achievement. The results showed that teaching coping skills and stress management significantly and effectively increased academic achievement of male and female students. These findings are consistent with results of previous studies, which confirmed that academic achievement of the students will increase by reducing their stress and anxiety.

It should be noted that these students had high levels of stress at the beginning of the project. They were taught eight stress management and coping skills during training sessions. Thus, academic achievement of male students increased at university by reducing stress at the end of training sessions. Several studies focused on negative impact of stress and anxiety on academic achievement. This study also cited this issue. Therefore, students' motivation for learning will increase if they fight stress. High level of uncontrollable stress prevents emergence of potential talents and capabilities and impairs academic achievement. Thereby, the study specifies the importance of teaching coping strategies and stress management. Like any other research, this study is not without limitations. Individual attitudes toward the applied test, individual cooperation with the scholar, individual honesty and interest in using teaching methods and answering the questionnaire items could not be controlled by the scholar and would affect the results.

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