Original Article

Zahedan Journal of Research in Medical Sciences

Journal homepage: www.zjrms.ir

Effectiveness of Stress Management Cognitive-Behavioral Therapy on Psychological and Physiological Indexes of Patients

Vahideh Montazeri-Khadem,[*1] Hamid-Taher Neshat-Dust,[2] Mehrdad Kalanteri,[2] Rezvan Sadr-Mohammadi[3]

1. Department of Psychology, Islamic Azad University, Zarand Branch, Kerman, Iran
2. Department of Clinical Psychology, Isfahan University, Isfahan, Iran
3. Department of Clinical Psychology, Work Higher Education Institute of Rafsanjan, Rafsanjan, Iran

Article information

Article history:
Received: 3 Sep 2011
Accepted: 19 Oct 2011
Available online: 24 Oct 2012
ZJRMS 2012; 14(10): 43-46

Keywords:
Cognitive therapy
Stress
Anxiety
Depression
Surgery

*Corresponding author at:
Department of Hematology,
School of Medical Sciences,
Tarbiat Modares University,
Tehran, Iran.
E-mail:
Montazari87@yahoo.com

Abstract

***Background*:** The purpose of this study was to determine the effectiveness of stress management cognitive-behavioral therapy on psychological indexes (anxiety and depression) of patients volunteer to surgery.

***Materials and Methods*:** The design of research was Quasi-experimental with pre-post test type, and control group. 26 subjects were selected on the list of elective surgery in March 2009 had been assigned randomly to experimental (N=13) and control group (N=13). Stress management intervention was conducted in experimental group and were under no intervention in control group. Test anxiety by Spilberger, depression by Beck depression were measured.

***Results*:** Destabilizing Middle data using covariance analysis was used. Results showed that test scores of anxiety, depression compared to the experimental group had a significant reduction ($p< 0.05$).

***Conclusion*:** Stress management cognitive-behavior intervention can be a elective psychotherapy.

Introduction

The most common and complex surgical techniques most have treatment the method of unrest and fear that the failure to predict or control can be. When human health is threatened (true or false) tension that can arise in physical and mental performance [1] before surgery, patients are usually suffering from stress, anxiety and fear of the unknown is one of important factors is [2]. 22% of patients are anxious before surgery and long-term position in this situation has a serious impact on mental and physical health and long recovery-does [3]. As anxiety, pain has a negative impact on healing and tissue repair. Too much anxiety and pain during physical and mental energy to stimulate the system, autonomic, muscle tension and increase the production of corticosteroids [4].

Surgeons believe that patients who expect to die during surgery, intraoperative die. Kimp with psychological adaptation of patients before surgery showed mortality risk in patients who deny their anxiety, over those who have expressed anxiety and depression and improve outcomes including surgical factors include: positive attitude, informed consent, patient education (the surgical approach), how a tolerance for pain, family support before and after surgery [5]. Some researchers believe, because the subjects of clinical anxiety and depression scores and non-clinical different scale are highly correlated with each other this 2 part of the overall structure of negative emotions that are [6]. Past pattern of stress management programs were purely mechanical, and physical health symptoms were the cause and seek to eliminate the causes was not, the stress was re-appear. But today, with a variety of stress management, relaxation, visualization techniques to reduce anxiety and cognitive-behavioral, cognitive restructuring, coping effectiveness training, anger management expressiveness and combined [7].

Stress management in accordance with a fourth theory component and a specified sequence, educational process four steps to increase awareness, assessment activities, and coping responses to anger management division. Simple to operate this program in advance of coping strategies and ultimately the individual is between activities. The goal of stress management programs cognitive-behavioral increasing sense of control, self-efficiency, self-esteem, fight efficiently, improving quality of life and decreased negative mood and social isolation [8]. People usually know of illnesses, symptoms and consequences are anxious that trigger the disease in patients who need surgery, is more severe in developed countries physicians to inform patients about the proper ways of training. Considering what an important role in the treatment of anxiety and its relation such patients was expressed by some psychological problems. The present research with consideration to the character and surgical stress management techniques and cognitive behavioral interventions as a way of dealing with a process improvement and reduction of psychological disorders (anxiety and depression) makes clear.

Materials and Methods

This empirical research project, the two groups (experimental and control groups) is associated with two-stage pre-test. Independent variable cognitive-behavioral therapy that was applied only in the experimental group and its effect on test anxiety and depression scores of patients were tested before surgery and control groups were compared. The study, all patients who had abdominal surgery to the government hospital in Rafsanjan, on March 88 had been referred. Using cluster random sampling, two hospitals (maternity Nick-breath and Moradi Hospital) were selected from 60 patients operated on the list, 26 patients with moderately severe anxiety (Spielberger anxiety scores 50-70) and moderate to severe depression (depression score 29-19) respectively. After the initial description of the methods and objectives of study and obtain informed consent. As the subjects selected and randomly divided into control and experimental groups. In each test and control groups were 13 cases (N=13). Stress management of cognitive-behavioral techniques, relaxation techniques and cognitive techniques for behavior that program objectives are:

1- Gather information about resources for people with stress, stress responses in human nature and types of coping strategies used in dealing with stress. 2- Progressive muscle relaxation skills to reduce anxiety such as relaxation and visualization. 3- Modifies cognitive assessment incompatible with the use of cognitive restructuring. 4- Promoting interpersonal and communication skills to resolve conflicts through education and anger expressiveness. 5- Increase access to social support networks through the use of interpersonal and communication skills improved [9].

Time after 5 sessions each session was 90 minutes to two days per week, which was conducted over three weeks; generally these meetings are as given in table 1.

The questionnaire was the following: 1- Questionnaire for demographic data (age, sex, marital status, educational level, residence, occupation and type of admission) and clinical information (including history of hospitalization, previous surgery, hospital stay before surgery, history of present illness and type of surgery) 2- State Anxiety Inventory-Trait Spilberger. This questionnaire was presented in 1970 by Spilberger and was revised in 1983. The revised form has 40 questions. The questionnaire consisted of two parts-is [10] anxiety (state) and state anxiety (trait). Taylor anxiety scale correlated with the scale of 79.0-83.0 and the correlation between trait anxiety and emotional characteristics list of 52.0-58.0 has been reported. Coefficient alpha of this questionnaire, the state-trait anxiety scale mode, 92.0 and the property 90.0 has been reported [11].

3- Depression Inventory Beck: The questionnaire consisted of 21 multiple choices a (0-3) are and each term is a measure of psychological state. Symptoms of this test in three groups of 7 female including evidence of sensational motivational and cognitive and physical symptoms can be separated. Beck first time in 1961, has developed this test and his goal was to measure the frequency of depressed patients [12].

Analysis of data obtained was performed using SPSS-16 software. Data analysis was both descriptive and inferential. Descriptive level indicators such as mean and standard deviation were used. Inferential level research hypotheses were tested by analysis of covariance.

Results

Demographic characteristics in this part of the demographic variables including age, sex, education, history of hospitalization and surgical history and marital status, an overview is given in table 2.

In order to test the parametric the default should be respected. The default normal distribution of scores, the test examines Shapiro Willk is based on the difference between the distribution of scores and scores of normal distribution in society [13].

The results show that the variable is not normal to be (p<0.05). Default equality of variance, Levin was evaluated by testing. Results default not be rejected in the case of variables (p<0.05).

As that was was specified, the default normality and equal variance between the variables in the case is confirmed, the use of covariance analysis as a parametric test is permitted findings from analysis of covariance shows We can say with 95% confidence between the mean scores of variables (trait anxiety, state anxiety and depression), there are significant differences in the two groups (p=0.0001). High effect size (72.0, 93.0, 77.0) show greater differences in scores between experimental and control groups, due to the stress management intervention. The statistics show that the probability of a type II error is low and has proper ability to generalize results.

Table 1. The general topics of intervention sessions

Meeting	General meeting as
1	Behavioral stress management techniques stress definition, the gradual relaxation of 16-muscle
2	Cognitive appraisals+ progressive 8-muscle relaxation with visualization
3	Progressive 4-muscle relaxation and outogenic traing, and coping strategies
4	Meditation and anger management, passive muscle relaxation, and the fourth autogenics with imageny
5	Assetiveness raining + passive 4-muscle relaxation and imagery four counts breathing and meditation by the sea

Table 2. Overview of the demographic characteristics of the samples studied

Specifications	Average age	Female	Males	Diploma	Above Diploma	License	Admission	Not admitted	Surgical history	No history of Surgery	Single	Married
Experiment group	53.23	10	3	8	2	3	4	9	4	9	3	10
The control group	76.28	10	3	9	4	-	3	10	5	8	3	10

Discussion

In this study, stress management, cognitive-behavioral anxiety before surgery, patients in the experimental group than in the control group test has been effective. In other words, the test group and control reduction of anxiety in the independent variable, there was a significant difference.

The findings with the findings by Parker et al. [14], Sikars et al. [15] and Hallon et al. [16] also have reading stress stimulates the adrenal glands and stimulate the sympathetic system, which increases during the complex process of respiration, heart rate, pulse rate and pressure- and the person suffering from repeated and chronic high blood pressure and other diseases will [17].

One way to deal with stressors of progressive muscle relaxation techniques of stress management techniques of cognitive is behavior, which seems to be that are using this technique can be physical adverse effects eliminates the stress and the symptoms caused by these destructive agents prevented progressive muscle relaxation techniques to create balance in the posterior hypothalamus and the anterior hypothalamus is, thus preventing the undesirable effects of stress and anxiety and time that when people asked that positive thinking will replace negative thoughts, better judgment and before surgery had less anxiety. When the patients had a mental image of the surgery and ready to act on what will happen and that it and about their fears regarding the operation talk to each other or when the train. The relaxation was used, conquer their anxiety better [18]. The covariance analysis results indicate Stress Management Effectiveness of cognitive-behavioral tests on depressed patients before surgery group than in the control group's posttest. These findings with the findings Hallon et al. [16] and Hope et al. [18] time-was read.

Susceptibility to depression, cognitive style and your personality is closely linked to autonomy and people-oriented shows. Based on individual assessment of their personal autonomy and control of progress can-be. These people feel down during the depression, self loathing, self-blame, guilt and despair are experiencing irritable [19].

People-oriented person is needed to confirm the others in style and emphasis on maintaining independence and avoiding exclusion. Depression in people with symptoms such as feelings of being ignored and being who become, alone, abandoned and desperate to be seen [20] .

Cognitive-behavioral therapy, including specific applications and empirical focus is on cognition and behavior, but the emphasis is on changing thoughts and understanding, the result is that some clients are challenged with thoughts of failure, one of the most useful interventions to treat mental disorders such as anxiety and depression, cognitive-behavior. Cognitive interventions proven to reduce of distress and changing the mode cannot be far away from our problems or is supposed to happen in the future, changes to provide stability [20]. Considering the limitations of this study include lack of cooperation in order to follow up patients and greater number of patients who participated in the study is that caution in generalizing the results to be respected by men, the ultimate impact of cognitive behavioral stress management for patients requiring mental health services are emphasized.

Acknowledgements

This article is taken from her thesis master's degree in psychology Vahideh Montazeri Public Servant of the Islamic Azad University_ Zarand Branch, code is 2112076882022.

Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

Funding/Support

Islamic Azad University, Zarand Branch.

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Please cite this article as: Montazeri-Khadem V, Neshat-Dust HT, Kalanteri M, Sadr-Mohammadi R. Effectiveness of stress management cognitive-behavioral therapy on psychological and physiological indexes of patients. Zahedan J Res Med Sci (ZJRMS) 2012; 14(10): 43-46.