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The Effectiveness of Group Training Stress Management in a Cognitive-Behavioral Manner on the Reduction of Stress, Anxiety and Depression and the Enhancement of the Personal Well-Being of I.C.U Employees of Hospitals

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Abstract This study aimed to determine the effectiveness of group training stress management in a cognitive- behavioral manner on the reduction of stress, anxiety and depression and the enhancement of the personal well-being of I. C. U employees of hospitals. The pattern of present research is quasi-experimental and pretest-posttest kind with control group. The statistical population was all the employees of I. C .U parts of all hospitals in Bandar Abbas among which one hospital has been chosen randomly and all the employees of that hospital were as the sample of study. 30 people who were willing to participate in the study were selected and were divided into two test and control groups, ultimately. The scale of depression, anxiety and stress 21- question form (DASS-21) and adult personal well-being scale (Cummins, 2004) were used to collect data. The stress management training workshop program in cognitive - behavioral method was performed in 10 sessions of 1.5 hours on the samples. Covariance analysis was used for data analysis by observing the assumptions. The results of present research showed that the effectiveness of group training stress management in a cognitive-behavioral manner is effective in the reduction of stress, anxiety and depression and the enhancement of the personal well-being of I.C.U employees of hospitals ($P < 0.05$). These trainings are also effective on increasing the personal well-being of employees in I. C. U. part ($P < 0.05$). These results suggest that the program of stress management training in a cognitive-behavioral method leads to the reduction of negative emotions, consequently depression and increases the employees' personal well-being.

Keywords: stress management in a cognitive-behavioral method, stress, anxiety, depression, personal well-being

Introduction

One of the effective factors on the performance of individuals in organizations is stress in the organization that has put a lot of people's health at risk. Therefore, the stress has been proposed as one of the main topics of organizational behavior in the last decades (Khalili Shurinin, Ataei, Sajjadi, 2010). There is no doubt that the concern of people toward work, social problems, economic status, organization publications and expectations of employees, technological advances, concerns and fears of outdated information and data, management problems and expectations of employee all make the person to constantly have many pressures, emotions, worries, fears and hopes from the moment of waking up in the morning until the sleeping time at night. Sometimes it is proportionate with physical, psychological and nervous capacity of the person and sometimes it is not compatible and the set of these states and pressures are called tension or occupational stress (Lotfi Zadeh et al., 2011). Based on the theories of work psychologist, the occupational stress is one psychological factor which is always imposed on the workers and is responsible for many physical and mental

diseases. Primarily some jobs are more stressful than the other jobs. Nursing profession is one of these full tension jobs. Nursing is an important component of quality health care and nurses play a vital role in a country's health care system (Fletcher and Gones, 1993). Many researchers have done extensive researches on the occupational stress and its effects on organization. The results of the conducted studies show that experiencing stress in work place would accompany with inappropriate effects for both peoples' health and hygiene and for welfare and health of organizations (Gates, D.M., Gillespie, G.L., and Succop, 2001). Basically, some jobs are more stressful than the other jobs. Nursing profession is one of these full of tension jobs. According to another study that was conducted in Japan on the psyche of nurses, 89% of respondents to the stress questionnaire have expressed their occupation stress (Ito et al., 2004). The result of study which was conducted on 168 nurses in Hong Kong shows that 75.8% of participants in this study have introduced their job as stressful (Callaghan, P. et al., 2000).

In the past few decades, different research and interventions have been done on the stress management and its effects on improving physical and mental hygiene. The results of these researches indicate the direct and indirect impact of stress management on the improvement of mental disorders and physical problems (Anthony et al., 1998; Slade, 2010). Heron et al (2011) show in a study that people who have participated in training workshops of stress-coping methods had better viewpoints toward the principals of coping with stress. One of these interventions is stress management by cognitive-behavioral method and its aim is cognitive remodeling and changing the person' maladaptive ideas and teaching the coping skills that will affect the behavior and the emotion, as well. The researches show that the stress management training by cognitive-behavioral method have a positive effect on various occupational groups (Khadivi , Zargar and Davodi, 2012; Eidi, Khadivi, Davodi, Ahmadian and Zargari, 2013; Hamid, Mehrabizade Honarmand and Karimi 2012). However, the effectiveness of this therapy on nurses in the I. C. U has not been considered yet. The effectiveness of this intervention on the personal welfare of people is not been considered as well. Personal well-being point to this meaning that how people think and feel about their life in general and about its specific areas based on the personal standards. The high quality of life is associated with general well-being, life -worth feeling, and low quality of life is associated with dissatisfaction and even indifference to life (Mohler-kuo and Dey, 2012). Studies show that the condition provides an increase of coping skills, reduces stress and promotes well-being (Mc Horney and Fleishman, 2006). The aim of this study is to determine the effectiveness of group training stress management in a cognitive behavioral manner in order to reduce stress, anxiety and depression and enhance the personal well-being of I. C. U employees of hospitals.

Methodology

The present study is quasi-experimental. The statistical population was all the employee of I. C .U parts of all hospitals in Bandar Abbas among which one hospital was chosen randomly and all the employees of that hospital were as the samples of study. 30 people who were willing to participate in the study were selected and were divided into two test and control groups, ultimately. The sampling method in present research was based on the goal.

The following questionnaires were used to collect the data:

A: depression, anxiety and stress scale 21 -question Form (DASS-21)

Depression, anxiety and stress questionnaire (DASS) was made by Lovibond and Loviband in 1995. This scale has been formed from 21 items related to negative emotions signs

(depression, anxiety and stress).
The subjects should grade the frequency of considered symptoms during last week by using 4 degrees scale (between 0 and 3). Each one of the three scales of depressions, anxiety and stress has 7 questions. Lovibond and Loviband (1995) show that DASS anxiety subscale has a 0.81 correlation with Beck's Anxiety Inventory (BAI) and DASS depression subscale has a 0.74 correlation with Beck's Depression Inventory (BDI), which represents appropriate convergent validity of the test. The validity and reliability of these instruments were examined on 1070 men and women in Iran. The correlations between the DASS depression subscale with the Beck's Depression Inventory were 0.70, DASS anxiety subscale with Zung anxiety test were 0.67 and DASS tension subscale with perceived tension subscale were 0.49. Men and women' scores in this test were significantly different (Sahebi, Asghari and Salari, 2005).
B: Adult personal well-being scale (Cummins, 2004): Adults personal Well-being Scale (Cummins and Lu, 2004) contains seven subjects of satisfaction that each one of them is related to one field of life quality, including the standard of living, health , personal relationships, safety, achievements in life, feeling part of community and future security. The maker knows it as a subjective index of life quality. The questions are scored from 0 to 10 in a Likert scale. The achieved scores in each one of the seven main questions are summed up to obtain the total score of life quality for scale that is ranged from 0 to 70. The psychometric features of scale are pointed appropriate in different researches (Cummins et al, 2007). Reliability coefficient for life including quality domains for scale is repeated at a distance of 6 months and national studies in Australia have obtain it between 0.74 and 0.86 (Lu et al., 2005).
Correlation coefficient of adult personal well-being questionnaire with the General Health Questionnaire (GHQ) was obtained as -0.63 in a study in Iran that reflects the appropriate divergent validity of the tool (Naeeniyan and Nik Azin, 2012).
D: Training workshop program of stress management by cognitive – behavioral method
The program includes ten 1.5- hours' sessions which are held once a week. Therapeutic sessions in this method are as follows (Anthony et al., 1998):

Session	Therapy goals
First	Familiarity of participants with each other and with researchers, the concept of stress and stressors of life, the conduction of pre-test
Second	Discussion about home exercises, progressive muscle relaxation training for 8 groups of muscle
Third	Training diaphragmatic breathing, imagery, and muscle relaxation for 4 groups of muscles
Fourth	Speaking about negative thinking patterns and cognitive distortions
Fifth	Autogenic training (in this method, people are trained to create a state of deep relaxation in themselves by using self-induction which causing heaviness and heat).
sixth	Autogenic training for heart rate, respiration, abdomen and forehead.
Seventh	Autogenic training with illustration and induction
Eighth	Mantra meditation training
Ninth	Breath counting meditation training
Tenth	Review of previous session and discuss about home training, the conduction of post-test

In order to do sampling, the researcher referred to the intensive care unit (ICU) of Khatamol Anbia hospital in Bandar Abbas and the samples were taken from the people who would like to have participated in the group treatment. The control group was the nurses who have not participated in the group therapy. This group was located on a waiting list to participate in the group therapy. Pre-test and post-test have been taken from the participants of treatment group before and after a 10-week period.
In the last session, the participants were given the research questionnaire again (post-test). The test of covariance analysis was used in the part of descriptive statistics. In order to use co-variance test, the Levin test has been studied in order to study the hypothesis of variances assimilation in the two groups of control and test in the research variable in post-test and the independent-t test has been used in order to study the difference of group membership in research variables in the pre-test step, as well.

Results

The following table shows the frequency and percentage of subjects based on gender, age, education and work experience.

Table 1. Frequency and percentage of subjects based on gender, age, education and work experience

Variable	Group			
	Control		Test	
	Frequency	Percentage	Frequency	percentage
Man	8	53.3	8	53.3
Woman	7	46.7	7	46.7
Summation	15	100	15	100
25 years and less	2	13.3	1	6.7
26 years to 30 years	6	40	6	40
31 years to 35 years	6	40	6	40
36 years to 40 years	1	6.7	1	6.7
41 to 45 years	0	0	1	6.7
46 years and more	0	0	0	0
Summation	15	100	15	100
Diploma and below-diploma	3	20	3	20
Above diploma	2	13.3	4	26.7
Bachelor	10	66.7	6	40
Senior	0	0	2	13.3
Summation	15	100	15	100
Less than 1 year	2	13.3	1	6.7
2 to 5 years	6	40	4	26.7
6 to 10 years	4	26.7	4	26.7
11 to 20 years	2	13.3	6	40
More than 20 years	1	6.7	0	0
Summation	15	100	15	100

The results of above table show that the number of subjects in both groups of men and women are equal. Most of the subjects are in the range of 26 to 35 years in the both groups in the viewpoint of age. Also, most of the participants are bachelor in both groups. Most of the

subjects have 2 to 5 years work experience in the control group and in the test group most of the subjects have 11 to 20 years work experience.

Table 2. The mean and standard deviation of scores of research variables at two levels of pre-test and post-test in both control and test groups

Variable	Step	Group			
		control		Test	
		Mean	Standard deviation	Mean	Standard deviation
Stress	Pre-test	5.33	3.92	5.73	4.02
	Post-test	5.60	3.68	3.87	2.72
Anxiety	Pre-test	4.27	3.75	3.93	3.10
	Post-test	4.73	3.45	3.73	2.86
Depression	Pre-test	4.53	3.12	4.40	4.39
	Post-test	4.93	3.17	3.60	3.35
Personal well-being	Pre-test	52.33	11.52	53.47	15.80
	Post-test	50.60	11.72	54.13	14.85

The following table shows the results of independent-t test in order to investigate the differences between the scores of stress, anxiety, depression, personal well-being in the pre-test and Levine test in order to verify the variances homogeneity assumption in both test and control groups.

Table 3. Results of Levine test and independent t-test

variable	First freedom degree	Second freedom degree	Levin test	Significance level (P)	t-value	Significance level (P)
Stress	1	28	0.12	0.97	0.27	0.78
Anxiety	1	28	0.33	0.57	0.26	0.79
Depression	1	28	0.93	0.34	0.09	0.92
Personal well-being	1	28	0.13	0.72	0.22	0.82

As regard that significance is greater than pointed amount (a= 0.05) so, the zero hypothesis is confirmed and variances in the both control and test groups are identical in the variables of stress, anxiety, depression and personal well-being. The results of independent-t test show that there is no significant difference between the control and test groups in the pre-test in mentioned variables (P> 0.05). Table 4 shows the results of covariance analysis.

Table 4. Covariance analysis results of group membership impact on stress, anxiety, depression and personal well-being variables in the post-test step

variables	Step	Changes sources	Total squares	Freedom degree	Mean squares	F coefficient	significance (P)
stress	Post-test	Pre-test	249.93	1	249.93	155.46	0.001
		Groups	30.95	1	30.95	19.25	0.001
		Error	43.41	27	1.61	-	-
Anxiety	Post-test	Pre-test	260.10	1	260.10	322.63	0.001
		Groups	3.72	1	3.72	4.61	0.04
		Error	21.77	27	0.81	-	-
Depression	Post-test	Pre-test	281.74	1	281.74	452.99	0.001
		Groups	11.20	1	11.20	18	0.001
		Error	16.79	27	0.62	-	-
Personal well-being	Post-test	Pre-test	4794.45	1	4794.45	591.42	0.001
		Groups	45.33	1	45.33	5.59	0.025
		Error	218.88	27	8.11	-	-

Results of the above table show that group training stress management in cognitive behavioral method is been effective on the reduction of stress, anxiety and depression of employee at post-test step ($P\leq 0.05$). Also, the findings suggest that group training stress management in cognitive behavioral method is been effective on increasing the personal well-being of employees at post-test step ($P\leq 0.05$).

Discussion and conclusion

The results of this study indicate the effectiveness of group training stress management in cognitive behavioral manner to reduce stress, anxiety and depression of employees. These findings are consistent with the results of Hamid and colleagues (2012), Khadivi and colleagues (2012) and Heron et al. (2011). In his study, Razhbam (2009) shows that nurses of I. C. U. are faced with intensive stresses like work failure of instruments, facing with ill patients, death of patients, relationship with other employee and relationship with family members of patients which need special trainings.

In explaining these results, it can be stated that intervention of stress management aimed the thought of person as a cognitive process by behavioral-cognitive manner and the basis of this theory is that changes in behaviors and emotions by thought is determined on the happened events. Such techniques have therapy consequences of stress management. In general, the program of stress management by cognitive-behavioral method based on the following principles leads to reduce stress, anxiety and depression of employee:

1. Since the connection between body and mind is very powerful, relaxation methods affects not only on the body but also on the psyche. As a result of these methods, the self-awareness of individual increases and the background of appropriate using of coping with stress skills are assembled.
2. The stress management helps restructuring the cognitions of individual in four stages as: awareness, re-evaluation of facts, accepting, replacement and assessment of new mental frame. Cognitive behavioral skills cause the increase of the individual's positive assessments by the modification of cognitive skills, reduction of stress symptoms and negative assessment. These skills help the anxious and stressful people to interpret an event as less stressful by the reconstruction of their thought patterns.
3. Assertiveness skills help the nurses to cultivate efficacy styles such as decisively assertiveness in themselves and not having problem in their personal relationships.

4. Knowledge of effective coping styles is a way of reducing stress that has the following results: maintaining current emotional status, continuing everyday activities that were interrupted by stress, psychological empowerment sense.

Overall, these findings suggest that the stress management skills in cognitive and behavioral method cause to reduce the stress and anxiety in the first place. Also, the depression is always a part of the consequences of stress. If the person' stress reduces, the amount of the depression will also reduce, as well.

The findings also suggest that cognitive behavioral group training stress management is effective on the personal well-being of I. C. U. employees. This finding is consistent with the research of Rowshan (2006) and Tattersall (2009). Sense of well-being has both emotional and cognitive components. People with high well-being sense mainly experience positive emotions and have a positive assessment of events around them while people with low well-being sense assess the events and situation of their life as inappropriate and experience most of the negative emotions like anxiety, depression and anger. One important component of personal well-being is not having negative emotions. It should be noted that if the experience of positive and pleasant emotions are simultaneous with unpleasant and negative emotions, the person would proportionally spend less time to experience negative emotions. On the other hand, cognitive skills training cause the changes of the individual's assessment from the situations and as a result experiencing positive emotions.

From the limitations of present research is the limitation of research sample to the employees of one state hospital of Bandar Abbas and inexistence of primary riddle from the viewpoint of stress in order to select the employees for participating in the therapy group.

It is suggested to use group training stress management program in a cognitive behavioral manner to reduce stress, anxiety and depression of I. C. U employees. Also, it seems necessary to design a cognitive-behavioral stress management training program appropriate to the needs and stresses of I. C. U employees.

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