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THE EFFECT OF MINDFULNESS-BASED STRESS REDUCTION TRAINING ON STRESS AND BURNOUT OF NURSES

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Abstract:
Nurses as a group of care providers are under increasing stress and burnout is common. Mindfulness-based interventions play a potential role in reducing stress and burnout. The purpose of this study was to determine the effect of mindfulness-based stress reduction training on stress and burnout among nurses working in two selected hospitals in Karaj in 2015. This study was semi-experimental with pre-test, post-test and a control group. Totally, 60 nurses were selected by convenience sampling and entered the study. The intervention was a course of mindfulness-based stress reduction training including mindfulness practice (body scan, mindfulness gestures, meditation of walk and sit and awareness of breathing), in addition, awareness of pleasant and unpleasant events and the use of mindfulness in daily routine activities. Standard questionnaires of job stress of Tufts and Gary Anderson and burnout of Maslach were completed before and after training by the subjects. The majority of nurses in both groups before the intervention, with a moderate level of stress, and there was no significant difference between the two groups (P >.05). Job stress and three aspects of burnout (emotional fatigue, depersonalization, and personal accomplishment) of nurses after training to before training showed a significant reduction (p <0.001). Mindfulness-based stress reduction training was associated with improvements in burnout and job stress scores.

Key Words: *Mindfulness-based, Stress Reduction, mindfulness, Job Stress, Burnout, Nurses*

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INTRODUCTION:

Stress is one of the components of human life and get away from it is almost impossible. Various surveys show that stress comes from various sources, one of the most important sources is the job [1]. Work-related stress is the result of interaction between the individual and his workplace[2] and undoubtedly has a major effect on various aspects of life of subjects employed [3]. The nurse is responsible for the control and monitoring for 24 hours and, of course, is continuously exposed to stress factors [4]. Since health environments always have a wide range of stress factors, such as exposure to severe diseases, patients' mortality, high work load and role ambiguity [5], nurse fatigue after a while become fatigue and even show willingness to retire from their jobs [6]. In hospitals, often we encounter nurses when entering the nursing profession were regular, sympathetic and interested subjects but after years of work and dealing with lots of problems and mental stress, become fatigue, and after retiring from their jobs [7]. Recently, the problem of the shortage of nursing also exacerbated the situation. As a result, nurses are at risk of chronic stress and burnout [8]. Burnout can be described as a syndrome that includes three different aspects of emotional fatigue, and reduced sense of personal accomplishment (9, 10). Burnout syndrome is not basically a mental disorder, but progresses slowly over time and may become a failure [6, 11]. Studies have also shown that stress significantly reduces the attention and focus of physicians and decision-making skills and professional abilities in effective communication, empathy and therapeutic communication with patients [12, 13 and 14]. Mindfulness is the quality of consciousness and means paying attention to the present moment, targeted and non-judgmental attention [15]. Mindfulness means being in the moment with whatever it is now, without judgment and comment on what is happening, the mere fact experience without explanation [16]. Mindfulness helps us understand that although negative emotions occur in life scope but they are not a fixed part of the character and life trend and hence make individuals to select responses and reactions with thought and contemplation rather than in voluntary reactions to the events [17, 18]. Hence, mindfulness is a new style of communicating more effectively with life, which cause a better relationship with life, or relieve human pain and suffering, richer life and enjoyable meaningful [19, 20]. Increased mindfulness leads to a significant and effective reduction in psychological distress, stress [21], the likelihood of recurrence of depression [22], neuroticism and anxiety [18], an increase of well-being [21, 23], enhancing the ability to compromise and improve emotional functioning [24]. Stewart, 1995 stated that in order to establish a good relationship between physicians and patients, the therapist should be conscious of himself, the patient and environment [25]. Mindfulness does this by adapting to experience every moment and providing direct insight on the role of the mind in creating undue anxiety [19]. In addition to health promotion of health staff, mindfulness also enhances the quality of care for patients [26]. The mindfulness based stress reduction (MBSR) is an educational program that disigned in 8 week [27]. Mindfulness based programs are widely known as effective interventions in reducing nurses stress[28] and reducing stress, depression and anxiety in both clinical and non-clinical groups [29, 30]. One of the characteristics of a healthy organization is that mental and physical health of staff is considered by the management like production and productivity and effective management not be achieved without attention and belief in of mental health of staff and today one of the factors that in organizations puts mental health of staff at risk is stress [31]. The aim of this study is to the effect of mindfulness-based stress reduction training on stress and burnout of nurses.

METHOD:

This study was a semi-experimental with 60 participants. The study population is consisted of nurses working in Shahid-Bahonar(control group) and Shahid-Rajaei(experimental group) hospitals, Karaj. Samples were selected, 30 nurses in the control group and 30 nurses in the intervention group. Inclusion criteria included: lack of nurses' involvement in administrative tasks, at least 2 years work experience in hospital wards, lack of severe psychiatric disorders. The exclusion criteria were irregular participation in training sessions and/ or not participating in two training sessions. Data collection tools include; Demographic questionnaire, Gray-Taft and Anderson standard questionnaire of job stress consisted of 34 questions (less than or equal 68 low stress, 69-103 moderate stress and greater than or equal to 104 high stress)[32, 33], Maslach Burnout Questionnaire (In emotional fatigue, scores are ranked: 21-30-intense, 11-20-average and less than 10-low, in depersonalization, scores are ranked: 31-45-severe, 16-30-average and less than 15-low and in the personal accomplishment scores are ranked: less than 13-high, 14-26-medium and over 27-low)[34]. The training program the beginning of the first session, participants introduced them and talked a little bit about their stress and problems at work. Then, the program and its objectives were introduced. Two exercise categories were given in the training. The first category included body scan or check, meditation, hat ha- yoga or yoga-style moves with an

awareness of the body, sitting meditation and awareness of breathing, body, feelings and thoughts, emotions and consciousness with no choice as well as walking meditation. The second category included awareness of pleasant and unpleasant events, breathing, providing knowledge to everyday routine activities. In training sessions of intervention group, experiences and discoveries of each individual of mindfulness obstacles were discussed [35, 36]. Data were entered software SPSS version 18 and analyzed [37, 38].

FINDINGS:

In this study, no statistical difference was found between the two experimental and control groups in terms of demographic variables (Table 1)(P>0.05). T-test results for comparing the average job stress before the intervention between two groups also showed that no significant difference was found between both experimental and control groups in terms of mean job stress (P>0.05). T test results for comparing the average job stress after the intervention between two groups also showed that significant difference was found between both experimental and control groups in terms of mean job stress at 5% level (P≤.0.05). In the experimental group, a significant difference was found between the level of stress before and after the intervention at 99% level (Table 2). The results showed that 43.3% of the experimental group had average personal accomplishment and in the control group 46.7% had high personal accomplishment that this amount was too much. Comparing the average frequency and intensity of emotional fatigue, average frequency and intensity of depersonalization, and average frequency and intensity of personal accomplishment after the intervention between the two groups showed that a significant difference was found between the two experimental and control groups (P≤.0.05). Also in the experimental group, a significant difference was found between the level of emotional fatigue, depersonalization, and personal accomplishment before and after the intervention (Table 3)(P<0.001).

Table 1: Distribution frequency of demographic variables among nurses in 2015

Variable	Each Group Classes	Case Group		Control Group	
		N	%	N	%
Age	<30 years	6	20	10	33.3
	31-40 years	18	60	16	53.3
	41-50 years	6	20	4	13.3
Level of Education	Academic degree	2	6.7	2	6.7
	Undergraduate	27	90	23	76.7
	Master	1	3.3	5	16.7
Marital Status	Single	7	23.3	10	33.3
	Married	23	76.6	20	66.7
Work Experience	=<10	13	43.3	17	56.7
	11-20	14	46.7	12	40
	21-30	3	10	1	3.3
Hospital Ward	General	17	56.7	11	36.7
	Emergency	4	13.3	8	26.7
	Intensive care	9	30	11	36.7

Table 2: Comparison of nurses' job stress before and after intervention

Group	Before	After	Difference	T	P-value
Case	94.43±21.5	85.77±21.2	-8.67±7.2	-6.625	**<0.001**
Control	100.30±30.2	100.40±30.5	0.10±3.1	0.178	**0.860**

Table 3: Comparison of Mean and Standard Deviation of three aspects of nurses' burnout before and after intervention.

Aspects of Burnout	Group	Before	After	Difference	T	P-value
Average Frequency of Emotional Fatigue	**Case**	29.27±9.5	25.47±9.40	-3.80±2.9	7.284**-	<0.001
	Control	29.77±7.6	30.37±7.90	0.60±1.9	1.678	0.104
Intensity of Emotional Fatigue	**Case**	37.80±9.6	34.63±9.80	-3.17±3.3	-5.204**	<0.001
	Control	38.83±8.0	38.97±8.0	0.13±2.3	2.681	0.231
Average Frequency of Depersonalization	**Case**	11.53±5.9	9.50±5.60	-2.03±2.5	-4.458**	<0.001
	Control	11.67±4.7	12.43±4.80	0.77±1.3	3.155	0.072
Intensity of Depersonalization	**Case**	14.60±5.80	12.17±5.80	-2.43±1.9	-6.863**	<0.001
	Control	14.83±4.70	15.80±4.90	0.97±1.8	2.957	0.060
Average Frequency of personal Accomplishment	**Case**	36.47±8.40	34.33±8.30	-2.13±2.7	-4.390**	<0.001
	Control	37.90±5.50	38.33±6.0	0.43±1.5	1.557	0.130
Intensity of personal Accomplishment	**Case**	40.67±7.90	37.30±9.70	-3.37±6.2	-2.961**	0.006
	Control	41.87±5.30	42.40±5.70	0.53±2.5	1.181	0.247

* Significant at level of P<0/05 ** Significant at level of P< 0/01

DISCUSSION:

In the present study, mindfulness-based stress reduction (MBSR) training significantly reduces job stress and burnout in nurses who were trained, because the intervention created significant changes in the scores of job stress and job burnout questionnaires of all three aspects. Similar research has not been done in this regard in Iran. But this teaching method has been used for many disorders and other cases and its positive effect has been reported, such as Azargoon et al. study examining the effectiveness of mindfulness training on reducing rumination and depression. At the end of training sessions, the results showed that a significant difference is found between scores of depression and rumination of students. So the training has been effective [34]. Also in another case-control study conducted by Zare et al. aimed to investigate the mindfulness-based stress reduction on diabetes control in patients with diabetes, a significant difference was found between the results of post-test of Glycosylated hemoglobin levels in the control and experimental groups and mindfulness intervention has been reported effective on glycemic control [39]. In another study conducted by Golpour and Amini on students with test anxiety, the results showed that mindfulness training caused a significant difference between variables of mindfulness, self-expression and test anxiety between the intervention and control groups [40]. Also the results of multivariate analysis of covariance of Esmailian and et al. study titled "Effectiveness of MBSR on depression symotoms of children with divorced parents" showed that mindfulness-based cognitive therapy program significantly reduced symptoms of depression, inefficiency, and lack of pleasure, interpersonal problems, low mood and low self-esteem in children with divorced parents. Also a significant increase was observed in mindfulness and acceptance of children who had participated in treatment. The mentioned results were listed in the follow up period [41]. In another study conducted by Kafi et al, 2013 titled "The effectiveness of mindfulness-based cognitive therapy on psychological symptoms in women with irritable bowel syndrome", the findings showed that average score of psychological symptoms has been

reduced in mindfulness training group in the post-test and follow-up (P<0.01). Thus, the findings confirmed the effectiveness of training mindfulness-based cognitive therapy on the improvement of psychological symptoms in patients with irritable bowel syndrome (42). There are also examples in international studies that their results are consistent with the study results. The results of Cohen Katz et al, 2005 study on nurses at the hospital also showed that Mindfulness-based stress reduction training reduced scores on Maslach Burnout Inventory and the effects were persistent up 3 months of treatment [8]. In another study, researchers examined the effect of a mindfulness course on burnout and welfare of care providers to patients. The results showed that a significant difference was found between scores before and after training, so training has been effective [43]. Also in another study determining the effectiveness of mindfulness-based stress reduction on satisfaction and burnout of nurses the results showed that total job satisfaction before and after mindfulness was not significantly different. But the rate of burnout in the next stage of training mindfulness-based stress reduction has been significantly reduced compared to before training [44]. Mindfulness training teaches individuals to recognize stressful situations and have full knowledge and deliberately control the stressful situations such as anxiety. As soon as individuals can dominate automatic reactions at a deep level, they can change the type of reaction when dealing with stressful situations and in these situations rather than negative responses, they provide positive responses. In mindfulness-based stress reduction training, opinions are viewed independently and impartially, but overall awareness is acquired through regular and repeated exercise in mindfulness training [45]. One of the major limitations of this study was the lack of follow-up to examine the continuity of the intervention results that it is hoped in other studies researchers consider it.

CONCLUSION:

According to the results, mindfulness-based stress reduction training is effective on job stress and burnout among nurses. Certainly less stress and burnout will provide more quality nursing services to patients, as well as more satisfying interaction with other partners. Thus, it is up to the authorities involved in education to take an effective step to protect the health of the personnel as well as improve the quality of health care to patients by holding training courses and providing the possibility of nurses' participation with no shifts' concern.

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