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Artículos

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Efecto del manejo del estrés en el estrés laboral de enfermeras de unidades de cuidados intensivos en hospitales afiliados a la Universidad de Ciencias Médicas

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Abstract:

Introduction and Background. Stress is one of the crucial life phenomena in the present century. Long-term or high stresses affect various aspects of our lives. Nurses' job stress seriously affects patients and their families. One of the most effective methods in teaching stress management strategies. This study aims to reduce nurses' job stress by teaching coping strategies. **Methods.** This clinical trial study was adopted to achieve the goal of the study. The data were collected from 60 nurses working in intensive care units of all hospitals. The data collection tool was the HSE job stress questionnaire. **Results.** It was found that there was no significant difference between the experimental and control group in demographic information (P<0.05). There was no significant difference between the mean score of the job stress before the intervention in both groups. But after the intervention, a significant decrease was revealed in the mean score of the job stress of the treated group as compared to that of the control group (P<0.0001). **Conclusion.** The study concludes that stress management is very effective on job stress of Intensive Care Unit Nurses.

Keywords: Effectiveness, ICU, Nurse, Stress management.

Resumen:

Introducción y antecedentes. El estrés es uno de los fenómenos vitales más importantes del siglo actual. Las tensiones prolongadas o elevadas afectan varios aspectos de nuestras vidas. El estrés laboral de las enfermeras afecta seriamente a los pacientes y sus familias. Uno de los métodos más efectivos es enseñar estrategias de manejo del estrés. El objetivo de este estudio es reducir el estrés laboral de las enfermeras mediante la enseñanza de estrategias de afrontamiento. **Métodos.** Este estudio de ensayo clínico se adoptó para lograr el objetivo del estudio. Los datos se recopilaron de 60 enfermeras que trabajan en unidades de cuidados intensivos de todos los hospitales. La herramienta de recolección de datos fue el cuestionario de estrés laboral de HSE. **Resultados.** Se encontró que no hubo diferencia significativa entre el grupo experimental y el de control en la información demográfica (P <0,05). No hubo diferencia significativa entre la puntuación media del estrés laboral antes de la intervención en ambos grupos. Pero después de la intervención, se reveló una disminución significativa en la puntuación media del estrés laboral del grupo de casos en comparación con la del grupo de control (P<0,0001). **Conclusión.** El estudio concluye que el manejo del estrés es muy efectivo en el trabajo de las enfermeras de la Unidad de Cuidados Intensivos.

Palabras clave: Efectividad, UCI, Enfermera, manejo del estrés.

Introduction

In the 1930s and 1940s, Hans Selye approached the conceptualization of stress from the response end, viewing stress as a dependent variable, "a response to disturbing or threatening stimuli. [1-3] " Conversely, stimulus-based definitions consider stress to be an independent variable (generally environmental) that causes an individual to respond. Modern definitions take both into account [4,5] . In the occupational stress literature, a stressor is regarded as any work-related characteristic, situation, or event that might initiate stress. At the same time, strain refers to the worker's psychological or physiological reaction to stress.

Researchers argue that various types of stress affect the body's internal systems. Studies have demonstrated that the body's autonomic sympathetic nervous system and endocrine glands directly impact the whole body [2] . Long-term or high stresses can affect various aspects of our lives [6 -8] . Mental problems reduce people's ability to cope with even the simplest issues in life. Any stimulus that creates stress in a person and triggers them reaction is known as a stressor [3] . One of the external factors is job stress and the workforce has always suffered some job stress problems.

Job dissatisfaction can be considered as one of the most common consequences of job stress [4] . Another consequence of job stress is leaving the job or a specialty. In this case, the organization will face a useless workforce. Many incidents at work can occur due to job stress so that every year a large number of people are injured and disabled due to incidents at work or die [4] . The work environment is associated with prolonged and continuous stress. Depression and anxiety have been shown to increase in people with stressful jobs [5] . Nowadays, the health sector is one of the most important areas of sustainable development in human societies due to its direct relationship with human health.

The nursing staff of hospitals is among the therapists in this ward [6]. Job stress has a significant impact on health care staff, including nurses, and imposes lost time due to disease and the payment of large sums for insurance premiums to the society [7]. Nurses' job stress also seriously affects patients and their families since job stress reduces the quality of care. Bolandianbafghi et al [8].. showed that nursing is one of the most stressful jobs and called for further studies on nursing job stress since the efficiency of nurses decreases in stressful situations. [8] Regarding the stressful nursing job, the rate of mortality caused by job stress in the United Kingdom has shown that the suicide rate among female nurses is higher than the mean rate of mortality caused by other jobs in the mentioned country. [9]

The job of nursing and caring for a patient is stressful. Thus, stress threatens organizational goals and reduces the quality and performance of nurses in medical settings, especially hospitals [10]. Nurses in intensive care units are more exposed to job stress than nurses in other units. Advanced technology, contradictions in human relationships, ethical issues, disagreements with nursing managers, observation of patient mortality, lack of sufficient information, job pressures, and failure to achieve job ideals are the main stressors in intensive care units [11-13]. Different medical, psychological, and psychiatric treatments to reduce stress and teach coping skills are a major part of coping effectively with stress. One of the most effective methods is teaching stress management strategies. Teaching the necessary methods and techniques helps nurses overcome their stress correctly and reduce the unfavorable effects of job stress [14]. This strategy allows nurses to minimize the negative impact of stress on them in the work environment and analyze the positive side of stress and make the most of it. If we can control the stress and pressure of nurses in the work environment properly, this pressure will strengthen them and improve their performance, and reduce their job stress. Thus, this study aims to reduce nurses' job stress by teaching coping strategies.

Materials and methods

This clinical trial study was carried out in 2020 after obtaining the permission of the ethics committee of Shiraz University of Medical Sciences. It was carried out on 60 nurses working in intensive care units of all hospitals affiliated with the University of Medical Sciences. Inclusion criteria of the study included having an employment history of at least six months, not participating in any of the yoga, aerobics, meditation, and other stress control and management workshops. The study's exclusion criteria were being absent in any of the classes and participating in any stress control and management classes and workshops, and lack of willingness to continue the study. The data collection tool was the Health Safety and Environment (HSE) job stress questionnaire. First, eligible people willing to participate in this study were registered until the sample size reached 60 people. Then they were entered into experimental and control groups in a simple random block. Informed consent was obtained from all nurses in intensive care units to participate in the study and all the explanations about the project were provided to the nurses. Two questionnaires were used to collect the needed information. Using one demographic questionnaire, nurses' information such as age, gender, level of education, and working hours per week were collected.

Using the HSE job stress questionnaire, its validity and reliability have been confirmed outside Iran, and in Iran, nurses' stress was assessed [15]. The level of job stress of nurses in intensive care units was determined before, one month, and two months after the intervention. This questionnaire consists of 35 questions in seven areas of demand, control, managerial support, peer support, relationship, role, and changes. This questionnaire is scored on a 5-point Likert scale ranging from 5 for never and 1 for always. The demand subscale is scored in reverse so that the option always gets a score of 1 and the option never gets the score of 5. In this questionnaire, a high score indicates more health and safety in terms of stress. The stress management training program for the case group includes two main axes of increasing knowledge and training skills. It was held in two sessions of 4 hours. Information on the effect of stress on physical, mental,

and social functions, types of physiological responses to stress, types of strategies such as relaxation, positive attitude, and visualization, relaxation, focus on breathing, ways to conserve energy, identifying and correcting inefficient thoughts and the ways of managing time were provided to nurses. In the axis of stress management skills, nurses presented their sources of stress using the situations they had in real life during a week. The workshop executor used the same situations to train participants to cope with the stress. Accordingly, nurses participated actively in training. Besides, P-values are calculated from the deviation between the observed value in experimental and control groups.

Results

The mean age of subjects was 31.57±5.04 in the experimental group and 31.3±5.07 in the control group (30 people in each group), and the mean of employment history (in years) was 6.93±4.98 in the experimental group and 5.43±3.52 in the control group. The mean working hours per week was 40.73±6.26 in the experimental group and 37.95±9.33 in the control group, and the monthly income (in Rials) was 92467000±630000 in the experimental group and were 91200000±820000 in the control group. It was found that there was no statistically significant difference between the experimental group and the control group in terms of quantitative demographic information (P>0.05). Also, there was no statistically significant difference between the experimental and control groups in terms of gender, marital status, number of children, the status of work shifts, and job satisfaction; they were homogeneous (P>0.05). The effect of stress management classes on the job stress of nurses in intensive care units is shown in Table 1, which indicates the score of job stress dimensions and total job stress of nurses in the two groups of experimental and control before and after the intervention.

TABLE 1
Job stress dimensions and total job stress of nurses in the two groups of experimental and control before and after the intervention

Job stress dimensions	Group	Time						P-V
		before		After one month		After two months		
		Mean	SD	Mean	SD	Mean	SD	
Demand	Experimental	02.3	62.0	3	43.0	9.2	32.0	001.0> P
	Control	1.3	63.0	2.3	71.0	1.3	63.0	
Control	Experimental	03.3	84.0	9.2	51.0	7.2	51.0	001.0> P
	Control	6.2	52.0	5.2	69.0	6.2	66.0	
Managerial support	Experimental	1.3	71.0	9.2	61.0	3	33.0	001.0> P
	Control	3.3	64.0	4.3	78.0	5.3	52.0	
Peer support	Experimental	2.1	61.0	5.1	40.0	3.1	31.0	001.0> P
	Control	2.3	44.0	1.3	63.0	1.3	62.0	
Relationship	Experimental	8.2	46.0	5.2	62.0	3.2	43.0	001.0> P
	Control	10.2	71.0	8.1	64.0	2	63.0	
Role	Experimental	9.2	57.0	5.2	67.0	2.2	61.0	001.0> P
	Control	7.2	53.0	8.2	66.0	6.2	48.0	
Change	Experimental	3	54.0	5.2	65.0	1.2	47.0	001.0> P
	Control	2.3	71.0	1.3	51.0	3	52.0	
Total	Experimental	05.19	35.4	8.17	53.3	6.16	98.2	001.0> P
	Control	2.20	18.4	9.19	4.62	8.19	06.4	

Discussion

Stress is the physical, mental, and emotional reactions experienced because of the changes and needs of an individuals' life [16,17]. Positive stress can be a motivator, while negative stress can be created when these changes and needs cause the person to fail. The present study investigated the effect of stress management workshops on nurses' job stress in intensive care units. Results suggest significant differences between the rates and scores of job stress of the subjects in the experimental and control groups one and two months after the end of the workshop. It indicates that as nurses learn stress management skills, they will experience less job stress because stress management, relaxation, and positive thinking are skills that a person uses according to the situation to assess their emotions accurately. Therefore, the stress management workshop significantly reduced nurses' job stress in intensive care units, and the research hypothesis is confirmed. In explaining why the results have continued in the stage of job stress prevention, it can be stated that the frequent use of relaxation techniques of stress management, identification, and correction of dysfunctional thoughts has significantly reduced nurses' job stress. However, this reduction in job stress, which decreased to a lesser extent two months after the intervention, is due to the passage from the workshop completion time.

Different factors in the work environment, such as physical work environment, responsibilities, the scope of roles and dual roles, etc., have increased the nurses' stress. By teaching stress management strategies, it is possible to reduce the stress level of nurses [18,19]. The results of this study are in line with those of several studies. For example, in a study carried out by Khoshgoyan et al. [20], it was found that time management has reduced job stress. Also, in a study carried out by Dobie et al., it was found that nurses' job stress can be reduced by teaching brief mindfulness techniques [21]. Also, the study carried out by Gangadharan and Madani [22] revealed that the progressive muscle relaxation technique is very effective in reducing depression, anxiety, and stress among nursing students [22], which is consistent with the present study results. In research conducted by Galante et al. [23], to examine the effectiveness of mindfulness skills training on students' mental health, it was found that the provision of mindfulness training could be an effective component of a wider student mental health strategy [23].

Conclusion

The most important feature of this workshop that distinguishes it from other ways of stress management is its flexibility and preventive approach, which can be implemented in different groups. In fact, it helps people identify stressful situations and apply effective coping strategies. Given the vital role of implementing stress management techniques in reducing nurses' job stress and since nursing is one of the most stressful jobs, all health care providers must pay more attention to this critical issue. Since the results of this study showed that stress management program could be a way to reduce nurses' job stress, this method can be used as a practical and effective solution for better management of nurses' stress to enhance the quantity and quality of nursing services and subsequently patient satisfaction and organizational performance.

Conflict of interest

The authors declare no conflict of interest.

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