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Original Article

Inspecting the extent of patients' mental health maintenance in the operating rooms of the medical educational centers of Mazandaran University of Medical Sciences in 2018

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Being a stressful procedure surgery can result in mental and physical reactions in patients. And considering the key and effective role of the personnel and nurses working in operating rooms in developing and raising patients' mental health, this study was conducted with the purpose of determining the extent of patients' mental health maintenance in the operation rooms of the medical educational centers of Mazandaran University of Medical Sciences. This research which is a descriptive (Cross-Sectional) study was conducted using the simple random sampling method on 97 of the personnel of the operating room of the medical educational centers of Mazandaran University of Medical Sciences in the year 2018. Materials used in this survey consisted of three-part checklists of mental health maintenance (before, during and after operation) and in the end the collected data have undergone statical analysis using spss19 software. Statical analysis in this study showed that 55.7 % of the samples were female and the work experience of most of the samples were between 5 and 10 years. The average grades of the adherence to mental health principles were 14.07±2.70 before the operation, 9.41±1.83 during the operation and 14.37±2.89 after the operation and there was a considerable relationship between the total grade in the three stages and variables of the age and sex of the personnel and the type of surgical procedure. Based on this study, the performance of the personnel of the operating rooms of the medical educational centers of Mazandaran University of Medical Sciences in adhering to the principles of patients' mental health was good and the performance of the female personnel was better.

Keywords: Mental Health, Patient, Operating Room

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Introduction

According to the definition that the World Health Organization presented for mental health, it is a behavior in harmony with society, identification, and acceptance of social realities and the ability to be adapted to them and to flourish innate talents and potentials [1]. Patients are known as one of the most vulnerable groups in society either physically or mentally, socially, and economically and for this reason, the meaning of a patient became more significant for most of the International Human Rights Organizations [2]. Key factors in nursing include honest and appropriate relationships between nurse and patient, to skillfully and carefully perform medical instructions and to respect personal values and professional work [3]. Considering the important role of nurses in caring for patients, specializing them in caring matters(mental and physical) is the most important factor that can expedite the recovery process and quicken the return of the patients to their homes [4]. Surgical procedure is a stress that causes physiological (endocrine) reactions and psychological stress (anxiety and fear) [5]. Any patients who enter a hospital can be anxious and distressed slightly, moderately, or severely and by identifying and measuring the level of stress, medical and nursing care can be planned for [6]. Among mental disorders before surgery, anxiety is more prevalent and can be caused by feeling the danger of death, fear of not becoming conscious again, worrying about not having control, fear of unconsciousness, fear of what is unknown, etc [7]. Accordingly a patient who enters an operating room has various mental concerns that are caused by his or her needs, therefore, any disturbance in maintaining their privacy and private

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information can result in many problems such as increasing the stress level, not trusting the medical staff, aggressiveness, hiding medical history and avoiding physical examination [8]. An operating room is different from other hospital sections and factors like the working stress of the personnel, the mass of patients and the low number of nurses can result in ignorance of the patients' physical and mental needs [9]. Since any factor that endangers patients' mental health and causes anxiety in them affects the recovery process, the number of needed anesthetics and the extend of the patients' pain tolerance [10], this survey was conducted with the purpose of determining the extent of patients' mental health maintenance in the operating rooms of the medical and educational centers of Mazandaran University of Medical Sciences in 2018.

Materials and Methods

This research is a descriptive (cross-sectional) study that was conducted for the purpose of inspecting the extent of patients' mental health maintenance in the operating rooms of the medical and educational centers of Mazandaran University of Medical Sciences between January and May 2018. The population consisted of 97 of the nurses working in the operation rooms of the medical and educational centers of Mazandaran University of Medical Sciences who were analyzed using the simple random sampling method. The required factors for the samples to be included in the research were: their complete consent to be a part of the research and having at least one year of working experience and the required factors for the samples to be excluded from the research were: their disapproval of continuance of the research and the urgency of the operation. Also, in order to collect the data in this study, three-part checklists of patients' mental health maintenance (before, during and after the operation) were used. The reliability and validity of the checklist were determined in the research of Akbari and his research partners and the Cronbach's coefficient Alpha of the checklist was calculated as 88%. The checklist consisted of the first part (assessment before the operation) including 9 items, second part (assessment during the operation) including 6 items, and third part (assessment after the operation) including 9 items about adherence to the principles of patients' mental health. The number 2 was given to the items if the principles were adhered to and number 1 if the principles were not adhered to. The total score of the checklist is 48 and if the earned scores are less than 16 (weak adherence,) 16-32 (average adherence,) 33-48 (good adherence) of the principles of mental health. In the parts of the assessment before and after the operation earning the scores 11-19 (weak adherence,) 12-14 (average adherence,) 15-18 (good adherence) of the principles of mental health and in the part of the assessment during the operation earing the scores 6-7 (weak adherence,) 8-9 (average adherence,) and 10-12 (good adherence) of the principles of mental health which are separately evaluated. After the project was approved by the research deputy of the university and the protection code of human subjects and the letter of introduction were received from the research committee of the university, checklists were filled according to the number of the samples in the presence of a researcher. After the sampling was finished, in order to describe the data, descriptive statics (mean, standard deviation, frequency distribution) and analytical statics (Pearson's correlation coefficient) were used. In order to analyze the data spss19 software was used.

Results

In this study, the results showed that 54 of the samples (55.7%) were female and the rest of them were male. most of the respondents held Master of Sciences degree. Also, most of them 47.4%) had the work experience of 5-10 years. The result from Spearman's rank correlation coefficient showed that there is reverse and significant relationship between adherence to the principles of mental health before the operation, age, and the type of surgical procedure. There is a direct and significant relationship between adherence to the principles of mental health during the operation and age. There is reverse and significant relationship between adherence to the principles of mental health after and the type of surgical procedure. There is a significant relationship between the total score of the three stages of examination (principles of mental health before, during, and after the operation) and age and sex of the personnel and the type of surgical procedure. (The level of significance was less than 0.05.) But there was no relationship between the mentioned variables and adherence to the principles of mental health during, before, and after (Table 1).

Based on Table 2 and according to the information obtained from the research, the standard deviation is ± the average score and adherence to the principles of mental health before the operation is 14.07±2.70, adherence to the principles of mental health during the operation is 9.41±1.83, and adherence to the principles of mental health after the

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operation is 14.37±2.89. Also, in the part of before the operation, the score range is 9-18 minimum and 9 and 18 respectively maximum, during the operation the score range is 6-12 minimum and 6 and 12 respectively maximum. On the part of after the operation the score range is 9-18 minimum and 9 and 18 respectively maximum. Also adherence to the principles of mental health by the majority of the samples regarding to the defined score range were 53.60 % good adherence (before the operation,) 55.670% good adherence (during the operation,) and 58.76% good adherence (after the operation) they appropriately adhered to the principles of mental health.

Table 1: the result of Spearman's rank correlation coefficient between demographic variables and the extent of mental health maintenance (before, during and after the operation)

Variables		Frequency (percentage)	P-value		
			Before operation	During operation	After operation
Age	22-27	28 (28.9)	0.034	0.021	0.082
	27-32	29 (29.9)			
	32-37	29 (29.9)			
	Over 37 years old	11 (11.3)			
sex	Male	43 (44.3)	0.197	0.033	0.120
	Female	54 (55.7)			
Working experience	1-5	35 (36.1)	0. 842	0.365	0.319
	5-10	46 (47.4)			
	10-15	13 (13.4)			
	15-20	2 (2.1)			
	Over 20 years old	1 (1.1)			
Education	BS	36 (37.1)	0.472	0.440	0.222
	MS	(62.9)61			

The calculated mean ± standard deviation of the total adherence to the principles of mental health (before, during, and after the operation) is 37.85±4.37. Also, the result of the sum of the three stages of adherence to the principles of patients' mental health (before, during and after the operation) with the score range of 16-48 had 27 minimum and 47 maximum scores. The majority of the samples (85.57%) appropriately adhered to the principles of patients' mental health in all three stages (Table 3).

Table 3: the frequency distribution of mental health maintenance in three stages of the operation

Mental health	Weak	Average	Good	Mean±SD
Total score	0	14 (14.43)	83 (85.57)	37.85±4.37

Discussion

This study shows that the extent of adherence to the principles of patients' mental health regarding the defined score range is 53.6% good adherence (before the operation,) 55.67 good adherence (during the operation,) and 58.76 good adherence (after the operation.)

Given that surgery is a deliberate interference (medical) in the anatomical structure of the body for curing diseases and traumatic injuries and is an important and effective factor in patients' mental health [11], this study was conducted for the purpose of inspecting the extent of patients' mental health maintenance in the year 2018. Paying attention to patients' mental concerns and mental health in order to lower their anxiety in operating rooms are important aspects of our research. Based on the results of this research, the total score of the three

Table 2: Frequency distribution of the extent of mental health maintenance in the three stages before, during and after the operation.

Questions	Weak (٪)	Average (٪)	Good (٪)	Mean±SD
Mental health before operation				
Does he/she try to help the patient overcome his/her fear?	43 (44.3)	45 (46.4)	9 (9.3)	14.07±2.70
Does he/she feel responsible to create a private environment for the patient?	33 (34)	57 (58.5)	7 (7.2)	
Does he/she have proper behavior with the patient?	32 (33)	59 (60.8)	6 (6.2)	
Does he/she answer the patient's questions properly and completely?	18 (18.6)	71 (73.2)	8 (8.2)	
Does he/she care about keeping the patient's spirit high?	54 (55.7)	37 (38.1)	6 (6.2)	
Is the patient satisfied with his/her behavior before the operation?	18 (18.6)	69 (71.1)	10 (10.3)	
Does he/she explain how to put on a surgical gown if it is needed before the operation?	54 (55.7)	35 (36.1)	8 (8.2)	
Does he/she use affirmative sentences?	20 (20.6)	72 (74.2)	5 (5.2)	
Does he/she use emotional sentences?	71 (73.2)	20 (20.6)	6 (6.2)	
Mental health during the operation				
Does he/she try to prevent the dangers facing the patient during the operation?	53 (54.6)	37 (38.1)	7 (7.2)	9.41±1.83
Does he/she urge him/herself and the others to check the necessary equipment needed during the operation?	27 (27.8)	58 (59.8)	12 (12.4)	
Does he/she consider him/herself the preserver of the patients' rights?	54 (55.7)	34 (35.1)	9 (9.3)	
Does he/she adhere to the moral principles in caring for the patient?	28 (28.9)	57 (58.8)	12 (12.4)	
Does he/she welcome and accept the possible warnings given for the sake of the patient's benefits during work?	54 (55.7)	35 (36.1)	8 (8.2)	
Does he/she remind his/her co-workers of any errors during the operation with utmost respect?	29 (29.9)	61 (62.9)	7 (7.2)	
Mental health during the operation				
Does he/she care about the patient's recovery?	47 (48.5)	40(41.2)	10 (10.3)	14.37±2.89
Does he/she try to provide the necessary items needed for the patient's convenience?	13 (13.40)	74(76.3)	10 (10.3)	
Does he/she try to keep his/her working place and the patient's room quiet?	58 (58.90)	25(25.8)	14 (14.4)	
Does he/she skillfully care or the patient?	9 (9.30)	88(90.7)	0	
Does he/she carefully care for the patient?	43 (44.3)	47(48.5)	7 (7.2)	
Does he/she check the drugs and instructions with the doctor after the operation?	10 (10.3)	78(80.4)	9 (9.3)	
Does he/she report any ignorance in caring for the patient?	31 (32)	65 (67)	1 (1)	
Can he/she understand any change in the patient's situation by the patient's behavior?	25 (25.8)	67(69.1)	5 (5.2)	
Does he/she care for the patient's needs as soon as possible?	35 (36.1)	57(58.8)	5 (5.2)	

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stages of the operation showed that there is a significant relationship between the variables of age and sex of the personnel, and the type of the surgical procedure and the extent of adherence to the principles of patients' mental health that is compatible with the researches of Nasiriani and Ross [12,13]. But there is no relationship between working experience and education and the extent of adherence to the principles of mental health. Accordingly, it can be interpreted that probably working experience and education do not have any effects on the personnel's view on adherence to the principles, but further study in that matter is needed.

In this study, there is a reverse and significant relationship between adherence to the principles of mental health before the operation and age of the personnel which means the more the age of personnel is the less the adherence to the principles of mental health becomes before the operation. Also, the research of Akbari and his research partners showed that there is a reverse relationship between age and the working experience of the personnel with adherence to the principles of mental health before and after the operation which is compatible with our study [3].

Also, there is a direct and significant relationship between adherence to the principles of mental health during the operation and age of the personnel, whereas in the research of Akbari and his research partners there was no relationship between these variables that could be caused by difference in environmental conditions [3]. One of the important results reached during the operation is feeling responsible for maintaining patients' private environment that 58.8% of the samples moderately adhered to which is compatible with the research of Jahanpour and his research partners in which the majority of patients and nurses mentioned adherence to human boundaries as moderate. Reaching this result shows that the personnel's view on maintenance of patients' privacy and its importance for the patients based on the research of Jahanpour and his research partners must be developed [14].

Regarding phrases like "using emotional sentences and keeping the patient's spirit high," the extent of adherence was weak among the majority of the personnel. This shows the lack of attention of the staff to the patient's mentality. It was observed that the working place and patients' recovery rooms were not appropriately kept quiet By the personnel (14.4%) which is compatible with the research of Ginsberg SH and his research partners [15].

In another research which was conducted by Padmakumar, 83% of the respondents stated that the noise level affects human errors, therefore it is necessary that all of those who are engaged in caring for the patients pay constant attention to controlling the level of the noise [16]. By emphasizing the necessity of this matter, informing the personnel of its benefits, and limiting the personnel's conversation with one another, quieter places can be established in the operating room and patients' recovery room. Regarding phrases like "does he/she considers him/herself the preserver of patients' right?" during the operation, the extent of adherence is weak (55.7%) and "does he/she answers the patient's questions properly and completely?" before the operation which is related to the preservation of the patient's rights, the extent of average adherence is 73.2% . In the same way the research of Mohammad Arab and his research partners which was conducted for the purpose of determining patients' awareness of their rights and its preservation in hospitals which are connected to the university of medical sciences in Tehran shows that the extent of preservation of patients' rights was good in 13.8% of the patients, average in 82.9% of the patients and weak in 3.3% of the patients. Also, between the 7 items, the highest extent of preservation of patients' rights was the patients' awareness of their rights which is not compatible with the results of our research [17]. In the survey which was conducted by Zandie and his research partners the extent of preservation of patients' rights in the operating rooms of the educational hospitals of Hamedan was average in total (50.2%) and one of the factors that had the lowest extent of patients' rights preservation by the personnel of the operating room was introducing themselves to the patient (22.2%) which was compatible to a part of our research that included Table 1. [18].

In our opinion, the first steps in the enhancement of patients' rights preservation are increasing the awareness of the medical staff in the importance of patients' rights and monitoring and controlling the extent of their execution.

No inspection of the extent of mental health maintenance by surgeons and anesthesiologist and no examination of the extent of mental health maintenance in hospitals which were not connected to Mazandaran University of Medical Sciences are among the limitations facing our project.

Conclusion

The results of this research show that the performance of the personnel of the operating rooms of the medical educational centers of Mazandaran University of Medical Sciences regarding the

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adherence to the principles of mental health was average and the performance of female personnel was better. Finally due to the weakness of some items and the importance of the subject of our study and its role in the recovery of patients, it is recommended that actions be made in holding classes with the purpose of increasing the personnel's awareness in this subject, setting assuring rules and monitoring the performance and controlling the extent of mental health maintenance of the medical staff.

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Conflicts of interest

None.

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