

Prevalence of Anxiety in the Process of Transferring Patients From Cardiac Surgery Intensive Care Unit to the General Ward

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Abstract

Background: Researches have shown that in some countries where patients are transferred from intensive care to the general ward, they experience mental challenges, including anxiety. However, in Iran no researches have been done on this subject.

Objectives: The aim of this study was to evaluate the prevalence of anxiety in patients transferred from the intensive care unit to the general ward.

Methods: This study was a cross-sectional study. Samples of this study included 110 patients transferred from the intensive care unit to the general ward. Spielberger's questionnaire was used to collect data. To analyze the data, the SPSS version 16 software was used.

Results: After entering variables in the multivariate logistic regression model, it was found, that there was only a significant relationship between gender and anxiety. Statistical data showed that 63.6% of patients had moderate anxiety.

Conclusions: According to the study, the subjects had high levels of anxiety, thus providing a platform for learning how to deal with anxiety seems to be required for these patients. The study also found that being female is directly related to the level of anxiety in these patients. Therefore, more attention to females during transfer from the intensive care to the general ward is important.

Keywords: Anxiety, Cardiac Surgery Intensive Care

1. Background

The intensive care unit (ICU) can be stressful environment for the patients and their families (1). Although discharge is a positive step in terms of physical recovery, patients may not have the mental readiness for transfer to the general wards; many patients experience high anxiety during transfer from the intensive care unit to other wards. Discharge may cause anxiety for the patient and their family because of transfer to a new environment. A lack of one-to-one nurse patient communication after transfer from the ICU makes a sense of detachment in the patient and their family (1). Given the shortage of hospital beds, the increase of admissions to intensive care units, high cost and shortage of nursing staff and equipment in the health care system, there is too much emphasis on discharge as soon as possible (2). Despite the initial recovery at the ICU, some patients are still at risk of deterioration of their physical condition, which leads to readmission or death. A patient, who is discharged from the ICU and is readmitted within 48 hours of discharge may be considered as premature discharge (2). Therefore, a variety of interventions

and educational strategies have been initiated to identify critically ill patients or those at risk of acute conditions in general wards. Some of these strategies include the medical emergency team, patient at risk team, modified early warning scores, ICU liaison nurses, critical care outreach teams and acute life-threatening events recognition and treatment courses. These strategies can help staff provide appropriate care for these patients, who require a higher level of care (such as admission to a critical care unit) (3).

In Australia, the ICU liaison nurse has been recognized as a facilitator of care for patients, who are discharged from the ICU (4). Currently liaison nurse services are not provided in medical centers of Iran. It is important to understand the role of intensive care unit nurses, and nurses' perception of their roles in discharge planning. Intensive care unit nurses' role is to support the patients and their families, and also provide resources that will assist the general ward nurses during the transfer process. However, nurses views are often overlooked; some studies indicate that ward nurses usually complain of not receiving enough information to provide immediate care for the

patients (1). A liaison nurse is a nurse with clinical nursing specialization. They are basically involved in discharge planning and facilitate the transfer of patients to the wards or even assist the release of the patient from the hospital. The role of a liaison nurse is based on improving communication, increasing continuity of care, and improving the transfer process (5). A liaison nurse at the ICU requires integrating the services of an intensive care unit nurse and supportive services. Some studies suggest that a liaison nurse should have experience at the intensive care unit to better assist with the transfer process (6). For several decades transfer anxiety has been discussed as a construct, however little empirical attention has been paid in this regard. Additionally, the impact of specialist nurses on transfer anxiety is somewhat unknown. Therefore, the aim of this study was to evaluate the prevalence of anxiety in patients transferred from the intensive care unit to the general ward.

2. Objectives

This study aimed to investigate the prevalence of anxiety in patients transferred from the intensive care unit of cardiac surgical unit to the general wards.

3. Methods

The ethics committee of Tehran University of Medical Sciences (TUMS) approved the study in the January 2012 (grant No: 92.s.130.2374). In addition, permissions were obtained from the hospital and ICU authorities. The researchers informed all of the patients about the process of the study, and their right to participate or withdraw from the study at any time. Patients were also assured of the data confidentiality, absence of any constraint to participate, and the lack of adverse effects of the intervention. Also, a written informed consent was obtained from each participant.

This cross-sectional study was conducted on patients transferred from the intensive care unit of cardiac surgical ward to the general wards of TUMS hospital in Tehran city, Iran. The study was conducted from September 2012 to December 2014. One hundred and ten patients were selected and were enrolled in the study.

The data collection was a questionnaire consisting of two parts. The first part of the instrument included six questions (four questions related to demographic and two questions about clinical characteristics of patient's). Demographic and clinical characteristics included: age, gender, education level, family income, family history of heart disease, and history of open-heart surgery in the family. The second part was a State-Trait anxiety inventory (STAI)

Form Y-1 (State Anxiety) (7). The STAI Form Y-1 contains 20 items that measures state anxiety (how an individual feels right now). Respondents rate their level of anxiety using a four-point scale, which ranges from not at all to very much. Responses for each item are from one to four with possible total score ranging from 20 to 80. Reliability and validity of the instrument have been verified in Iran (Cronbach Alpha coefficient = 0.9452) (8). Patients completed the STAI before being transferred from the intensive care unit to the general ward. The inclusion criteria were hospitalization for the first time at the intensive care unit, age of > 18 years old, no hearing impairments, having no known anxiety disorder and length of ICU stay greater than three days. The exclusion criteria included a patient's reluctance to remain in the study, decreased consciousness, and unpredictable events during the transfer process (i.e. pain and dyspnea). To carry out the study, the researcher referred to selected hospitals during the morning shift after 08:00 AM, when patients were transferred to the ward and samples became available for selection. The patients' demographic data were extracted from their medical records or by speaking with the patients. Statistical analyses were performed using the SPSS 16 software.

4. Results

The age of the study participants was over 60 years and 27.3% of them were in the range of 40-59 years. Overall, 59.1 percent of participants were male (Table 1). Univariate regression analysis showed that gender had a significant relationship with anxiety. Therefore, the chance of moderate and high level of anxiety was 2.8 times higher in females than in males (Table 2). After entering the variable logistic regression multivariate model, the moderated interactive effects of these variables showed that only gender was associated with anxiety. Statistical data showed that 30 percent of patients had low anxiety before being transferred from intensive care unit to the general ward. Furthermore, 63.6 percent of patients had moderate anxiety, and high anxiety was found in 4.6 percent of patients (Table 3).

5. Discussion

Patients in the critical care unit may suffer psychological and physical problems caused by stress of being at the intensive care unit (9). This stress may continue even after the patient has been transferred to the wards. Some of the major physical responses emerging after discharge from the intensive care unit is disrupted sleeping pattern, disorientation, tiredness, confusion depression, weakness such that they are unable to get out of bed or even take a

Table 1. Demographic and Clinical Characteristics of the Patients

Variable	Number (%)
Age	
20 - 39	23 (20.9)
40 - 59	30 (27.3)
60 - 79	43 (39.1)
> 80	14 (12.7)
Gender	
Male	65 (59.1)
Female	45 (40.9)
Family income	
Enough	66 (60)
Not enough	44 (40)
Family history of heart disease	
Yes	42 (38.2)
No	68 (61.8)
Education Status	
Illiterate	34 (30.8)
Diploma	59 (53.8)
University	17 (15.4)
History of open heart surgery	
Yes	19 (17.3)
No	91 (83.7)

few steps during rehabilitation (10, 11). The findings of this study showed that transmission from intensive care to the general wards is a major source of anxiety for the patient; for instance Ratray et al. in a study on anxiety of patients, who were transferred from intensive care to the general ward, estimated 37 percent (12). This high anxiety sometimes causes side effects in the patient and re-admission to the intensive care unit (13). Increasing demand for intensive care unit and intensive care unit beds occupancy rate, has increased costs related to the intensive care unit, this increase in costs is significant, given that during a day of care for a patient in the intensive care unit of 3 to 5 which is equal to the cost of a day for a patient takes place in the general ward (14). Therefore, it is important for factors involved in readmission of patients in intensive care to be identified and controlled (15). Frazier et al. found in their study that anxiety occurs in 75% of patients transferred from intensive care to the general wards (16); similar results were found by the current study (63.6% of patients had moderate anxiety). The anxiety of patients following physiological changes eventually leads to increased

Table 2. Demographic Variables and Disease Related Factors Associated With Anxiety

Variable	OR	%95 CI	P-Value
Age, y			
20 - 39	0.86	0.21-3.42	0.83
40 - 59	2.77	0.64-11.9	0.16
60 - 79	1.15	0.32-4.08	0.82
> 80	-	-	-
Gender (female)	2.89	1.16-7.2	0.02
Education status			
Illiterate	0.27	0.06-1.12	0.07
Diploma	0.62	0.15-2.49	0.5
University	-	-	-
Family income			
Enough	0.80	0.61	0.34-1.86
Not enough	-	-	-
Family history of heart disease	1.34	0.57-3.17	0.49
History of open heart surgery	2.62	0.70-9.7	0.14

Table 3. Anxiety of Patients Transferred From Intensive Care to the General Ward

Anxiety	Number (%)
Low Anxiety(score 20 - 39)	33 (30)
Moderate anxiety(score 40 - 59)	70 (63.6)
High Anxiety(score 60 - 80)	7 (6.4)

plasma concentrations of adrenaline and noradrenaline, palpitations, increased myocardial oxygen consumption, increased pulse and respiratory rate and blood pressure (14, 17). Elliott et al. (2014) noted that patients, who are transferred from ICU to general wards are readmitted to ICUs before being discharged from the hospital due to receiving ineffective care services and developing hemodynamic instability in wards (18). For patients with compromised cardiovascular system to myocardial ischemia and cardiac surgery this is very harmful and puts the patient at risk (19), thus it is important to control for factors involved in the deterioration of the patient's condition.

This study provided a start to the prospective mapping of anxiety levels at time of transfer and shortly after transfer from an ICU to the general wards. It also provides information for future researchers who may want to examine ICU transfer anxiety. By understanding the anxiety experienced by ICU patients, nurses are better able to provide psychological support and thus more holistic care to this group (20). Thus, according to the results of this study and

studies by other researchers in other countries, it could be concluded that it is necessary to improve clinical outcomes of ICU patients, who are transferred to the general wards. Thus, according to this new research field in Iran, the researchers suggest measurement of anxiety levels of patients' families, and further investigation and interventions such as music therapy on anxiety of the patients.

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Footnotes

Authors' Contribution: The idea of the research was developed by kurosh jodaki and Masoomeh Zakerimoghadam. The research was conducted by kurosh jodaki. Hamid Asaysh was involved in the study design, acquisition of data, analysis and interpretation of data.

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