O R I G I N A L P A P E R

Nurses' Tendency of Malpractice in Turkey

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Abstract

Background: Nurses main role they play in the health care team is to serve as a key guardian of patient safety.
Aim: This research was carried out as a descriptive study in order to determine nurses' tendency of malpractice in Turkey.
Methods: Seventy eight (78) nurses who are working in a randomly selected hospital from five hospitals in Giresun city centre were involved in the study. During data collection 'Information Form for Nurses' and 'Malpractice Tendency Scale' were used.
Results: The weekly working hours of the nurses are found out to be 53.6±7.9 hours. It is also determined that the nurses' highest point average of the scale related to the subtitles is "*Drug and Transfusion Applications*" (X =4.98±0.11) and the lowest average is *"Prevention of Falling"* (X =4.70±0.45).
Conclusion: The present study showed that the weekly working hours of the nurses are too much. Moreover, it is seen that the points of *"Prevention of Falling"* and *"Communication"* subtitles of the malpractice scale is low and the possibility of making mistake is high for the nurses.

Key Words: Malpractice, Medication error, Nurse, Nursing practice, Patient safety

Introduction

Patient safety is a central issue in healthcare (Ocloo 2010; Kalra, 2004). The Institute of Medicine (IOM) has suggested that safety is a systems property, and that achieving safety requires a team effort. Nurses are vital as a member of the health care team, especially in the hospital (Castle et al., 2004; Larson, 2003). Because nurses care for their patients around the clock in hospitals, they see themselves as primarily responsible for their patient's well-being and their main role in the health care team is to serve as a key guardian of patient safety (Johnstone & Kanitsaki, 2006; Castle et al., 2004).

What is a nursing error? A nursing error is defined as a discipline-specific term that encompasses an unintended 'mishap' (e.g. involving slips, lapses, misjudgments, etc.) made by a nurse and where a nurse (as opposed to some other health care professional) is the one who is situated at the 'sharp end' of an event that adversely affected a patient's safety and quality care (Johnstone & Kanitsaki, 2006). Medical errors may occur due to various reasons. According to Akalın (2005), the main reasons of medical errors can be grouped under three titles as *human related factors* (fatigue, insufficient training, not showing sufficient care, not taking precaution, carelessness, insufficient communication, power/control, having no time, wrong decision, logical fallacy, disputer personality), *institutional factors* (building structure of the working place, policies, management/ financial structure, leadership,

insufficiency in feedback, wrong distribution of the staff) and *technical factors* (insufficient automation, insufficient devices, insufficiency in decision making support, insufficiency in integration). That the working hours of the nurses working in medical institutions are high is also an important factor causing errors. American Nurses Association (ANA) puts forward that the errors resulted from the nurses are generally related to insufficiency of the nurses and when the nurses are in working environment in which they are stressful, tired and they cannot think properly, errors increase (Ballard, 2003).

When the reasons of medical errors are specifically examined in our country, it is understood that there are many factors causing medical errors such as the education system graduating unqualified medical staff, lack of medical staff, excessive working hours, working in shifts, too many patients, fatigue, dissatisfaction with the occupation, stress, insufficiency of the devices and their not being calibrated, problems caused by physical conditions of the building, insufficiency of the funding spared for medical services and not making enough use of information technology (Ozata, 2009).

Besides their harm to the patient, medical errors also have negative effects on medical staff. The staffs feel guilty, depressive and burnout because of the medical errors they did. As a result, the efficiency, productivity and performance of the medical staff that lost self-confidence can decrease (Benner et al., 2002).

The ICN has a position statement on safety adopted in 2002 (http://www.icn.ch/pspatientsafe.htm). ICN believes nurses and national nurses associations have a responsibility to inform patients and families of potential risks, report adverse events to the appropriate authorities promptly, take an active role in assessing the safety and quality of care and lobby for standardized treatment policies and protocols that minimize errors.

These responsibilities are available to all nurses when needing support in situations where safety is an issue. All nurses who have practiced nursing have made a mistake at some time during their career. Even so, there are no precise figures on the incidence and impact of nursing errors in health care (Johnstone & Kanitsaki, 2006). Therefore, the aim of this study was to determine nurses' tendency of malpractice in Turkey.

Material and Methods

Design and Setting

This research was carried out as a descriptive study in order to determine nurses' tendency of malpractice in Turkey. Seventy eight (78) nurses who had been working in a randomly selected hospital from five hospitals in Giresun city centre were involved in the study.

The research data was collected between April 15, 2011 and May 04, 2011. In this study, sampling was not used and the research population comprised of all nurses. However, six nurses refused to participate in the study. In all, 78 nurses completed the survey.

Instruments

The data was collected by the researchers using the "Information Form for Nurses" and "Malpractice Tendency Scale". "Information form for nurses" was prepared by the researchers at the end of literature survey in order to evaluate the socio-demographic data of nurses (Brady, Malone & Flemıng, 2009; Ozata, 2009; Krauss et al., 2004; Astı & Acaroglu, 2000). It included demographic items (i.e. age, gender, education level, marital status) and working conditions (i.e. working year in the profession, nurses' shift type, clinics that nurses work, working hours per week, total shift per month, total patients cared in a day and nurses' satisfaction level).

"Malpractice Tendency Scale" was developed by Ozata to evaluate nurses' tendency of malpractice in 2009 in Turkey (Ozata, 2009). The scale consists of 49 items in total. Subtitles as "*Drug and Transfusion Applications*", "*Prevention of Nosocomial Infections", "Patient Monitoring and Security of Materials-Devices", "Prevention of Falling"* and "*Communication"* were included in Malpractice Tendency Scale. Cronbach's alpha value of the scale was 0.95. The scale is a 5-point Likert type. 1; never 2; rarely 3; sometimes 4; often 5; always. The increase in the total point indicates that nurses' tendency of making a medical error is lower.

Data Collection

After written consent was obtained from the director of institution the questionnaires were

administered to nurses. Nurses had been briefly informed by the researchers on the purpose and methods of the study. Participants completed the forms within approximately 15-20 minutes.

Ethical Considerations

The study was conducted according to the ethics guidelines set out in the Declaration of Helsinki, and written consent was obtained from the director of the institution. The aim of the study explained to the nurses and verbal contents of them were obtained.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS, Chicago, IL) for windows version 12.0 was used for data entry and analysis. Nurses' demographic variables and malpractice tendency were evaluated using the percentage distribution and mean. Kruskall- Wallis test was used to make a comparison of means of the malpractice tendency and nurses' demographic variables. The statistical significance level was set at $p<.05$.

Results

The nurses' socio-demographic characteristics are shown in Table 1. Seventy eight nurses (78) completed the questionnaire. The mean age of nurses was 25.5 years with a standard deviation 6.03 years. Of the nurses in this study, 39 (50%) graduated health professional high school, 20 (25.6%) bachelor degree and 19 (24.4%) associate degree.

It was found that 53.8% of the nurses included in the study were single, 46.2% married, 63.1% worked between 1-5 years, 71.8% worked in day and night shifts. Eighteen per cent of the nurses worked in surgery, 23.1% gynecology, 42.3% medical, 9% pediatric intensive care unit and 7.7% emergency clinics. It was also found that the nurses' working hours per week, total shift per month and total patients cared in a day were 53.6±7.9, 6.6±3.8 and 11.6±9.3 hours, respectively (Table 1).

The total scores that nurses come from subtitles in the scale are presented in Table 2. Additionally, the item was given with the highest score in subtitles of the scale. For instance, there are 18 items in the "*Drug and Transfusion Applications"* subtitle of the scale. When the results related to this subtitle was analyzed, it was seen that the highest score was on item "I am careful about which fluid to give to the patient" (X =4.98±0.11).

Prevention of the infections is the most important issue that the nurses must pay attention to. Therefore, when the results of *"Prevention of Nosocomial Infections"* subtitle (12 items), the highest score was given to "I pay attention not to contaminate the preparation and implementation of infused fluids" (X =4.85±0.44) item.

There are 9 items in the *"Patient Monitoring and Security of Materials-Devices"* subtitle of the scale. The highest score in this subtitle was given to "I do frequency of patient monitoring as specified in doctor order" item (X =4.83±0.37).

There are 5 questions under the subtitle *"Prevention of Falling"* and the highest score was given to "I provide the necessary support and assistance when the patient ambulates" item in this part. Under the subtitle *"Communication"*, there are 5 questions as well and the highest score was "I document all the information related to patient's treatment and care in nursing form" (X =4.78±0.41) item.

Table 3 shows the comparison of nurses' demographic variables and malpractice tendency scores. As shown, a significant difference was found between the clinic and the subtitles *"Prevention of Nosocomial Infections", "Patient Monitoring and Security of Materials- Devices"* and *"Communication" w*hen the nurses' clinics and subtitles of the malpractice tendency scale was compared *(*$p<.05$). Additionally, there was a statistically difference between the nurses' shifts and *"Prevention of Falling"* and *"Communication"* and, nurses' satisfaction level and "*Drug and Transfusion Applications", "Prevention of Nosocomial Infections", "Communication"* ($p<.05$).

Table 1. Socio-Demographic Characteristics, Workload and Satisfaction Level of Nurses (N=78)

Age (Mean ± SD)	25.5 ± 6.03	
Working hours per week (Mean ± SD)	53.6 ± 7.91	
Total shift per month (Mean ± SD)	6.6 ± 3.88	
Total patients cared in a day (Mean ± SD)	11.6 ± 9.30	
Nurses' satisfaction level (Mean ± SD)	3.3 ± 1.27	
Parameters	**N**	**%**
Marital status		
Single	42	53.8
Married	36	46.2
Education status		
Nursing college	39	50.0
Associate degree	19	24.4
Bachelor degree	20	25.6
Working years in the profession		
1-5 years	57	63.1
6-10 years	9	11.5
11 years and over	12	15.4
Shift type		
Day Shift	17	21.8
Night Shift	5	6.4
Day-Night Shift	56	71.8
Clinics		
Surgical clinics	14	18.0
Medical clinics	33	42.3
Gynecology-Obstetric	18	23.1
Pediatric ICU	7	9.0
Emergency	6	7.7

ICU: Intensive care unit

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Table 2. Malpractice Tendency Scores of the Nurses

Subtitles	Mean ± SD	Items received the highest score from subtitles	Mean ± SD
Drug and Transfusion Applications	87.6 ± 3.87	I am careful about which fluid to give to the patient	4.98 ± 0.11
Prevention of Nosocomial Infections	57.2 ± 3.79	I pay attention not to contaminate the preparation and implementation of infused fluids	4.85 ± 0.44
Patient Monitoring and Security of Materials-Devices	41.5 ± 3.41	I do frequency of patient monitoring as specified in doctor order	4.83 ± 0.37
Prevention of Falling	22.6 ± 1.98	I provide the necessary support and assistance when the patient ambulates	4.70 ± 0.45
Communication	22.8 ± 2.23	I document all the information related to patient's treatment and care in nursing form	4.78 ± 0.41

Table 3. The Comparison of Nurses' Demographic Variables and Malpractice Tendency Scores

Variables	Drug and Transfusion Applications Mean±SD	Prevention of Fallings Mean±SD	Prevention of Nosocomial Infections Mean±SD	Patient Monitoring and Security of Materials-Devices Mean±SD	Communication Mean±SD
Clinics					
Surgical clinics	87.71±2.75	23.85±1.77	57.85±2.54	41.14±4.91	22.71±2.16
Medical clinics	88.37±1.68	23.28±1.79	60.85±25.50	38.25±2.86	22.00±2.26
Gynecology-Obstetric	87.90±5.30	22.62±1.50	69.27±20.09	42.00±3.56	23.80±1.75
Pediatric ICU	86.25±6.40	23.10±2.33	54.70±4.21	41.30±3.19	22.76±2.52
Emergency	88.50± 2.25	21.60±2.31	56.27±2.63	42.16±2.56	22.10±2.55
	p>0.05*	p>0.05*	**p<0.05***	**p<0.05***	**p<0.05***
Education status					
Nursing college	88.33±2.35	22.87±2.01	57.05±3.99	41.66±3.02	23.02±2.17
Associate degree	87.15±4.07	22.36±2.06	57.42±4.63	42.42±2.79	22.78±2.43
Bachelor degree	87.40±3.06	22.40±1.87	57.65±2.43	40.50±4.41	22.75±2.26
	p>0.05*	p>0.05*	p>0.05*	p>0.05*	p>0.05*
Shift type					
Day shift	88.33±2.35	22.88±1.64	57.27±4.15	42.83±2.45	23.22±2.34
Night shift	87.40±1.34	20.40±1.51	56.00±3.00	40.20±2.86	20.40±1.34
Day-night shift	87.43±4.40	22.74±2.02	57.41±3.77	41.25±3.64	23.01±2.15
	p>0.05*	**p<0.05***	p>0.05*	p>0.05*	**p<0.05***
Satisfaction level					
None	85.85±6.36	22.14±1.77	56.85±4.39	39.85±4.59	23.28±2.28
Mild	86.25±2.87	21.25±1.89	56.50±2.38	40.75±2.87	23.75±1.50
Moderate	86.84±4.75	22.34±2.17	56.40±4.33	40.93±3.83	22.03±2.41
High	89.10±1.48	23.42±1.92	59.47±1.02	43.21±2.63	23.78±1.93
Very high	88.62±1.67	22.81±1.51	56.07±4.01	41.75±2.26	23.18±1.90
	p<0.05*	p>0.05*	**p<0.05***	p>0.05*	**p<0.05***

***Examined by Kruskall-Wallis test; ICU: Intensive care unit**

Discussion

When the findings of the study were analyzed, it was determined that the working hours of the nurses were 53 hours in a week. In our country the working hours of a medical staff is 40 hours according to Government Officers' Law numbered 657 and it is 45 hours according to Law Related to Amends and Working Principles of Medical Staff numbered 2368. In this study the weekly working hours of the nurses were found out to be over the mentioned hours. In literature it was detected that long working hours and shift or post working system had negative influences on individual's physiology and psychology and this situation could be dangerous for patient security (Bilazer et al., 2008). Furthermore, it was stated that long working hours could cause sleeping disorder, insomnia, fatigue, attention deficiency, loss of social relations, family issues, decrease in occupational satisfaction, low performance, loss of motivation and faults in patient care (Bilazer et al., 2008; Persson & Martensson, 2006; Ruggiero & Pezzino, 2006; Wilson, 2002).

The results related to the subtitle of *"Drug and Transfusion Applications"* were examined and it was found that the highest score was given to the item "I am careful about which fluid to give to the patient". Since the highest average score to be taken from the scale is 5.00, this finding shows that the nurses pay attention to the preparation of infusion liquids and they have very little tendency to do errors. However, the drug errors are the most common and threatful error types for the patients (Nguyen, Connolly & Wong, 2010; Brady, Malone & Flemıng, 2009). In a study conducted by Grasso and co-authors (2003), it was reported that errors up (66%) occurred during the administration of drugs. Young and colleagues (2008) found that medication error rate was found as 28.2% and they reported that medication errors were wrong time (70.8%), wrong dose (12.9%), skip a dose (11.1%), giving overdose (3.5%), giving the drug not ordered (1.5%) and wrong drug (0.2%), respectively. In the review through which 33 researches on drug errors were studied, it was determined that utmost attention must be showed while preparing and applying the drugs (Wright, 2010). Parenteral drug applications are among the ones which cause the nurses to be sued (Demir-Zencirci, 2010). In a study on the evaluation of the nursing applications towards patient safety in our country, it was stated that drug application error had 47.0% rate (Cırpı, Dogan & Yasar, 2009). In the study searching for potential causes of drug application errors of the nurses, it was stated that the causes were the excessive number of the patients per nurse, distractibility and concentration disorder, long working hours, lack of information about the drug and the patient (Sezgin, 2007). Moreover, in the literature review it was found that when the number of the nurses increased, the drug errors decreased (Chang & Mark, 2009).

When the results related to the *"Prevention of Nosocomial Infections"* subtitle of the scale were examined, it was determined that the highest score was "I pay attention to not contaminate the preparation and implementation of infused fluids". In a study in which had been defined the nurses' malpractice tendencies, it was found the highest score of this subtitle similar to our findings (Ozata, 2009). Sharek and Classen (2006) stated that the most common error type was hospital infections (27.8%). In another study conducted in our country this rate was found out to be 34.6% (Cırpı, Dogan & Yasar, 2009). Infection control and prevention is one of the hardest areas of the medical applications and the increase in infection rates is a cause of concern in medical staff and patients. An institutional approach is necessary to decrease the infections related to medical care (Anezz, 2006).

It was found that the highest score of the *"Patient Monitoring and Security of Materials-Devices"* subtitle of the scale was "I do frequency of patient monitoring as specified in doctor order" item. Lack of enough monitoring and evaluation of the patients is one of the most important errors that lead the nurses to face with legal procedure (Giordano, 2003). Furthermore, another medical error which causes the nurses to be sued is fault or failure while using medical materials. This situation is generally caused because of that the complicated medical materials is tried to be used without enough training and reading the manual. Therefore it is important to maintain and calibrate all medical devices regularly, check the due dates of all medical consumables, check their sterilization durations, supplying enough materials and consumables, give appropriation of all consumables by the user, choosing the appropriate size of the materials to prevent errors

caused by faulty or inappropriate usage of materials (Astı & Acaroglu, 2000).

The highest score of the scale related to *"Prevention of Falling"* subtitle was "I provide the necessary support and assistance when the patient ambulates" item and it had the lowest score average compared to other subtitles. This result shows that the nurses' tendency to do errors on prevention of falling is very high. The injuries as a result of patient falling in the hospitals is another factor which causes the nurses to be sued (Demir-Zencirci, 2010). In a study conducted by Göktas (2007) it was stated that falling was the highest rate (14.74%) among 95 errors' reporting. The patients' psychological situation, walking disorder, having a falling history, having a serious illness, confusion history, used drugs (e.g. sedatives, insulin) and loss of senses (e.g. vision, hearing, touch) are the main risk factors that cause fallings (Krauss et al., 2004; Perell et al., 2001). Koh and colleagues (2008) stated the obstacles to practices for prevent patient fallings as lack of information and training of medical staff, lack of motivation, insufficiency in the number of medical staff and insufficiency of necessary devices for the patients. Increasing the number of the nurses and sufficient support to the patients with falling risk can diminish the falling rates.

The highest score of *"Communication"* subtitle of the scale was in item "I document all the information related to patient's treatment and care in nursing form" and when it was compared to other subtitles, it was found that it was item with the second lowest score. In the study of Arda and colleagues (2007), 85.5% of the nurses had communication problems with the patients. In the same study, the main reason for lack of communication was found out to be the insufficient number of the nurses. Additionally, it was put forward that the reasons such as anxiety created by the clinical authorities, too many shifts and fatigue influenced the communication negatively. Thus, an institutional approach must be developed to increase the communication among care providers. Defining policies and methods about oral/ telephone directives and informing the staff about them and writing the information about the patient are among the issues to be emphasized in order to prevent communicational errors (Anezz, 2006).

Conclusion

In this study it was concluded that the working hours of the nurses were too much. In addition, *"Prevention of Falling"* and *"Communication"* subtitles of the malpractice tendency scale were found out to have low scores. Hence, it was put forward that the nurses' tendency to do errors was very high. Nevertheless, since patient security culture has not been constituted yet in our country, the nurses tend to hide their errors by giving positive answers to the questions so it must be kept in mind that they may lead to low medical error tendency results.

Accordingly with these results; the nurses should be trained about the errors related to their clinics and necessary warnings must be done. Nurse employment should be increased in order to obtain nursing services in desired amount and quality. It is also suggested that the number of the nurses per patient should be increased.

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