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Abstract

Background: Nurses have a key role in ensuring the safety of patients, reducing the likelihood of errors and improving patient outcomes.

Aims: This study aimed to determine the factors affecting patient safety, with a focus on the culture and attitudes of nurses working in emergency units.

Method: This cross-sectional, descriptive, correlational study was conducted between 10 January and 30 August 2015 among 282 nurses who worked at emergency units of 19 hospitals in the north-central Black Sea Region of Türkiye Data were obtained using descriptive information forms, the Patient Safety Attitude Scale (PSAS) and the Patient Safety Culture Scale (PSCS).

Results: The mean total PSAS score was 152.26 [standard deviation (SD) 22.54; range 46–230], while the mean total PSCS score was 2.56 (SD 0.52; range 1–4). Around a quarter of the participants reported errors, such as medication errors and patient falls, which threatened patient safety in the emergency units. The case report forms were not filled when these errors occurred.

Conclusion: Attitude and culture of nurses in hospital emergency units towards patient safety differed according to their sociodemographic and work–life characteristics, including being satisfied with working in the emergency room, quality of work–life balance, level of job

satisfaction, and number of years working in the emergency room.

Keywords: attitudes, culture, emergency unit, nurses, medication errors, patient safety, emergency care, Türkiye

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Introduction

There is a growing interest in patient safety culture, as healthcare organizations undertake studies and promote practices to ensure patient safety (1). The World Health Organization defines patient safety as “the prevention of errors and adverse effects to patients associated with health care” and emphasizes the importance of safety by healthcare organizations (2). Patient safety encompasses all precautions taken by health organizations and healthcare professionals to prevent, report and analyse medical errors leading to adverse events during care and to eliminate or reduce the negative effects of such errors on patients accessing services (3).

In a healthcare organization, prevention of medical errors and elimination or reduction of the negative effects of such errors on patients depends upon having created a patient safety culture within the organization (4). Patient safety culture derives from the hypotheses, values and norms shared by team members, units or organizations which directly or indirectly affect patient safety (5). It specifies what is and what is not important within a healthcare organization, and determines behaviours relating to patient safety (6).

The work environment and working conditions of nurses are among the important factors that affect patient safety and culture (7). Findings indicate that nurses' work environments pose a threat to patient safety (8), that heavy workloads and that low job satisfaction reduce the quality of care and services provided by nurses (9,10). Patients generally attend the emergency unit due to acute disease or injury which requires rapid treatment. Thus, nurses working in the emergency unit are occasionally obliged to initiate immediate treatment without obtaining detailed history from patients. Emergency unit nurses experience problems especially when the patient is unconscious and they are unable to obtain sufficient information on the patient's medical condition (11,12).

In Türkiye, emergency units are highly stressful places. Health professionals working in the unit often fail to meet their own physiological needs, such as eating, due to insufficient personnel and heavy workloads. Patients' relatives often insist that their relatives should receive medical attention before others without paying attention to triage. Such situations lead to a decreased tolerance for patients and their relatives as well as burnout and fatigue among emergency unit nurses (12). Nurses play key roles not only in patient care but also in informing systems that enable patient safety, reduce the possibility of errors and develop strategies to improve patient outcomes (6,13,14). Thus, it is important that healthcare institutions understand the attitudes and behaviours towards patient safety so they can determine the weak points, errors and other factors affecting them.

There have been a number of studies about patient safety culture and attitudes of healthcare professionals in other countries (15–19), but little is known about the factors that affect nurses' attitudes towards patient safety in Türkiye (13,14,20,21). As far as we know, this study is the first to examine the factors affecting patient safety culture and the attitudes of nurses employed in the emergency units of hospitals in and around Samsun, a city located in the central Black Sea region of northern Türkiye.

To improve patient safety in emergency units, studies which analyse differences between nations, regions and cultures, and the findings and information obtained from these studies, are essential. Our findings will be useful in formulating appropriate strategies and national plans of action to improve patient safety in emergency units. Higher quality and more reliable care and treatment can be given when we know the factors affecting patient safety culture in emergency units and the attitudes of nurses who work in them. Therefore, answers were sought for the following questions:

What are the culture and attitudes regarding patient safety among nurses working in the emergency unit?

Do the sociodemographic or occupational characteristics of nurses affect their patient safety culture and attitudes in the emergency unit?

Methods

Study design and sampling method

This cross-sectional, descriptive, correlational study was conducted between 10 January 2015 and 30 August 2015 in 19 hospitals in Samsun, a city in the Black Sea Region of Türkiye. The sample size was determined as 238, at a 95% confidence interval and a 3% margin of error. The total number of nurses employed in the emergency units of the hospitals was 306. The nurses were selected using random sampling, a probability sampling method. To select the sample, a list was prepared containing numbers given to all nurses working in the emergency service of the hospitals. Nurses to be included in the sample were determined by drawing 238 numbers from the list. Considering that there may be data losses, the drawing was terminated at 282 (92.2%). The sample comprised nurses who had been employed in the emergency unit for at least 6 months.

There were no differences between the study hospitals (n = 19), all of which were general hospitals. Patients with various health problems and a stable condition, which only required outpatient treatment, could be admitted to emergency units as well as patients who had a potentially life-threatening condition (mainly trauma, injury due to accidents and critical patients). The number of nurses employed in the emergency units in this study ranged between 15 and 21 for each hospital.

Data collection

The data for this study were collected from the nurses using a survey form prepared by the researchers, the

Patient Safety Attitude Scale (PSAS) and the Patient Safety Culture Scale (PSCS). The survey form contained 21 questions, 4 of which covered the sociodemographic characteristics of the nurses. The following questions were asked to investigate nurses’ work-related characteristics:

What is your duty at the emergency unit (service nurse/supervising service nurse)?

How long have you been working as a nurse?

How many months have you been working at the emergency unit?

Your employment status at the hospital (staff/on contract)?

Do you love your profession? (I do/I do not/undecided)?

Are you satisfied with the service you work at (satisfied/not satisfied/partly satisfied)?

Type of employment (daytime/in shifts/other-specify)?

How many hours do you work per week?

Average number of patients cared for per day?

How would you evaluate your quality of work life? (perfect/very good/good/poor/very poor)?

How would you define your level of job satisfaction at the organization (very good/good/medium/partly poor/poor)?

Nurses were asked the following questions regarding patient safety:

Have you encountered a situation or event that threatened patient safety in the emergency

room (yes/no)?

If your answer is yes, what were these situations or events that threatened patient safety?

When you encounter a medical error that threatened patient safety in the emergency service, did you report this situation (yes/no)?

Do you encounter medication errors in the emergency room (yes/no)?

If your answer is yes, what are the most common medication errors you encounter in the emergency department?

What do you think are the reasons for medication errors in the emergency service?

The survey forms were pilot-tested for ease of use and comprehensibility on a group of 8 nurses who were not included in the final sampling. Respondent nurses completed the survey form and the scales in a quiet room when they had less workload. The researchers provided them with information about the study and obtained their verbal informed consent. They were informed that they could decide not to participate in the study, that no identifying information would feature on the survey forms, and that the data would be used only for the study. Data collection lasted approximately 15–20 minutes.

Patient Safety Attitude Scale

The PSAS was developed by Sexton et al. (22) and adapted for the Turkish language by Baykal et al., adopting the group translation approach for testing the language validity of the original scale (23).

The Turkish version of the PSAS has 6 subdimensions and 46 items: job satisfaction (11 items), teamwork climate (12 items), safety climate (5 items), perception of management (7 items), stress recognition (5 items) and working conditions (6 items) (23). This 5-point Likert-type scale

has the following response categories: 5 = I totally agree, 4 = I agree, 3 = I partially agree, 2 = I disagree, 1 = I totally disagree. Ten items (21, 36, 37, 38, 39, 40, 41, 42, 43, 45) are negatively scored. Total scores range between 46 and 230. The scale has no cutoff score. Higher scores indicate positive attitudes to patient safety while lower scores indicate negative attitudes (22). Cronbach's alpha reliability coefficient for the PSAS was 0.93.

Patient Safety Culture Scale

The PSCS was developed by Turkmen et al (24). They generated an 83-item PSCS draft. To test content validity, the draft scale was evaluated by a panel of 10 professionals and the items were rewritten based on their opinions. The scale was pilot-tested among 15 people who had similar characteristics to the study sample to test its understandability. The item total score correlations ranged between 0.46 and 0.75. Items with low total score correlations (correlation coefficient of 0.30 and below) were excluded from the draft scale, resulting in a total of 51 items (24).

Confirmatory factor analysis was conducted to test construct validity. Factor loadings ranged between 0.43 and 0.82. The Pearson correlation analysis was carried out to assess the consistency between mean test–retest scale scores; the test–retest scores were statistically significantly correlated (r = 0.47, P

The PSCS includes 5 dimensions: management and leadership (17 items), training of personnel (7 items), reporting unexpected errors and events (5 items), care environment (8 items), and personnel behaviour (14 items). The 4-point Likert type scale has the following response categories: 1 = I totally disagree, 2 = I disagree, 3 = I agree, 4 = I totally agree. Subscale scores are calculated by adding the subscale items and then dividing the sum by the number of items within the subscale. Total scores are calculated by adding the mean subscale scores and dividing the sum by 5, resulting in a total score between 1 and 4. The scale has no cutoff score. Scores approaching 4 indicate a positive patient safety culture, while scores approaching 1 indicate a negative patient safety culture (24). Cronbach's alpha for the PSCS in this study was 0.97.

Ethical considerations

The study began only after consent had been received from the ethics committee of the Ondokuz Mayıs University (B.30.2.ODM.0.20.08/1129). Written consent to collect the data was received from the managers of the hospitals where the study was conducted as well as from the managers of the Ondokuz Mayıs University hospital. The nurses participating in the research provided their verbal informed consent.

Data analysis

The data were analysed using SPSS, version 22.0, software package. A normality test of the quantitative data was examined using Shapiro–Wilk. Multiple regression analysis was used to examine the effect of independent variables on scale scores. The backward method was used to include independent variables in the model. The significance level was set at P