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The Tendency To Medical Errors Among Pediatric Nurses In Turkey: A Systematic Review

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ABSTRACT

Objective: This systematic review was conducted in order to review the studies published on the tendency to make medical errors among pediatric nurses in Turkey and to systematically examine the data obtained.

Methods: The relevant search was made in the CoHE (Council of Higher Education Council) National Thesis Center, Google Scholar, EBSCOhost, and PubMed databases. In this study, no year limitation was made. As a result of the search, 3 articles that met the research criteria were included in the study.

Findings: It was found that the pediatric nurses had a high tendency to make medical errors during the implementations performed in the clinics, that their colleagues witnessed these medical errors, and that the tendency to make medical errors differed according to the service worked and the procedure performed.

Conclusion: It is seen that pediatric nurses have a high tendency to make medical errors and that the most important reason for this is the intensive work programs. It is recommended to develop new strategies to improve the working conditions of pediatric nurses in health institutions.

Keywords: *Child, Nurse, Medical Error, Turkey.*

INTRODUCTION

Medical errors occur due to inattention, illiteracy or neglect of health care professionals and result in patient harm (1). According to the Safety Reporting System published in our country in 2016, there were 74,383 medical error reports in 2016 (2). As a result of medical errors, irreversible conditions such as death, disability, and diseases may occur in patients (3-5). Therefore, important duties are assigned to institutions and health professionals in preventing medical errors (6).

Nurses, who constitute a significant majority of health professionals, have a higher risk of making medical errors due to many dependent and independent tasks (7). Especially among pediatric nurses, working with a sensitive population, high workload, and insufficient number of personnel increase the rate of medical errors (8). For this reason, it is important to inform nurses about medical errors and to take measures to reduce the rate of medical errors (9).

This systematic review was conducted in order to review the studies published on the tendency to make medical errors among pediatric nurses in Turkey and to systematically examine the data obtained. The systematic review question created prior to the study was determined as “What is the tendency of pediatric nurses to make medical errors?”.

Inclusion criteria of the study

Being present in CoHE (Council of Higher Education) National Thesis Center, Google Scholar, EBSCOhost, and PubMed databases

Being conducted with pediatric nurses in Turkey

Using the Medical Error Tendency Scale in Nursing

Having full-text access, not being a review article

MATERIALS AND METHODS

CoHE (Council of Higher Education) National Thesis Center, Google Scholar, EBSCOhost, and PubMed databases were searched using the keywords “çocuk (child)”, “hemşire (nurse)”, “tıbbi hata (medical error)”, and “Türkiye (Turkey)”. In the study, no year limitation was made and 3 articles that met the inclusion criteria were included in the study. The PRISMA Declaration was utilized in the preparation of this systematic review protocol and article writing. In the studies, the Medical Error Tendency Scale in Nursing consists of 49 items and 5 subdimensions (medication and transfusion administrations, falling, communication, hospital infections, patient monitoring and equipment safety). The minimum total score that can be obtained from the scale is 49 and the maximum score is 245. The increase in the total score indicates that nurses' tendency to medical errors is decreased (9, 10).

Universe and Sample Characteristics

In the literature search, 166 articles were reached using the keywords “çocuk (child)”, “hemşire (nurse)”, “tıbbi hata (medical error)”, and “Türkiye (Turkey)”. Studies that did not meet the inclusion criteria and repeated studies in databases were searched were excluded from the research. As a result, three articles were obtained to examine in the context of the study (Table

1).

Table 1. The Number of Articles Selected in the Selection Process of the Systematic Review Study

Number of articles reached in database search: 166

CoHE National Thesis Center (n:0) Google Scholar (n:166) EBSCOhost (n: 0) PubMed (n: 0)

Number of articles that met the inclusion criteria of the study: 3

CoHE National Thesis Center: 0 Google Scholar: 3 EBSCOhost: 0 PubMed:0

FINDINGS

The objectives of the studies, universe and sample sizes, scales used, and research types are presented in Table 2. The samples of the studies consisted of a minimum of 70 nurses (9) and a maximum of 123 nurses (10).

In the study conducted by Ersun et al. (2003) with 123 pediatric nurses, it was stated that 61% of the nurses encountered medical errors, that 51.5% witnessed the errors of physicians and 48.5% witnessed the errors of their friends, and that none of the nurses filled in the report form. It was determined that the most common type of error was medication error and the most common medication error was the calculation of wrong medication doses. It was determined that 27.7% of the nurses made a medication error before and that 47.4% of these errors were due to the insufficient number of personnel. The mean score of the nurses from the Medical Error Tendency Scale in Nursing was 227.12±15.06. It was determined that nurses working in pediatric services had a higher tendency to make medical errors ($p<0.05$) (10).

In a cross-sectional and descriptive study, it was determined that 42.9% of the nurses made a medication error before and that 62.9% witnessed that their colleagues made a medication error. 68.6% of the nurses stated that they did not participate in training on medical errors and 74.3% stated that they needed training on the relevant subject. It was found that the tendency of nurses to make medical errors was high (9).

In a descriptive study conducted with pediatric nurses, it was found that 48.9% of the nurses made a medication error and that 72.2% of them witnessed that their friends administered the wrong medicine. It was reported that the most common type of error was the wrong dose of medication. It was determined that nurses who did not like the clinic they worked had a higher tendency to make medical errors (8).

Table 3. The objective, sample size of the studies examined, parameters used and research types

N o	Authors	Year of the Study	The objective of the study	Universe and Sample	Scale Used	Research Type
1	Ersun et al.	2013	To determine the tendency of pediatric nurses to make errors	Universe: 160 Sample: 123	Medical Error Tendency Scale in Nursing	Cross-sectional descriptive study design
2	Külcü and Yiğit	2017	To determine the tendency of nurses working in pediatric clinics to make medical errors	Universe: 88 Sample: 70	Medical Error Tendency Scale in Nursing	Cross-sectional descriptive study design
3	Manav and Başer	2018	To examine the pediatric nurses' status of making medication errors and tendencies	Universe: Not specified. Sample: 90	Medical Error Tendency Scale in Nursing Attitude Scale in Medical Errors	Descriptive and correlational study design

DISCUSSION

The excessive workload in clinics, inability to work in the desired service, insufficiencies in the health care system, and sensitive structure of the child population may be the factors affecting the rate of medical errors (8, 11-13). In the studies examined in our research, it was determined that the rate of medical errors and the tendency to make medical errors were high among pediatric nurses and that one of the most important reasons for medical errors was working with insufficient number of personnel. Preparing low doses of medications in pediatric clinics may increase the risk of administering incorrect doses of medicines (4). In the studies examined, the most common type of error was reported to be the administration of the wrong medicine. In the literature, it is stated that nurses do not receive sufficient information about medical errors and that they do not know what to do when they encounter a medical error (4, 7). In the studies examined, nurses stated that they witnessed errors in medical procedures implemented in their environment, that they did not use the report form after medical errors, that they did not participate in training on medical errors, and that they needed training on this subject.

CONCLUSION

In conclusion, it was found that pediatric nurses have a high tendency to make medical errors and that nurses do not receive sufficient training on this subject. It is thought that this systematic review will contribute to the studies to be carried out on the subject by reaching scientific evidence. In line with the study results, it is recommended to determine the causes of the tendency to medical errors, to provide sufficient training to pediatric nurses and to take necessary measures.

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