

## abstract

**Background and purpose:** medication errors as the most common type of medical errors, due to their high prevalence, commonness and possible risks for patients, are used as an indicator to determine the level of patient safety in hospital and pre-hospital emergency departments. Based on the research, it has been determined that most of the errors occur when prescribing medicine to the patient. Therefore, the current research was conducted in order to "determine the amount of medication error, psychological reactions and factors affecting it from the point of view of hospital and pre-hospital emergency nurses in Ardabil city in 2019".

**Materials and methods:** The present study is a cross-sectional descriptive study that was conducted on the nurses of the hospital emergency department and pre-hospital in Ardabil. The emergency nurses studied in this research were investigated by census. Out of 275 questionnaires distributed among the research samples, 242 questionnaires (RR=88%) were completed and returned. Data collection was done using the following questionnaires: a) Demographic information questionnaire b) Medication errors questionnaire c) Psychological reactions related to medication errors questionnaire d) Questionnaire of factors influencing the occurrence of medication errors from the point of view of nurses. Data analysis was done by Spss software using descriptive statistics (mean, standard deviation, frequency) and analysis (one-way analysis of variance, t-test and chi-square). Smirnov Kolmogoroff test was used to determine the normality of the data ( $p \geq 0.05$ ).

**Findings:** The results showed that 21.81% (36 people) of hospital emergency nurses and 16.88% (13 people) of pre-hospital emergency nurses stated that they had a medication error at least once in the last 6 months. The prevalence of medication errors in hospital emergency nurses was 1.3 errors per nurse and in pre-hospital emergency nurses 2.66 errors per nurse during the past 6 months. The most common cause of medication errors in hospital emergency nurses was feeling unmotivated due to job discrimination (11.52%) and in pre-hospital emergency nurses, giving medicine to the patient without a doctor's prescription (18.53%). The rate of medication error reporting in hospital emergency nurses was (50%) and in pre-hospital emergency nurses (45.36%), and the ratio of error reporting per nurse in the hospital and pre-hospital emergency departments was 1.55 and 1.2, respectively. The case was determined. The average medication error resulting in injury per nurse was 1.06 in the hospital emergency department and 0.71 in the pre-hospital emergency department. The most psychological reaction to medication errors in hospital and pre-hospital emergency nurses was related to stress and fear. The most effective factor in the occurrence of medication errors was the feeling of

demotivation due to job discrimination in hospital emergency nurses with an average of  $3.36\pm 0.08$  and in pre-hospital emergency nurses with an average of  $3.16\pm 0.12$ .

**Conclusion:** The results of this study showed that medication errors and consequently psychological reactions caused by medication errors are very common among emergency nurses. Therefore, providing continuous training, holding advanced training classes, providing necessary standards and sufficient in-service training can play a decisive role in reducing medication errors. The most psychological reaction following medication error was fear and stress. Therefore, it was suggested to introduce wrongdoers to use psychiatric services. Considering the importance of patient safety, accurate and comprehensive identification of the occurrence of medication errors and the factors influencing their occurrence, as well as the management of psychological reactions following medication errors in emergency nurses, is of great importance, therefore, the present study aims to determine the amount of medication errors. Psychological reactions and factors affecting them from the perspective of hospital and pre-hospital emergency nurses in Ardabil city in 2019.

**Keywords:** medication error, psychological reactions, factors affecting medication error, pre-hospital and hospital emergency nurses