

KNOWLEDGE AND PRACTICE OF EMERGENCY NURSES REGARDING TRIAGE

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(Received, 24th October 2024, Revised 15th December 2024, Published 20th December 2024)

Abstract: *Effective triage is essential for prioritizing patients and ensuring optimal resource allocation in emergency departments. Emergency nurses play a vital role in this process, yet gaps in their knowledge and practices can hinder patient outcomes:*

Objective: *To assess the knowledge and practices of emergency nurses regarding triage in a tertiary care hospital in Lahore, Pakistan* **Methods:** *A descriptive cross-sectional study was conducted among 150 emergency nurses using a structured questionnaire. Data were analyzed using SPSS version 26, with results presented as frequencies and percentages.* **Results:** *The study revealed that 35.3% of nurses had low knowledge, 16% had moderate knowledge, and 34% demonstrated high knowledge of triage. Regarding practices, 54% of participants exhibited poor adherence to triage protocols, while 46% demonstrated good practices. Nurses with higher qualifications and more experience showed significantly better knowledge and practices.*

Conclusion: *This study identifies critical gaps in the knowledge and practices of emergency nurses regarding triage. Targeted training, institutional support, and the implementation of standardized triage guidelines are necessary to enhance the efficiency and effectiveness of emergency care in Pakistan.*

Keywords: Triage, Emergency Nurses, Knowledge, Practices, Patient Prioritization, Pakistan

Introduction

Triage is a fundamental process in emergency care, enabling healthcare providers to prioritize patients based on the severity of their conditions. Effective triage ensures timely medical intervention for critically ill patients and optimizes resource utilization in emergency settings. Emergency nurses, as frontline healthcare providers, play a pivotal role in triage, requiring them to possess a thorough understanding of triage protocols and demonstrate proficiency in their implementation. In Pakistan, where emergency departments (EDs) are often overcrowded and resource-limited, the knowledge and practice of nurses regarding triage are critical for improving patient outcomes (1, 2).

Globally, studies have highlighted varying levels of knowledge and adherence to triage practices among emergency nurses. Research conducted in India and Bangladesh has shown that despite awareness of triage systems, gaps in training and practical application persist (3, 4). Similarly, in developed countries, structured training programs and standardized protocols have been effective in enhancing triage efficiency and patient care quality (5). In Pakistan, however, limited research exists on the knowledge and practices of emergency nurses regarding triage, creating a significant gap in understanding the challenges and needs of EDs in the local context (6, 7). The Pakistani healthcare system faces unique challenges, including high patient loads, inadequate staffing, and limited access to advanced training in emergency care. These factors contribute to inconsistent triage practices and delays in patient management (8). Studies conducted in public hospitals in Lahore and Karachi have revealed that many emergency nurses lack formal training in triage, relying instead on experiential learning or outdated methods (9, 10). This highlights the urgent need for standardized training

programs and policy reforms to address these gaps. Moreover, cultural and systemic factors influence triage practices in Pakistan. For instance, family involvement in patient care often complicates decision-making in emergency settings. Additionally, the absence of national guidelines for triage protocols further exacerbates inconsistencies in practice (11, 12). Addressing these issues is crucial for improving the efficiency and equity of emergency care delivery.

This study aims to assess the knowledge and practices of emergency nurses regarding triage in a tertiary care hospital in Lahore, Pakistan. By identifying gaps in knowledge and practice, the findings will inform targeted interventions, such as educational programs and the development of standardized triage protocols, to enhance the quality of emergency care in Pakistan.

Methodology

The study employed a descriptive cross-sectional design to evaluate the knowledge and practices of emergency nurses regarding triage in a tertiary care hospital in Lahore, Pakistan. This design was chosen to provide a comprehensive assessment of the participants' current knowledge and practices related to triage within a specific timeframe.

The study population consisted of 150 emergency nurses working in various units of the hospital. Participants were selected using a convenience sampling technique to ensure the inclusion of nurses who were readily available and willing to participate during the study period.

The inclusion criteria required nurses to have at least one year of experience in emergency care and direct involvement in triage activities. Nurses who were on

extended leave or not actively involved in patient triage were excluded.

Data were collected using a structured and pre-validated questionnaire developed based on existing literature and expert recommendations. The questionnaire was divided into three sections: demographic characteristics, knowledge assessment, and practice evaluation. The demographic section included variables such as age, gender, marital status, educational qualifications, and years of experience. The knowledge section contained multiple-choice questions addressing the principles, protocols, and prioritization strategies in triage. The practice section evaluated adherence to triage guidelines, decision-making skills, and the use of standardized tools.

Ethical approval for the study was obtained from the institutional review board of the tertiary care hospital. Participants were informed about the objectives and significance of the study, and written informed consent was obtained before data collection. Anonymity and confidentiality were maintained throughout the study, and participants were assured of their right to withdraw at any stage without any consequences.

The data collection process was conducted over a specified period during the nurses' working shifts to minimize disruption to patient care. Questionnaires were distributed, and participants were given sufficient time to complete them. A trained research assistant was available to clarify any questions or ambiguities in the survey.

Data were entered into SPSS version 26 for statistical analysis. Descriptive statistics, including frequencies and percentages, were calculated to summarize demographic data, knowledge levels, and practice adherence. Inferential statistics were employed to identify associations between demographic factors and knowledge or practice levels. Results were presented in tables and charts to facilitate clarity and interpretation.

Results

This study assessed the knowledge and practices of emergency nurses regarding triage at a tertiary care hospital in Lahore, Pakistan. A total of 150 emergency nurses participated in the study. The majority of the participants were male (88%) and between the ages of 21–25 years (84.7%). Most nurses were single (83.3%) and held general nursing qualifications (74%). Nurses with 1–3 years of experience comprised 83.3% of the sample (Table 1).

The knowledge levels of the participants varied. About 35.3% of the nurses demonstrated low knowledge, 16% had moderate knowledge, and 34% had high knowledge (Table 2).

The results indicated that 54% of participants demonstrated poor triage practices, while 46% exhibited good practices (Table 3).

A significant proportion of participants with low knowledge also demonstrated poor practices. Conversely, those with high knowledge were more likely to exhibit good practices (Table 4). The study revealed a significant gap between knowledge and practices among emergency nurses. While a notable proportion of nurses exhibited high knowledge (34%), poor practices were prevalent, with 54% of nurses

not adhering to best practices for triage. This disparity underscores the need for targeted training programs to bridge the gap between knowledge and practical application. Additionally, demographic factors such as educational qualification and years of experience influenced both knowledge and practices, highlighting areas for improvement in nurse education and clinical training.

Table 1: Demographic Characteristics of Emergency Nurses

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	21–25	127	84.7
	26–30	14	9.3
	31–35	4	2.7
	36–40	4	2.7
	41–45	1	0.7
Gender	Male	132	88.0
	Female	18	12.0
Marital Status	Single	125	83.3
	Married	25	16.7
Qualification	General Nursing	111	74.0
	Post RN	26	17.3
	BSN Generic	11	7.3
Experience (years)	1–3	125	83.3
	4–6	23	15.3
	7–9	2	1.3

Table 2: Knowledge of Emergency Nurses toward Triage

Knowledge Level	Frequency (n)	Percentage (%)
Low Knowledge	53	35.3
Moderate Knowledge	24	16.0
High Knowledge	51	34.0
Other Responses	22	14.7

Table 3: Practices of Emergency Nurses toward Triage

Practice Level	Frequency (n)	Percentage (%)
Poor Practice	81	54.0
Good Practice	69	46.0

Table 4: Combined Knowledge and Practice Levels of Emergency Nurses

Knowledge Level	Practice Level	Frequency (n)	Percentage (%)
Low Knowledge	Poor Practice	53	35.3
Moderate Knowledge	Good Practice	24	16.0
High Knowledge	Good Practice	51	34.0

[Citation: Mushtaq, S., Saddique, H., Tasneem, S.S., Jabeen, R. (2024). Knowledge and practice of emergency nurses regarding triage. *Biol. Clin. Sci. Res. J.*, 2024: 1391. doi: <https://doi.org/10.54112/bcsrj.v2024i1.1391>]

Discussion

This study assessed the knowledge and practices of emergency nurses regarding triage in a tertiary care hospital in Lahore, Pakistan. The findings revealed significant gaps in both knowledge and practices, highlighting areas that require targeted interventions to improve the quality of emergency care.

The results showed that 35.3% of nurses had low knowledge of triage, while only 34% demonstrated high knowledge levels. These findings align with a study conducted by Ghosh and Roy in India, where 40% of emergency nurses exhibited inadequate knowledge of triage systems, citing limited training as a key barrier (13). Similarly, Rahman and Hossain reported in Bangladesh that a significant portion of nurses lacked understanding of prioritization protocols, leading to inefficiencies in patient care (14). In contrast, studies from developed countries, such as the one by Cone et al. in the United States, revealed higher knowledge levels among nurses due to regular training and standardized triage systems (15).

In terms of practices, 54% of nurses in this study demonstrated poor adherence to recommended triage protocols. This is consistent with the findings of Malik et al., who observed that 57% of nurses in tertiary hospitals in Karachi failed to follow triage guidelines due to high patient loads and inadequate staffing (16). A similar study by Zafar et al. reported that 60% of nurses in public hospitals in Pakistan relied on outdated practices, emphasizing the need for updated training programs (17).

The demographic analysis revealed that nurses with higher qualifications, such as Post RN and BSN, exhibited better knowledge and practices compared to those with general nursing qualifications. This is supported by Ahmed and Khan, who found that nurses with advanced training were more likely to adhere to evidence-based practices in emergency settings (18). However, this study also noted that younger nurses with less experience were more prone to errors in triage decision-making, a trend observed in studies by Saeed et al. in Pakistan and Ghosh et al. in India (19, 13). Cultural and systemic factors also play a role in influencing triage practices in Pakistan. The involvement of families in decision-making, as highlighted by Thorn and Javeed, often complicates the prioritization process and delays critical interventions (20). Additionally, the lack of national guidelines for triage further exacerbates inconsistencies, as reported by Kamran et al. (21). These findings underscore the importance of developing standardized triage protocols tailored to the local context.

Globally, interventions such as simulation-based training, incorporation of triage modules in nursing curricula, and periodic competency assessments have proven effective in addressing knowledge and practice gaps (15). For example, Rahman and Hossain demonstrated that targeted workshops significantly improved the triage skills of nurses in Bangladeshi hospitals (14). Similar initiatives could be adapted and implemented in Pakistan to enhance the efficiency and effectiveness of emergency care.

This study's findings are consistent with previous research, emphasizing the critical need for targeted training, institutional support, and standardized guidelines to improve triage knowledge and practices among emergency nurses in Pakistan. Addressing these gaps is essential to

optimize patient outcomes and ensure equitable access to emergency care.

Conclusion

This study highlights significant gaps in the knowledge and practices of emergency nurses regarding triage in a tertiary care hospital in Lahore, Pakistan. While some nurses demonstrated high knowledge levels and good practices, a substantial proportion lacked adequate understanding and adherence to recommended triage protocols. Nurses with higher qualifications and greater experience were more likely to exhibit better knowledge and practices. The findings underscore the urgent need for standardized triage training programs, institutional support, and the development of national guidelines tailored to the local context. Addressing these gaps is crucial for optimizing patient care and improving emergency department efficiency.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department Concerned. (IRBEC-SNU-02212/23)

Consent for publication

Approved

Funding

Not applicable

Conflict of interest

The authors declared absence of conflict of interest.

Author Contribution

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Conception of Study, Final approval of manuscript.

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