https://nmsjournal.kaums.ac.ir/
Nursing and Midwifery Studies. 2024; 13(1): 40-47
https://doi.org/10.48307/nms.2023.415758.1262

Research Article Open Access

Challenges of maintaining patient safety among Iranian nurses: A qualitative study

Farideh Namadi [1], **Leyla Alilu** [1*], **Hossein Habibzadeh** [1]

[1] Patient Safety Research Center, Clinical Research Institute, Nursing & Midwifery School, Urmia University of Medical Sciences, Urmia, Iran

[*] **Corresponding author:** Leyla Alilu. Patient Safety Research Center, Clinical Research Institute, Nursing and Midwifery School, Urmia University of Medical Sciences, Urmia, Iran. **Email:** Alilu@umsu.ac.ir

Received: 11 September 2023 **Revised:** 20 November 2023 **Accepted:** 25 November 2023 **e-Published:** 1 February 2024

Abstract

Background: Patient safety is one of the most critical factors influencing the quality of nursing care, but some challenges cause failure to maintain patient safety.

Objectives: This study was conducted to identify the challenges that clinical nurses face in maintaining patient safety.

Methods: This qualitative study was completed in 2021-2022 on clinical nurses of public and private hospitals in selected cities of Iran. Purposive sampling was used to select participants and data were collected through semi-structured in-depth interviews. The interviews were analyzed using Lindgren, Graneheim and Lundman content analysis method.

Results: Three categories of "organizational challenges," "work-related and individual challenges," and "challenges raised by patients or companions" emerged from the data as factors leading to failure in maintaining patient safety.

Conclusion: Nurses, nursing managers at the organizational level, and nursing policymakers at the national level should be aware of their role in patient safety violations and then manage these challenges by formulating appropriate programs, policies, and interventions.

Keywords: Patients, Patient safety, Nurses, Qualitative research.

Introduction

The World Health Organization (WHO) defines patient safety (PS) as "the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum."[1] Any shortcoming in PS can cause unpleasant consequences.[2] Evidence shows that one in ten patients is injured in healthcare settings and that more than three million deaths occur each year due to unsafe care.[3]

PS is one of the main indicators of healthcare quality,[4] and nurses, as the largest group of healthcare providers, play a prominent role in maintaining PS.[5] Studies show that factors such as job burnout, high workload, lack of equipment and resources, medication calculation errors, and decision errors [6-11] are among the factors that make nurses not always being successful in maintaining PS. Some studies have also listed low safety culture,[12-14] lack of equipment, shortage of nursing staff, and high workload [15] as challenges in maintaining PS in Iranian hospitals. In the last decade, the issue of PS has been prioritized by the Iranian Ministry of Health and Medical Education, and to improve it, PS indicators have been compiled and communicated in hospitals, and a special *registry system* for reporting *medical errors* has been launched since 2017. However, the high rate of medical errors in Iran (50%) [16] indicates the need for further investigation to identify existing problems.

Despite the high rate of medical errors, the importance of PS, and the role of nurses in this field, no study has investigated the experiences and perspectives of Iranian nurses regarding the challenges of maintaining PS. Therefore, the question arises, what are the experiences and perspectives of Iranian nurses regarding the challenges of maintaining PS? To answer this question, a qualitative approach was chosen because it is useful for obtaining first-hand data and describing little-known phenomena.

Objectives

This study aimed to explore Iranian nurses' experiences

Copyright© 2024. This open-access article is published under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License which permits Share (copy and redistribute the material in any medium or format) and Adapt (remix, transform, and build upon the material) under the Attribution-NonCommercial terms. Downloaded from: https://nmsjournal.kaums.ac.ir/

and perspectives on challenges of maintaining PS.

Methods

Study design and participants

This qualitative study was conducted with clinical nurses working in emergency, internal medicine, surgical, and intensive care departments of public and private hospitals in West Azerbaijan, East Azerbaijan, Kerman, Ilam, and Zahedan provinces of Iran, from October 2021 to March 2022.

Nurses were included if they had a bachelor's degree or higher, were interested in sharing their experiences and talking about PS, and gave consent to participate in the study. Participants were recruited purposively and with maximum variation in level (clinical nurse, supervisor, patient safety supervisor, educational supervisor, head nurse, nursing manager), type of hospital (downtown or suburbs hospitals, public or private), and shifts (rotating or fixed) [Table 1].

Data collection

Face-to-face interviews were conducted based on participants' desire in a private room at their workplace after work hours. However, telephone interviews were conducted with some of the participants in Kerman, Zahedan, and Ilam provinces due to COVID-19 restrictions.

Data were collected through semi-structured, in-depth interviews. All interviews were conducted by the first author who was trained and supervised by the second author. Each interview started with a general question such as "Please describe a work shift and what things you focus on in this position related to patient safety. Please give examples of what you do?" Then the main questions were asked, such as, "Have you ever experienced a situation that threatened patient safety? Please describe your experience?" Please state what caused you to make this error?" and "What conditions caused the error?" Depending on the participant's answers, exploratory questions were asked (e.g. Please give an example of this case, Explain more about this case). Each interview lasted between 40 and 110 minutes, with an average of 68 minutes. A total of 20 interviews were conducted with 20 participants.

Ethical considerations

This study was approved by the Research Ethics Committee of Urmia University of Medical Sciences (approval code: IR.UMSU.REC.1400.060). Participants were explained about the purposes of the study and were assured of the confidentiality of their names and information. They were also assured that they could withdraw from the study at any stage. Written informed consent was obtained from all participants.

Data analysis

Data analysis was based on Lindgren, Graneheim and Lundman's content analysis method[17] and started after each interview was transcribed word by word. It is a non-linear process characterized by de-contextualization and re-contextualization. De-contextualization involves two steps of selecting meaning units, and condensing and coding. Then, in the re-contextualization step, categories were created and themes emerged. Each paragraph of the interview was considered as a meaning unit to eliminate the possibility of data loss. Coding was done in a descriptive way. The manifest content of the text was considered, and extra words around a concept were tried to be removed. Re–contextualization focuses on the interpretation of latent content. To this end, the codes were placed under categories and sub-categories, based on similarities, differences, and the level of abstraction, and finally, the main sub-categories and categories were discussed and approved by the research team.

Data trustworthiness

To ensure the trustworthiness of the findings, the four criteria of credibility, dependability, conformability, and transferability were used.[18] All research steps, codes, and concepts were checked by the study supervisor and advisor (LA, HH), and four qualitative research experts to ensure the credibility of the findings. Immersion in the data was achieved by reading the interviews several times and performing analysis in a dynamic and back-and-forth manner. For dependability, all study steps and details were noted and recorded, and raw data, codes, concepts, and categories were saved for auditing purposes. For conformability, after each interview was conducted and analyzed by the first researcher, the extracted codes and concepts were examined with the second and third authors, and all conflicts were discussed and resolved. To increase the transferability of findings, sampling with maximum variation was done.

Results

Three main categories emerged from during the data analysis [Table 2].

Category 1: Organizational challenges

The participants' experiences showed that they face organizational challenges such as responsibility wandering, management failure, and inadequate organizational resources, which negatively affect their performance in providing PS.

Responsibility wandering

The wandering of responsibility in nurses was mostly due to the lack of adequate nursing staff and was experienced in two forms, "the inevitable simultaneity of tasks" and "conflicting responsibilities."

Nurses experienced the *simultaneity of tasks* in many situations. According to the participants' experiences, ward overcrowding and lack of sufficient nursing staff, high numbers of patients assigned to a nurse, simultaneous admission of two or more patients, and cardiac arrest of several patients at the same time were among the situations that required nurses to perform multiple tasks at the same time. These the situations not only caused nurses to experience responsibility wandering, but also endangered PS. A clinical nurse stated, *"When the ward is busy or several patients are admitted at the same time, you have to leave your existing patients for a while and take care of the new patients. This is inevitable. In such situations, errors may occur or something may happen to some patients"* (P 6).

Participants mentioned several instances of *conflicting responsibilities* that could jeopardize PS. Most participants reported that in situations such as shift handover, transferring a patient to the operating room or MRI, or being called to resuscitate a patient on another ward, patients under their responsibility may be left unattended for hours. In such cases, other nurses do not take responsibility for their patients. A nurse stated, *"Many accidents happen during shift handover. We have 40 patients and managers force us to participate in the handover of all 40 patients. This process takes an hour. Once, when we were handing over the patient of bed 2, the patient in bed 28 fell off the bed. Who is responsible for the patient's fall?"* (P13). Another participant stated, *"Recently I spent two hours resuscitating a patient and didn't know about the condition of my other patients"* (P14). Some of the participants also mentioned that the obligation to comply with the gender compatibility rules sometimes put them in a situation of conflicting responsibilities.

Management failure

According to the participants, hospitals suffer from mismanagement that in turn decreases PS. This category includes three subcategories "unprofessional behaviors," "disproportion of time with assigned tasks," and "inappropriate arrangement of human resources."

Unprofessional behaviors were prevalent at different levels of managerial system. Participants repeatedly highlighted unprofessional behaviors of senior and middle hospital officials such as opening new wards without providing the necessary facilities, manipulating the ventilator and disabling the oxygen reduction alarm by official orders, insensitivity of supervisors to perform sterile dressing, and assigning dressings to non-nursing and untrained staff, putting PS at risk. A clinical nurse stated, *"I often see the head nurse remain silent despite knowing that the dressings are not sterile"* (P14).

Table 1. Demographic and work characteristics of the participants

Participant	Gender/Age (Years)	Qualification level	Work experience (Years)	Job Position	Kind of shift
1	Female/61	BSc	38	Nursing manager	Fixed
2	Male/40	BSc	16	Clinical nurse	Fixed
3	Male/32	BSc	5	Clinical nurse	Rotating
4	Female/50	BSc	22	Head nurse	Fixed
5	Male/26	BSc	4	Clinical nurse	Rotating
6	Female/30	MSc	4	Clinical nurse	Rotating
7	Female/38	MSc	6	Clinical nurse	Rotating
8	Female/37	MSc	9	Patient safety supervisor	Fixed
9	Female/30	BSc	5	Clinical nurse	Rotating
10	Male/38	BSc	14	Clinical nurse	Rotating
11	Male/45	MSc	20	Clinical nurse	Rotating
12	Female/47	BSc	21	Supervisor	Rotating
13	Male/30	BSc	4	Clinical nurse	Rotating
14	Female/30	MSc	4	Clinical nurse	Fixed
15	Female/31	MSc	7	Clinical nurse	Rotating
16	Female/40	MSc	15	Educational supervisor	Rotating
17	Female/32	MSc	9	Clinical nurse	Rotating
18	Female/33	MSc	10	Supervisor	Rotating
19	Female/50	BSc	23	Head nurse	Fixed
20	Female/40	MSc	16	Clinical nurse	Rotating

Table 2. Main categories and sub-categories

Main categories	Subcategories	Codes
Organizational challenges		
	Responsibility wandering	– Inevitable simultaneity of tasks
		– Interference of responsibilities
	Management failure	– Existence of unprofessional acts
		– Disproportion of time with assigned tasks
		– Inappropriate arrangement of human resources
	Inadequate organizational resources	– Low standard of physical space of wards
		– Inadequate equipment of wards
		– Lack of specialized facilities
		– Lack of specialized manpower
Work-related and individual challenges		
	Being a beginner	– The nurse's lack of attention to the patient's age and underlying diseases
		– Inability to predict the patient's condition
		– Ignoring the patient's complaint
		– The stress of working independently
		– Low ability to manage multiple patients at the same time
	Inhibiting individual characteristics	– Being forgetful
		– Low speed of the nurse
		– Having a stressful personality type
		– Physical problems of the nurse
		– The old age of the nurse
	Mental turmoil	– Confusion of mind
		– Fatigue
		– Cognitive shift (interruption in care processes)
Challenges raised by patients and companions		
	Inappropriate interventions by patients and companions	– Failure to express chest pain due to the insignificance of the pain from the patient's point of view
		– Giving water to the NPO patient
	Inappropriate physiological condition of patient	– The presence of several diseases at the same time
		– High weight, restlessness, and sleepiness of the patient
	Uneducable patients	– The lack of trainability of patients
		– The lack of trainability of companions
		– Failure to follow educations
		– Not having the same language

Disproportion of time with assigned tasks was the result of imposing extra tasks to nurses.

Participants' experiences show that the organization imposed extra tasks on nurses, forced them to do secretarial duties, and assigned them a large number of patients, which wasted nurses' time, hindered the possibility of providing basic care, and seriously jeopardized PS. A head nurse expressed, *"I am a head nurse, but in addition to head nurse duties, I have to complete several health information systems. I don't have a nurse in charge of drug requests and a secretary; I have to do their tasks as well. Besides, I have to attend some meetings in the middle of the shift, so I always have to stay two or three hours extra without any benefit or salary"* (P19).

Inappropriate arrangement of human resources was another aspect of the organizational management failure. Employing novice or untrained nurses on specialized wards, assigning beginner nurses to departments regardless of their abilities and favorites, admitting unrelated patients to the ward, inter-departmental transferring of nurses when shortages occurred were the challenges repeatedly mentioned by the nurses. These problems not only endangered PS but also affected the performance of other nurses. A clinical nurse commented, *"… we have seen many mistakes made by inexperienced nurses, especially when inexperienced and untrained nurses are sent to the ICU, a lot of bad things happen"* (P10).

Inadequate organizational resources

The experiences of the participants show that the low

standard of the physical space of the wards (inappropriate ICU space), insufficient equipment of the wards (lack of a central monitor in the ICU, lack of sterile gloves for aseptic procedures), lack of specialized facilities (the closure of the hospital's laboratory and pharmacy in the evening and night shifts, lack of medicines), lack of access to physicians and anesthesiologists in the evening and night shifts, and low number of nursing staff make nurses unable to ensure PS at times. A clinical nurse stated, *"We don't even have a central monitor to monitor our patients from the station like other ICUs. ICUs should be in the shape of a hall and all patients should be visible, but our ICU has several rooms. This is a construction problem"* (P6). An educational supervisor also said, *"... once we lost a patient due to the lack of packed cells in the emergency ward. Our blood bank was empty and we were 5 hours away from the center of the province…"* (P16).

Category 2: Work-related and individual challenges

Participants' experiences showed that factors such as "being a beginner," "inhibiting personal characteristics" and "mental turmoil" can also make nurses susceptible to medical errors and jeopardize PS.

Being a beginner

Based on the participants' experiences, neglecting the patient's age, complaints, and co-morbidities, inability to predict the patient's condition, the stress of working independently, and inability to manage several patients at the same time, are among the characteristics of a novice nurse that can reduce PS. A clinical nurse stated, *"I was very stressed at the beginning of my career. It was the first time I had worked independently as a nurse and I had all the responsibility for the patients. This stress caused me to make two mistakes in the first month, although they were not serious"* (P 9). The same nurse believed that all nurses go through this stage and therefore should be supported by their colleagues and officials so that patients are not harmed.

Inhibiting individual characteristics

Some participants also mentioned that nurses' personal characteristics may also affect PS. Tense personality, type, forgetfulness, low action speed, age, and physical problems that interfere with work were among the personal factors that participants believed could influence PS. A clinical nurse commented, *"We had a nurse on the ward who suffered from varicose veins and lumbar disc complications, and was practically unable to work"* (P 20). Another nurse said, *"I had a colleague who was a calm person. But his work speed was very slow. A nurse must be able to make quick decisions and act quickly. But he was always behind with his work and his patients' care was always delayed*" (P 11).

Mental turmoil

The participants' experiences showed that mental turmoil due to personal problems (financial worries, family problems), fatigue (long working hours without enough rest), departmental turmoil (unscheduled visiting hours of patients, unexpected admission of a new patient, deterioration of a patient) causes nurses to make more mistakes and fail to provide PS. A nurse expressed, *"Sometimes I seem to be here, but I brought all the problems of the house with me, so it's like I'm not on shift … I just focus on my problem"* (P 3). One of the nurses recalled a medical error and said, *"I didn't want to go on shift that day, I was in a bad mood and I had to go to work, and that led to a medication error"* (P 5).

Category 3: Challenges raised by patients and companions

The experiences of the participants showed that sometimes inappropriate interventions by patients or companions in the care process, inappropriate physical conditions of patients, and lack of knowledge of patients and companions cause nurses to be unable to maintain PS.

Inappropriate interventions by patients or companions

Some participants stated that, although patients or companions have been trained, they sometimes do not follow the training and perform inappropriate interventions, such as giving water to an intubated patient or removing the patient's oxygen mask. This leads to patient harm. A nurse commented, *"Once, a patient had an NG tube. I explained that nothing should be given to the patient by mouth; otherwise, it will cause him to suffocate. But when I went to take care of him, I noticed that his companion poured water into the patient's mouth and aspiration occurred. However, his companion told me, "You don't know that my patient is thirsty"* (P10).

Inappropriate physiological condition of patient

The participants believed that it is very difficult to maintain PS in patients with certain physiological conditions, such as those with multiple diseases, patients with Alzheimer's disease, those who are restless, agitated, sleepy, and/or overweight. A participant explained, *"I was working in the pulmonology department. One day, a 60-year-old Alzheimer's patient had escaped barefoot from the neurosurgery department, came into our department, and tried to throw himself out of the window. He was shouting that they wanted to take me away. My colleague and I … forcibly brought him aside from the window"* (P 3).

Uneducable patients

A number of participants also pointed out that some patients or companions are not trainable due to old age or different language. It is very difficult to teach these patients. They also do not understand the nurses' advice and do not follow them. Therefore, it is very difficult to ensure the safety of such patients. A nurse said, *"I recently taught one of my elderly patients how to open the side rails before getting out of bed, and she said she learned. Later I noticed that she was coming down from the top of the bed rail. If I hadn't noticed it soon, she would certainly have fallen."* (P 9). Another said, *"We teach mothers how to breastfeed and burp their babies. But some of them either don't learn or get tired and the baby vomits and aspirates"* (P 20).

Discussion

The participants' experiences indicated that they faced three types of "organizational challenges," "work-related and individual challenges," and "challenges raised by patients and companions." These challenges endanger the PS and sometimes cause permanent or temporary damage to them. Sayed Desouky et al. has also shown that a majority of nurses face organizational, individual, and patient-related challenges to maintain PS.[19]

Responsibility wandering was one of the challenges experienced by nurses and rooted in the multitasking nature of the nursing profession, the lack of specific instructions in some situations, the high workload, and low human resources in Iran's health system. A study in America also reported nurses multitasking as a reason for interrupted patient care and recommended nursing leaders develop strategies for transforming nursing practice.[20] Another study has also cited the multitasking of nurses as a source of stress, medical errors, and jeopardizing PS.[21]

Management failure was another important challenge in providing PS. Such a failure was reflected in unprofessional management and inappropriate allocation of human resources that in turn aggravated the imbalance between the time and tasks assigned to nurses. A qualitative study from Iran has also identified the lack of nursing staff and inappropriate nursing arrangements as challenges for maintaining PS.[15] A study also showed that registered nurses often experienced time shortages and were unable to provide necessary nursing care due to the large number of patients and heavy workloads.[22] A study has also shown that a high patient-to-nurse ratio is associated with an increase in missed nursing care and a higher risk of patient mortality following common surgeries.[23]

The non-standard physical space of the wards, the lack of sufficient equipment, the lack of specialized facilities, the unavailability of physicians in the evening and night shifts, and the small number of nursing staff were also among the organizational challenges of nurses in providing PS. Iran has been suffering from a shortage of nurses for years. In recent years, economic problems have fueled the migration of nurses and other health professionals. In such a situation, old, nonstandard hospitals and outdated equipment continue to be used, which has an impact on PS. Several studies have also shown that the lack of resources increases the pressure on nurses, causes burnout and job dissatisfaction, and makes them unable to complete care plans. As a result, the rate of missed care increases,[22] and PS decreases.[24]

The findings showed that work-related and individual challenges, such as being a beginner, inhibiting personal characteristics can threaten the PS. In Iran, novice nurses usually start their carries without an adequate pre- service preparation course, which endangers PS. It has been shown that many novice and inexperienced nurses are in transition shock, worried about their competencies, have low time management skills, and focus more on completing their tasks than PS and providing comprehensive care.[25-27] Therefore, they need more support and training opportunities to get through the transition phase and gradually become able to practice independently.[25]

Our findings also showed that nurses' mental turmoil due to their personal problems, fatigue, and ward and patient-related conditions could negatively affect patient care and PS. Studies have also shown that nurses mental and physical problems, fatigue, and lack of sleep are associated with procedural failures, medical errors, and decreased PS.[28-32] It seems that the problems of the Iranian healthcare system, such as shortages, forced overtime and back-to-back shifts, have caused nurses experiencing high levels of fatigue and burnout. This problem is particularly prevalent in public hospitals, which are mostly teaching hospitals, and increases the workload and burnout of nurses and jeopardizes PS.

One of the main factors affecting PS in our study was related to the patients themselves and their companions. The shortage of nurses in the Iranian healthcare system has led hospitals to accept a relative of the patient as a companion. Nurses also practically leave some basic care measures such as personal hygiene, bathing, and feeding patients to the patients' companions. As a result, nurses' continuous and direct monitoring of patients is limited,

and patients and their companions sometimes take actions that endanger the PS. Some issues such as the advanced age of the patient, his/her cognitive problems and the cultural and language differences between the patient and the nurse, also exacerbated the lack of close communication between the nurses and the patient, and to some extent, reduced the patients' trust in the nurses and made them not follow the nurses' advice[33-37]. Some studies have also shown that patients are more willing to be educated by physicians.[38] The combination of these factors increases the possibility of unplanned interventions by patients and companions and further jeopardizes.

The participants, especially the clinical and safety supervisors were cautious and worried about fully disclosing their experiences. The researcher tried to gain their trust by emphasizing the confidentiality of the conversations and turning off the recording device at the participant's request. To increase the participants' confidence in the confidentiality of the data and to reduce their concerns about the interruption of the work shift, all interviews were conducted outside working hours and in a private setting.

The results of qualitative studies are highly context-dependent and have limited generalizability. Therefore, similar studies are recommended to explore the challenges of PS in other settings. A broader view of the challenges of PS can then be exposed.

Conclusions

The present study showed that organizational and managerial inadequacies, work-related problems, personal issues of nurses, and some issues related to patients and their companions endanger the safety of patients in Iranian hospitals. The findings are particularly important in identifying challenges related to organization and management, because these issues are beyond the control of nurses. Nursing managers and hospital officials can work together to solve organizational and management problems. Improving nurse-patient ratio, formulating policies and guidelines to clarify the boundaries of nurses' responsibilities, providing more support to novice nurses, employing nurses appropriately according to their skills, knowledge and career paths are some of the managerial strategies that can have a positive impact on improving PS.

Acknowledgment

This study was derived from a Ph.D. dissertation. The research team appreciates the sincere cooperation of all the participants.

Competing interests

The authors declare that they have no competing interests.

Abbreviations

World Health Organization: WHO; Patient safety: PS.

Authors' contributions

All authors conceptualized and designed the study. FN, LA, and HH organized data collection. FN and LA carried out the interviews. FN, LA and HH contributed to the analysis and writing of the manuscript. FN, LA and HH wrote the manuscript and all authors read and approved the final draft

All authors read and approved the final manuscript. All authors take responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

This study was funded by the Research Deputy of Urmia University of Medical Sciences (Patient Safety Research Center).

Role of the funding source

None.

Availability of data and materials

The data used in this study are not publicly available due to confidentiality.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. This study was approved by the Research Ethics Committee of Urmia University of Medical Sciences located in the northwest of Iran with code: (IR.UMSU.REC.1400.060). Written informed consent was obtained from all participants

Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

References

1. World Health Organization. Patient safety. Available from: https://www.who.int/news-room/fact-sheets/detail/patient-safety [Last access date 31 October2023].
2. Mohebi Far R, Safari Variani A, Khoshtarkib H, Ghanati E, Teymouri F, Zakaria Kiaei M, et al. Studying patient safety culture from the viewpoint of staffs in educational hospitals in Tehran City. J Health Saf Work 2015;5(1):57-64.
3. Slawomirski L, Klazinga N. The economics of patient safety: from analysis to action. 2022. doi:10.1787/761f2da8-en
4. Eklöf M, Törner M, Pousette A. Organizational and social-psychological conditions in healthcare and their importance for patient and staff safety. A critical incident study among doctors and nurses. Safety Sci 2014;70:211-21. doi:10.1016/j.ssci.2014.06.007
5. Chatzi AV, Malliarou M. The need for a nursing specific patient safety definition, a viewpoint paper. Int J Health Gov 2023;28(2):108-16. doi:10.1108/IJHG-12-2022-0110

6. Alshammari M, Duff J, Guilhermino M. Barriers to nurse-patient communication in Saudi Arabia: an integrative review. BMC Nurs 2019; 18:61. doi:10.1186/s12912-019-0385-4 PMid:31827387 PMCid:PMC6892156
7. Liu J, Zheng J, Liu K, Liu X, Wu Y, Wang J, et al. Workplace violence against nurses, job satisfaction, burnout, and patient safety in Chinese hospitals. Nurs Outlook 2019;67(5):558-66. doi:10.1016/j.outlook.2019.04.006 PMid:31202444
8. Mohammadi J, Nabiamjad R, Amiri S. Evaluation of emotional intelligence and its relationship with job stress and the symptoms of post-traumatic stress disorder among Shiraz pre-hospital emergency technicians in 2020. Int Arch Health Sci 2023; 10(2): 84-90. doi: 10.48307/iahsj.2023.176367
9. Burgener AM. Enhancing communication to improve patient safety and to increase patient satisfaction. Health Care Manag 2020;39(3):128-32. doi:10.1097/HCM.0000000000000298 PMid:32701609
10. Rangachari PL. Woods J. Preserving organizational resilience, patient safety, and staff retention during COVID-19 requires a holistic consideration of the psychological safety of healthcare workers. Int J Environ Res Public Health 2020;17(12):4267. doi:10.3390/ijerph17124267 PMid:32549273 PMCid:PMC7345925
11. Garcia CdL, Abreu LCd, Ramos JLS, Castro CFDd, Smiderle FRN, Santos JAd, et al. Influence of burnout on patient safety: systematic review and meta-analysis. Med 2019;55(9):553. doi:10.3390/medicina55090553 PMid:31480365 PMCid:PMC6780563
12. Behzadifar M, Behzadifar M, Jahanpanah F, Bragazzi NL. Patient safety culture assessment in Iran using the "Hospital survey on patient safety culture" tool: A systematic review and meta-analysis. Clin Epidemiol Glob Health 2019;7(4):641-7. doi:10.1016/j.cegh.2019.02.008
13. Chegini Z, Janati A, Babaie J, Pouraghaei M. Exploring the barriers to patient engagement in the delivery of safe care in Iranian hospitals: A qualitative study. Nurs Open 2019;7(1):457-465. doi:10.1002/nop2.411 PMid:31871731 PMCid:PMC6917972
14. Taj A, Arabasadi R, Ayatnia M. Effective and comprehensive management process against COVID-19: the golden key to increasing safety in the hospital environment. Novel Clin Med 2024;3(1):58-9. doi: 10.22034/ncm.2023.381578.1068
15. Teymoori S. Study of Nurses' Experiences of Safety Challenges of Social Security Hospital Patients. Nurs Develop Health J 2022;12(2):48-59.
16. Vaziri S, Fakouri F, Mirzaei M, Afsharian M, Azizi M, Arab-Zozani M. Prevalence of medical errors in Iran: a systematic review and meta-analysis. BMC Health Serv Res. 2019;19(1):1-11. doi:10.1186/s12913-019-4464-8 PMid:31477096 PMCid:PMC6720396
17. Lindgren B-M, Lundman B, Graneheim UH. Abstraction and interpretation during the qualitative content analysis process. Int J Nurs Stud 2020;108:103632. doi:10.1016/j.ijnurstu.2020.103632 PMid:32505813
18. Guba EG, Lincoln YS. Fourth generation evaluation: Sage; 1989.
19. Sayed Desouky Desouky F, Abd Elazem Mostafa H, Ali Hassan H. Challenges Facing Staff Nurses to Maintain Patient Safety. Egypt J Health Care 2021;12(4):762-72. doi:10.21608/ejhc.2021.204425
20. Yen PY, Kellye M, Lopetegui M, Saha A, Loversidge J, Chipps EM, et al. Nurses' time allocation and multitasking of nursing activities: a time motion study. InAMIA annual symposium proceedings 2018. American Medical Informatics Association.
21. Huang C-H, Wu H-H, Lee Y-C. The perceptions of patient safety culture: a difference between physicians and nurses in Taiwan. Appl Nurs Res 2018;40:39-44. doi:10.1016/j.apnr.2017.12.010 PMid:29579497
22. White EM, Aiken LH, McHugh MD. Registered nurse burnout, job dissatisfaction, and missed care in nursing homes. J Am Geriat Soc 2019; 67(10):2065-71. doi:10.1111/jgs.16051 PMid:31334567 PMCid:PMC6800779
23. Ball JE, Bruyneel L, Aiken LH, Sermeus W, Sloane DM, Rafferty AM, et al. Post-operative mortality, missed care and nurse staffing in nine countries: A cross-sectional study. Int J Nurs Stud 2018;78:10-5. doi:10.1016/j.ijnurstu.2017.08.004 PMid:28844649 PMCid:PMC5826775
24. Siman A, Braga L, Amaro M, Brito M. Practice challenges in patient safety. Rev Bras Enferm 2019;72:1504-11. doi:10.1590/0034-7167-2018-0441 PMid:31644737
25. Murray M, Sundin D, Cope V. Benner's model and Duchscher's theory: Providing the framework for understanding new graduate nurses' transition to practice. Nurse Educ Pract 2019;34:199-203. doi:10.1016/j.nepr.2018.12.003 PMid:30599429
26. hen F, Liu Y, Wang X, Dong H. Transition shock, preceptor support and nursing competency among newly graduated registered nurses: A cross-sectional study. Nurse Educ Today 2021;102:104891. doi:10.1016/j.nedt.2021.104891 PMid:33866200
27. Murray M, Sundin D, Cope V. New graduate registered nurses' knowledge of patient safety and practice: A literature review. J Clin Nurs 2018;27(1-2):31-47. doi:10.1111/jocn.13785 PMid:28252838
28. Johnson M, Sanchez P, Langdon R, Manias E, Levett-Jones T, Weidemann G, et al. The impact of interruptions on medication errors in hospitals: an observational study of nurses. J Nurs Manag 2017;25(7):498-507. doi:10.1111/jonm.12486 PMid:28544351
29. Thomas L, Donohue-Porter P, Fishbein JS. Impact of interruptions, distractions, and cognitive load on procedure failures and medication administration errors. J Nurs Care Qual 2017;32 (4): 309-17. doi:10.1097/NCQ.0000000000000256 PMid:28448299
30. Cho H, Steege LM. Nurse fatigue and nurse, patient safety, and organizational outcomes: A systematic review. West J Nurs Res 2021; 43(12):1157-68. doi:10.1177/0193945921990892 PMid:33554767
31. Di Muzio M, Dionisi S, Di Simone E, Cianfrocca C, Di Muzio F, Fabbian F, et al. Can nurses' shift work jeopardize the patient safety? A systematic review. Eur Rev Med Pharmacol Sci 2019;23(10).
32. Di Muzio M, Reda F, Diella G, Di Simone E, Novelli L, D'Atri A, et al. Not only a problem of fatigue and sleepiness: changes in psychomotor performance in italian nurses across 8-h rapidly rotating shifts. J Clin Med 2019;8(1):47. doi:10.3390/jcm8010047 PMid:30621274 PMCid:PMC6352064
33. Pourhadi S, Moradi Z. Assessment of barriers to elderly health education from health care providers opinions in the urban family physician plan of Babol city in 1399. J Gerontol 2022;7(1):29-39.
34. Van Rosse F, de Bruijne M, Suurmond J, Essink-Bot M-L, Wagner C. Language barriers and patient safety risks in hospital care. A mixed methods study. Int J Nurs Stud 2016;54:45-53. doi:10.1016/j.ijnurstu.2015.03.012 PMid:25840899
35. Shahmari M, Hasanpour M. Impact of Language Barriers on Patient Education: A Scoping Review. Payesh (Health Monitor) 2021;20(3):301-10. doi:10.52547/payesh.20.3.301
36. Khaleghparast S, Mayelafshar M, Hanifi Z, Sari L, Kalaei M, Ghanbari B. Barriers to patient education from the perspective of patients, nurses and doctors in Rajaee cardiovascular medical and research center. J Cardiovasc Nurs 2018;7(1):14-23.
37. Arian M, Mortazavi H, TabatabaeiChehr M, Tayebi V, Gazerani A. The Comparison between Motivational Factors and Barriers to Patient Education Based on the Viewpoints of Nurses and Nurse Managers. J Nurs Educ 2015;4(3):66-77.
38. Varghaei-Paidar A, Gavgani V, Hassannejhad N, Ranjbar S, Hosseinzadeh M, Imani S. A Survey of Nurses' and Patients' Opinions about Patient Education and Training and Possible Barriers in Madani Cardiovascular Health and Education Center. Depict Health 2017;7(4):22-9.

How to Cite this Article:

Namadi F, Alilu L, Habibzadeh H. Challenges of maintaining patient safety among Iranian nurses: A qualitative study. Nurs Midwifery Stud 2024;13(1):40-47. doi: 10.48307/nms.2023.415758.1262