ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 16, Issue, 05, pp.28105-28109, May, 2024
DOI: https://doi.org/10.24941/ijcr.46786.05.2024

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

PATIENT SAFETY COMPETENCIESAMONG NURSES IN JORDAN: CROSS-SECTIONAL CORRELATIONAL STUDY

Atallah Habahbeh, Ph.D.R.N., Murad Alkhalaileh,Ph.D.R.N., Ibrahim Ayasreh, Ph.D.R.N., NiaserAlhroob, Ph.D.R.N., Liath Alousofe, Ph.D.R.N. and Renad Habahbeh, M.D. and Ahmad Aljabery, Msc. RN.

Amman, Faculty of Nursing, Adult Health Department, Jerash Private University, Jerash, Jordan

ARTICLE INFO

Article History:
Received 19th February, 2024
Received in revised form
09th March, 2024
Accepted 25th April, 2024
Published online 20th May, 2024

Key words:
Patient Safety
Nursing Competences
Safety culture

***Corresponding author:**
Atallah Habahbeh, Ph.D.R.N.,

ABSTRACT

The main purpose of this study is to identify the competencies of Jordanian nurses in patient safety. Using convenience sampling, we conducted a cross-sectional study from January to June 2023 in governmental hospitals. Furthermore, Descriptive data are presented as frequencies, percentages, mean values and standard deviations of variables, Pearson correlation was use to examine the relationship between certain demographic variables and patient safety competences. A significant positive relationship between age and work experience (.741**) and a significant negative relationship between age and separate module for patient safety (.-276**). Moreover, a negative relationship was detected between work experience and separate module for patient safety (.-364**). t- test was applied to examine the mean differences between patient safety competences and certain demographic variables, no statistical differences were detected. We recommend that a separate module for patient safety should be included in nursing curricula, continuous education on patient safety toprovide high quality of nursing care, further research is required including different hospitals in Jordan to identify different intervention to ensure patient safety.

Citation: ***Atallah Habahbeh, Ph.D.R.N., Murad Alkhalaileh,Ph.D.R.N., Ibrahim Ayasreh, Ph.D.R.N., NiaserAlhroob, Ph.D.R.N., Liath Alousofe, Ph.D.R.N. and Renad Habahbeh, M.D. and Ahmad Aljabery, Msc. RN.*** **2024.** "Patient Safety Competenciesamong Nurses in Jordan: Cross-Sectional Correlational Study*". International Journal of Current Research*, 16, (05), 28105-28109.

INTRODUCTION

Patient Safety culture is a newly emergedconcept on the globe due to unsafe health practices (Baines *et al*., 2013). Patient safety culture focuses on organizational culture issues related to patient safety, patient safety culture is referred to beliefs, values, and attitudes, translating them into healthcare practices and commitment to providing an error-free health setting and stressing reporting culture (Khoshakhlagh *et al*., 2019).While nursing competency refers to "a nurse's ability to effectively demonstrate a set of attributes, such as personal characteristics, professional attitude, values, knowledge, and skills, and to fulfilling --professional responsibility through practice", (Takase & Teraoka, 2011).In clinical settings, nurses sometimes un unintendedly harm patients through unsafe nursing care. Thus, like other healthcare professionals, they should be provided with competencies for patient safety (Woods C, 2017). Lack of patient safety competencies is one of the nurses' educational problems that lead to unsafe nursing practice in the future.Nurses should have sufficient competencies to recognize possible safety hazards in order to

The European Union Network for Patient Safety (EUNetPaS 2010) proposed basic knowledge, skills, and behaviors that healthcare workers should have for patient safety competencies. The guidelines of EUNetPaS also signify the role of the nurses in enabling patient safety competencies and establishing the guidelines for patient safety competencies in health care. A high level of patient safety competencies involves the achievement of safe nursing practices and doing no harm to the patients. Therefore, nurses should be able in to provide a standardized level of care, a better understanding of nurse competence is the cornerstone of safe nursing practices which helps in providing safe nursing care (Wami *et al*., 2016). Nurses play an important role in recognizing patient safety hazards because they are responsible for the 24-h care of patients and are the first people to notice safety problems(Van Bogaert *et al*., 2014).Staff nurses are best located to guide, detect and report opportunities for improvements. Therefore, healthcare settings supportive of standardized nursing practice have minimal preventable adverse events (lake2016). Moreover, hospital management should focus on improving patient safety competencies through engaging nurses in different accreditation activities (Han & Kim. 2019). -According to (Tella *et al*., 2015) the

main content of patient safety in current nursing education includes the competency to prevent adverse events (attitude), the creation of patient safety competency (knowledge), and the competency to act after an error (skill). Continuous education and training on different patient safety competencies for nurses are essential to provide standardized nursing practices (Habib). However, nurses who have participated in patient safety training have a high level of nursing practice (Yan,L., *et al*, 2020). There is a global awareness of the importance of patients' safety culture since trials have been taken to implement the concept of safety culture in most healthcare settings (Baines *et al*., 2013). Since nurses have an important role in patient care, their competencies (Attitudes, Knowledge, and Skills) should be enhanced. Patient safety competence involves three dimensions building patient safety competence (knowledge), preventing patient safety incidents (attitude), and acting after an error (skill) (Langari *et al*. 2017). Nurses are ideally placed to guide patient safety competencies within clinical practice settings. (Fukada, 2018). Thus, the main purpose of this study is to identify the competencies of Jordanian nurses in patient safety.

This study aimed to answer the following questions

1. What are the competencies of Jordanian nurses in patient safety?
2. What are the factors that enhance or hinder Jordanian nurses' patient safety competencies?
3. Is there any differences in patient safety competencies based on certain demographic characteristics

METHODOLOGY

Study design: A cross-sectional correlationaldesign will be used in this study.

Setting: This study will be conducted in two governmental hospitals in the northern part of Jordan, these hospitals provide generalized medical and surgical services for their patients.

Sample & Sampling Technique: In this study, the target population is the governmental hospital nurses who have a diploma degree, BSC degree, and master's degree in nursing, read and write English, currently working in the studied hospitals, and a willing to participate in the study was included in the study. A convenience sampling technique was used to recruit the participants from the eligible nurses who were available at the time of the study; Convenience sampling is a method used to collect data from participants who are conveniently accessible to the researcher and enhance the representative sample of each level selected (Burns & Grove, 2010). The total number of nurses that be included in this study was estimated by using G power.

Instruments: Patient Safety in Nursing Education Questionnaire (PaSNEQ), the PaSNE Qcontains 57 variables that assess the understanding of nurses of the patient's safety based on three subscales: 'Academic settings', 'Clinical settings', and 'Patient safety competence [Tella, *et al*. 2015]. In this study, the third subscale was used to measure patient safety competency. The questionnaire followed a 4-point Likert scale("fully disagree", "disagree", "agree", "fully agree"). validity and reliability were tested accurately. The original version of the questionnaire was in the Finnish language, then double-blind back-translated into English and Finnish by two different natives, and bilingual translators, resulting in two English versions and two Finish versions. Cronbach's alfa value was 0914. Langari *et al*. (2017) examined the validity and reliability of the third part of the patient safety questionnaire in nursing education. Exploratory factor analysis showed that the scale loaded on three factors which are; patient safety competency (knowledge), performance competency after the error (skill), and competency to prevent patient safety incidents (attitude)], the content validity index was 0.91. Cronbach's alpha coefficient of 0.90 also showed the reliability of the questionnaire. This questionnaire consists of three subgroups of knowledge (4 items), skill (4 items), and attitude (6 items) and follows the 4-point Likert scale (completely disagree=1 to completely agree=4).

Data collection procedure: In the current study, data were collected through a self-report questionnaire from all the conveniently selected nurses. The researcher delivered a copy of ethical approval to the selected hospitals' administration, and then the researcher contacted the nursing directors in the selected hospitals to obtain the names of eligible nurses and their telephone numbers to make an arrangement with them. The questionnaires were distributed, individually to each participant, accompanied by a cover letter that clarifies the study's purpose and the participants' rights. After that, the researcher developed a codebook that included the initials of each participant and their phone numbers. The researcher contacted each eligible nurse to participate in the study on voluntary bases. A brief introduction was given to nurses through phone calls. The content of the verbal contact with the participants will be constant over all calls that included the name of the researcher, the purpose of the study, and a brief introduction to the study. The participants will be informed about the time needed to fill out the questionnaire. No financial reimbursement for participation will be given. The only benefits were that they would have the opportunity to contribute to advancing the nursing science and enhancing patient safety during the delivery of care.

Ethical consideration: The current study method and protocol were reviewed and approved by the ethical committee in the Faculty of Nursing at the University of Jerash and the Ministry of Health Permission from nursing directors in each hospital to conduct the study will be obtained. Written information about the purpose, content, and extent of the study will be explained to the participants who agreed to be recruited. The confidentiality of participants was assured by providing a code number for each participant at the stage of data collection and analysis. In addition, the collected questionnaires were kept in a locked cabinet in order to keep the participant's information private and confidential, no one had access to the data. Participants will be assured that their participation in the study was voluntary and they could withdraw from the study without penalties.

Data Analysis Plan: Upon completion of data collection, statistical analyses will be completed using the Statistical Package for the Social Science 21.0 (IBM Corp., Armonk, NY, USA). Descriptive and inferential statistical testswere used. Descriptive statistics such as percentages, means, and frequencies were used to describe the sample characteristics and to answer the first research question "What are the

competencies of Jordanian nurses in patient safety?" Pearson correlation will be used to answer the second research question "What are the factors that enhance or hinder Jordanian nurses' patient safety competencies? ANOVA and t-test were used to answer the third research question "Are there any differences in patient safety competencies based on certain demographic characteristics?

RESULTS

Descriptive data are presented as frequencies, percentages, mean values, and standard deviations of variables. The total response rate was 66%, 199 RN was returned the questionnaire. The sample was normally distributed (50.8%) were female and (49.2%) were male. The mean age of participants was 31.5 years, with an average of 6.5 years of working experience in healthcare settings. However, the participants with a bachelor's degree in nursing (66.8%) were two times more than a diploma degree. Moreover the majority of the participants (74.4%) report that they didn't get a separate module for patient safety in the curriculum.

Table 1. (Demographic Statistics)

Variables	Frequency (%)	Mean (St)
Gender		
Female	101 (50.8)	-
Male	98 (49.2)	-
Previous Education		
Diploma	60 (30.2)	-
Bachelorette	133 (66.8)	-
Others	6 (3%)	-
Separate module for patient safety education in curriculum		
NO	148 (74.4)	-
Yes	21 (25.60	-
Age	-	31.5(6.5)
Working experience	-	6.6(5.7)

Building patient safety competence (knowledge): Regarding building patient safety competence (knowledge) in (table 2), over 89% of the participants highly agreed that their competencies in patient safety continuously improved during their nursing studies", however, over 36% of the participants were not satisfied with their patient safety competencies.

Competence to act after an error (skill): Regarding competence to act after an error (skill) 97% of the participants highly agreed that they will intervene without delay if another healthcare professional behaves in a manner that puts the patient at risk, which is the highest scoring item in the subscale, however, over 62% of the participants reports that they, don't know how the analyses should proceed after a patient safety incident report is made (table 2).

Competence to prevent patient safety incidents (attitude): Regarding Competence to prevent patient safety incidents (attitude) more than 89% of the participants report that they can prevent possible patient safety incidents in nursing care situations. While, over 71% of the participants didn't communicate clearly to ensure patient safety (using such as repeat back, ISBAR). Which is the lowest-scoring item in this subscale (Table 2). What are the factors that enhance or hinder Jordanian nurses' patient safety competencies? To answer the second research question Pearson correlation was used to examine the relationship between certain demographic variables and patient safety competencies. A significant positive relationship was found between age and work experience (.741**) and a significant negative relationship was also found between age and a separate module for patient safety (.-276**). Moreover, a negative relationship was detected between work experience and a separate module for patient safety (.-364**). Is there any differences in patient safety competencies based on certain demographic characteristics?. To answer the third research question t-test was applied to examine the mean differences between patient safety competencies and certain demographic variables(Gender, Separate module for patient safety), and ANOVA test to examine the mean differences between patient safety competencies and previous education. Independent sample t-test results show no statistical differences between patient safety competencies and (Gender, Separate module for patient safety) (t=2.98, sig= .766). and 97% of the participants highly agreed that they will intervene without delay if another healthcare professional behaves in a manner that puts the patient at risk, which is the highest scoring item in the subscale. ANOVA test was applied to examine the mean differences between patient safety competencies and previous education, the result shows no statistical differences.

DISCUSSION

All participants in this study evaluated themselves as moderate in terms of building patient safety competencies (knowledge) 2.90 (.526), competence to act after an error (skill) 2.91(.434)), Competence to prevent patient safety incidents (attitude) 2.88(.477). The majority of participants (74.4%) in this study, did not spot a separate patient safety module in their nursing curricula. This result is in accordance with previous studies, which have also reported that nursing students did not report patient safety as an explicit subject throughout their education (Langari, m. 2107, Tella *et al*., 2014), this negative response of the participants indicates that the patient safety competences were not on the top priority of the faculty members who develop the education plan, therefore, the faculty members believe that the patient safety competencies were given through curricula. Moderatepositive correlations were detected between age and years of experience (.741**), also negative moderate correlations were detected between age and a separate module for patient safety (.-276**) and previous experience and a separate module for patient safety (.-364**). This result is congruent with (Colet, P., 2015, Amelia, R. &Nurmalia, D., 2020. And Sulaiman, M., 2020) who found thata strong negative correlation was established between the nursing students' academic level and Patient safety competence in the clinical setting. It is strongly recommended to inspect the reasons that can increase the attainment of patient safety competence among nursing in the clinical setting. The result of the Independent sample t-test and ANOVA test shows no statistical differences between patient safety competencies and certain demographic variables. However, over 89% of the participants highly agreed that their competencies in patient safety were continuously improved during their nursing studies", and over 89% of the participants reports that they can prevent possible patient safety incidents in nursing care situations, and 97% of the participants highly agreed that the will intervene without delay if another health care professional behaves in a manner that puts the patient at risk.

Table 2. Descriptive statistics

Building Patient Safety Competences (Knowledge)		
Variable	Frequencies (%)	
	Agree	Disagree
My competence regarding patient safety is good.	147(73.2)	52 (25.8)
I understand the central concepts related to patient safety (e.g. patient safety incident, near miss, adverse event and barriers).	171(85.1)	28(13)
. My competence in patient safety has continuously improved during my nursing studies	180(89.6)	19(9.5)
I am satisfied with my patient safety competence	126(62.7)	37(36.3)
Total Scale Mean		
Competence to act after an error (skill)		
If I notice a patient safety incident (an adverse event or a near miss event), I know how to make the report	180(89.6)	19(9.5)
After a patient safety incident report is made, I know how the analyses should proceed	74(36.8)	125(62.2)
If I notice an adverse event (patient suffers of harm), I respond immediately as the situation requires.	174(86.6)	25(12.5)
If another health care professional behaves in a manner that puts the patient at risk, I intervene without delay	195(97)	4(2)
Total Scale Mean		
Competence to prevent patient safety incidents (attitude)		
I plan to continue developing of my patient safety competency after graduation	157(78.2)	42(20.9)
I understand the role of effective teamwork in ensuring patient safety	176(87.6)	23(11.5)
I work systematically to ensure patient safety	174(86.6)	25(12.5)
I can identify possible patient safety incidents	170(84.6)	29(14.5)
I communicate clearly to ensure patient safety (using such as repeat back, ISBAR).	55(27.7)	144(71.7)
I can prevent possible patient safety incidents in nursing care situations.	180(89.6)	19(9.5)
Total Scale Mean		

Table 3. Pearson correlation

Age	Previouse Experience	Level of Education	Separate Module for Pt Safety
Gender	-	-	-
Age	.741	**	.037
Previous Exp.	.-276**	.024	.-364**

** Correlation is significant at the 0.01 level (2-tailed).

Table 4. 'Patient safety competences Anova test

Variable	Mean (s d)
My competence regarding patient safety is good.	2.7 (.829)
I understand the central concepts related to patient safety (e.g. patient safety incident, near miss, adverse event and barriers).	2.92 (.755)
. My competence in patient safety has continuously improved during my nursing studies	3.07 (.724)
I am satisfied with my patient safety competence	2.899 (.791)
Total Scale Mean	2.90 (.526)
Competence to act after an error (skill)	
If I notice a patient safety incident (an adverse event or a near miss event), I know how to make the report	3.85 (.730)
After a patient safety incident report is made, I know how the analyses should proceed	2.14 (1.03)
If I notice an adverse event (patient suffers of harm), I respond immediately as the situation requires.	2.98 (.79)
If another health care professional behaves in a manner that puts the patient at risk, I intervene without delay	3.42 (.534)
Total Scale Mean	2.91(.434)
Competence to prevent patient safety incidents (attitude)	
I plan to continue developing of my patient safety competency after graduation	3.07 (.70)
I understand the role of effective teamwork in ensuring patient safety	3.04 (.730)
I work systematically to ensure patient safety	3.07 (.778)
I can identify possible patient safety incidents	2.97 (.722)
I communicate clearly to ensure patient safety (using such as repeat back, ISBAR).	2.04 (.793)
I can prevent possible patient safety incidents in nursing care situations.	3.95 (.735)
Total Scale Mean	2.88(.477)

This result indicates the nurses although they didn't predict a spate module for patient safety in their academic curricula, they provide safe nursing care through the knowledge gained through continuous education on patient safety practices and principles since (78.2%) of the participants plan to continue developing of my patient safety competency after graduation and (86.6%) work systematically to ensure patient safety, and(87.6%) understood the role of effective teamwork in ensuring patient safety.

These results were congruent with previous studies (Han Y.*et al*., 2019,Langari, M., 2017, Steven *et al*., 2014).

Limitations

The current study was performed using a cross-sectional design that makes it impossible to resolve causal relationships between variables. In addition, extraneous factors were not considered in the current study such as

workloads, workplace violence, accreditation status, and acuity of patients, which may affect nurses' patient safety competency scores. Finally, our sample consisted only of nurses working in the two governmental hospitals in south part of Jordan. Small sample size used convenience sampling technique, which limits the generalizability of the result.

Recommendations

Further studies for evaluating nursing competency are needed with a large sample size that covers different areas in Jordan, further studies also are needed to examine the outcomes of competency improvement

CONCLUSION

Nursing competency includes different components, such as knowledge, skills, and attitudes. Therefore, a separate module for patient safety competencies should be included in nursing curricula.

REFERENCES

Amilia, R., &Nurmalia, D. 2020. A Comparison of Patient Safety Competencies between Clinical and Classroom Settings among Nursing Students. *Nurse Media Journal of Nursing, 10*(1), 66-75. https://doi.org/10. 14710/ nmjn.v10i1.25231

Baines, R.J., Langelaan, M., de Bruijne, M.C., Asscheman, H., Spreeuwenberg, P., van de Steeg, L., Siemerink, K.M., van Rosse, F., Broekens, M. & Wagner, C. 2013. Changes in adverse event rates in hospitals over time: a longitudinal retrospective patient record review study. *BMJ Quality & Safety 22: 290-298*

Fukada, M.2018. Nursing Competency: Definition, Structure and Development.*Yonago Acta Medica 2018;61:001–007.*

Jamshidi, H, Maslakpak H.M., and Parizad, N. 2021. Does problem-based learning education improve knowledge, attitude, and perception toward patient safety among nursing students? A randomized controlled trial, *BMC Nursing. https://doi.org/10.1186/s12912-021-00588-1*

Jang H, Lee NJ. Patient safety competency and educational needs of nursing educators in South Korea.(2017).12(9):*e0183536. https:// doi.org/10.1371/journal.pone.0183536*

Han Y, Kim J-S, Seo Y. Cross-sectional study on patient safety culture, patient safety competency, and adverse events. *West J Nurs Res.2019;42(1):32–40*

General Guide for Education and Training in Patient Safety Available at: *http://www.eu-patient.eu/ globalassets /projects/eunetpas/ guidelines_ final_ 22-06-010.pdf?id=54 14&epslanguage=en (accessed 8 March 2023).*

Khoshakhlagh, A. H., Khatooni, E., Akbarzadeh, I., Yazdanirad, S., & Sheidaei, A. 2019. Analysis of affecting factors on patient safety culture in public andprivate hospitals in Iran. *BMC Health Serv Res, 19(1), 1009.https://doi.org/10.1186/s12913-019-4863-x*

Langari M.N.M., Tella S., Smith N.J., Turunen H. Self-assessment of patient safety competence: a questionnaire survey of final year British and Finnish pre-registration nursing students. *Int J Caring Sci. 2017;10(3):1212.*

Safety culture and associated factors: A quantitative and qualitative study of healthcare workers' view in Jimma zone Hospitals, Southwest Ethiopia. *BMC Health Serv Res, 16, 495.* https://doi.org/10.1186/s12913-016-1757-z

Takase M, Teraoka S. Development of the Holistic Nursing Competence Scale. Nursing and Health Sciences. 2011; 13:396- 403. PMID: 21883769. DOI: 10.1111/j.1442-2018.2011.00631.x

Steven, A., Magnusson, C., Smith, P. & Pearson, P.H. 2014. Patient safety in nursing education: contexts, tensions and feeling safe to learn. *Nurse Education Today 34: 277-284*

Tella S, Smith NJ, Partanen P, Jamookeeah D, Lamidi ML, Turunen H. Learn-ing to ensure patient safety in clinical settings: comparing Finnish andBritish nursing students' perceptions. *J Clin Nurs. 2015;24(19-20):2954–64.*

Wami, S. D., Demssie, A. F., Wassie, M. M., & Ahmed, A. N. 2016. Patient safety culture and associated factors: A quantitative and qualitative study of healthcare workers' view in Jimma zone Hospitals, Southwest Ethiopia. *BMC Health Serv Res, 16, 495. https://doi.org/10.1186/s12913-016-1757-z*

Woods C, Parmenter G, Hutchinson M, Mannix J, Power T, *et al*.Self-reported confidence in patient safety knowledge among Australianundergraduate nursing students: a multi-site cross-sectional survey study.*Int J Nurs Stud. 2017;71:89–96.https://doi.org/10.1016/ j.ijnurstu.2017.03.006.*

Van Bogaert, P., Timmermans, O., Weeks, S. M., van Heusden, D., Wouters, K., & Franck, E. 2014. Nursing unit teams matter:Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events—A cross-sectional survey. *International Journal of Nursing Studies, 51,1123-1134. doi:10.1016/j.ijnurstu.2013.12.009.*

Yan, L., Yao, L., Li, Y., Chen, H. 2020. Assessment and analysis of patient safety competency of Chinese nurses with associate degrees: A cross-sectional study. *Nursing Open. 2021; 8:395–403. DOI: 10.1002/nop2.640*

Yoonjung Ji1, Hyeonkyeong Lee1*, Taewha Lee1, Mona Choi1, Hyejung Lee1, Sanghee Kim1, Hyunok Kim Do1,2, Sunah Kim1, Sang Hui Chu1, Jeongok Park1, Young Man Kim3 and Soyoon Park1 2021. Developing an integrated curriculum for patient safety in an undergraduate nursing program: a case study. *BMC Nursing. https://doi.org/10.1186/s12912-021-00694-0*

****