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The Relationship between Nursing Communication, Professional Skills, and Patient Safety Culture among Critical Care Nurses: A Descriptive Study

Nursing Communication, Professional Skills, and Patient Safety Culture

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ABSTRACT:

Background: Patient safety is a very crucial and significant issue in nursing. To improve patient safety, a systematic, organizational approach should be considered to create a patient safety culture.

Objectives: The study aimed to examine the relationship between nursing communication, Professional skills, and Patients safety culture among critical care nurses.

Materials and Methods: A descriptive cross-sectional study design was conducted among nurses working in critical care units at eight teaching hospitals in the southern provinces of Iraq (Basra, Maysan, Di Qar). A self-administered questionnaire method was used to collect data it's composed of three parts, Part I: consisted of the patient's demographic data, Part II: Hospital Survey on Patient Safety Culture (HSOPSC) Part III: consisted of nursing performance by used Six-Dimension Scale of Nursing Performance

Results: the study result display strong statistically significance relationship between nursing communication, professional skill and patient safety culture, while there was no statistically significance between communication and number of incidents reported $p > 0.05$ level. The professional skill showed statistically significance with overall patient safety culture ($p = 0.000, 0.320$), was no significance correlation between professional skill and of all reporting about incident ($p = 0.285$) and assessment of patient safety culture ($p = 0.151$) by nurses working in critical care units at the teaching hospital.

Conclusion: The study result confirms that nursing communication and professional practice, is an important factor in developing patient safety culture in critical care units. This disparity highlights that personal competency of nurses alone cannot overcoming on systemic obstacles.

INTRODUCTION

Nurses in critical care are the primary health care providers responsible for delivering efficient direct patient care and monitoring them continuously, 24 hours a day (1). The evaluation of nurse performance is crucial for delivering high-quality clinical care to attain optimal patient outcomes(2). Critically ill patients are patients with serious, life-threatening conditions(3). Intensive care comprises highly specialized nursing and medical competence, as well as advanced technology, to meet the complex needs of seriously ill patients with critical conditions. Survival, the care provided transitions from having curative intentions to instead focusing on relieving symptoms and promoting well-being at the end-of-life(4). The ICU setting, which is notorious for its lengthy workdays, increased patient acuity, and exposure to emotionally taxing circumstances, may encounter significant difficulties that could have a detrimental effect on their work-life balance (5). Critical care nurses have the daily responsibilities of providing physical care and psychological support to patients and their concerned families (6,7).

Communication is a core and complex skill required by all healthcare professionals (HCP), an activity that is affected by attitudes, emotions and knowledge. The process of communication is central to effective, safe, patient-centered and compassionate nursing practice(8). Nurse-patient communication often occurs simultaneously with other nursing actions, such as medication administration. This distinguishes nurses' communication praxis from that of medical colleagues for whom communication with a patient and/or family may be the specific focus of care (9). Nurses play an important role in patient safety through nursing care, which involves direct contact with patients and includes patient surveillance, dressing and medication administration, and nursing management, such as reporting patient safety incidents, performing environmental or other unit activities, and being involved in leadership (10).

Patient safety is a very crucial and significant issue in nursing. To improve patient safety, a systematic, organizational approach should be considered to create a patient safety culture, which is defined as shared values, beliefs, and norms among he Thus, patient safety culture not only affects patient outcomes (e.g., infection, hospital-acquired pressure ulcers, and falls) but also patient experiences(11). It is very important to improve patient safety by identifying nurses' awareness of patient safety culture and by exploring the factors that affect patient safety culture. Several factors affect patient safety culture; in particular, professionalism, communication, and working environment are related to patient safety and safety culture a health care professionals in institutions that influence their behaviors, attitudes, and actions(12). Ineffective communication of critical care nurses can lead to higher levels of burnout and negatively affect quality of patient care and patient outcomes such as higher mortality(13). patient safety culture comprises of seven sub-cultural factors, namely leadership, teamwork, evidence-based, communication, learning, accuracy, patient focus (14). Communication is a determining factor in providing quality services in a hospital and plays an essential role in various areas of life. In an organization, communication coordinates various activities to achieve set goals and develops an attitude of mutual understanding towards organizational members. Similarly, effective communication among health workers is a key feature of safe and reliable patient care(15). According to World Health Organization around 1 in every 10 patients is harmed in health care and more than 3 million deaths occur annually due to unsafe care. In low-to-middle income countries, as many as 4 in 100 people die from unsafe care(16). Available evidence suggests that 134 million adverse events due to unsafe care occur in hospitals in low- and middle-income countries, contributing to around 2.6million deaths every year. According to recent estimates, the social cost of patient harm can be valued at US\$ 1 trillion to 2 trillion a year(17). Above 50% of harm (1 in every 20 patients) is preventable; half of this harm is attributed to medications(18). However, despite the growing recognition of patient safety culture as a cornerstone of healthcare, research has shown that shared interests between communication, professional skills, and patient safety culture among care providers are limited, particularly in appropriate healthcare settings. The purpose of this study was to examine the relationship between nursing communication, professional skills, and Patient safety culture among critical care nurses.

MATERIALS AND METHODS

Design and setting

A descriptive cross-sectional study design was conducted among nurses working in critical care units at teaching hospitals in the southern provinces of Iraq (Basra, Maysan, Di Qar). The study was carried out in intensive care units, emergency departments, resuscitation units, and burn units across eight teaching hospitals, including Basra Teaching Hospital, Al-Sadr Teaching Hospital, Al-Faiha Teaching Hospital, Al-Mawani Teaching Hospital, Al-Sayab Teaching Hospital, Al-Hakim Teaching

Hospital, Al-Habboubi Teaching Hospital, and Al-Hussein Teaching Hospital. Participant recruitment and data collection were conducted from December 8, 2025, to January 14, 2026.

Study participants and sampling

A non-probability purposive sampling technique was chosen to obtain representative and accurate data and was used to select critical care nurses who met specific criteria. The target population for this study was nurses worked in the critical care areas at the selected hospitals. They were nurses who working in CCUs from the selected hospitals. this study employed purposive sampling, based on the assumption that the Researcher might select sample members based on their familiarity with the subject's community. Consequently, the purposive sampling was employed to identify respondents most likely to relevant and valuable furnishings information, serving as a tool for discerning and selecting situations that optimized the use of constrained research resources(19,20).

Data collection and instrument tools

A self-administered questionnaire method was used to collect data, after obtaining an official approval from the Ministry of Health, University of Baghdad, and College of Nursing. The researcher promised participants that their data would be maintained in an anonymous private approach. The researcher informed participants in the sample that their names would remain confidential. Furthermore, the study participants were assured that their identities would remain confidential during the study's beginning, publication, and any later publications, as stated by the researcher. The researcher obtained consent from all participants to record their responses and preserved the data for analysis. Data were gathered with the following instruments:

Self-reported critical care nurse's questionnaire: it's composed of three parts:

Part I: consisted of the patient's demographic data including age, sex, education level, marital status, hospital experience, critical care experience, training course and workplace of all participants at the teaching hospitals.

Part II: Hospital Survey on Patient Safety Culture (HSOPSC) it consists of 42-item three to five items that are scored on a 5-point Likert scale to determine if each dimension is represented by frequency (never to always) or agreement (strongly disagree to strongly agree) Arabic version (21)

Part III: consisted of nursing performance by used Six-Dimension Scale of Nursing Performance It has 52 items divided into six subscales: professional development (PD), teaching/collaboration (TC), planning/evaluation (PE), leadership (L), interpersonal relations/communications (IC), and critical care (CC). The scale can be used to evaluate the frequency or quality of nursing performance. All items have responses that can be graded on a four-point Likert scale (22)

Data analysis

Statistical Package for Social Science (SPSS) version 26.0 was used for data analysis.it used in all research. Descriptive statistics (mean, frequency, standard deviation, and percentage) were employed. The Pearson correlation coefficient (symbolized as r) is a statistical metric that assesses the strength and direction of the linear association between two continuous variables. A p -value of 0.05 or less was considered significant.

ETHICAL CONSIDERATIONS

After getting the approval of the Nursing College Council / University of Baghdad for the study protocol, and prior to data collection phase, the researcher submitted a detailed description of the study, including problem statement, objectives, and the study questionnaire, to the Ministry of Planning (Central Statistical Organization) in order to obtain official permission to carry out the study. Of equal importance, AL- Basra Health Directorate, Di Qar Health Directorate, and Maysan Health Directorate reviewed and consequently approved the study protocol to be conducted in the relevant settings, which are critical care unites. Ethical considerations are essential for protecting participants' values and integrity prior to data collection. The Institutional Review Board (IRB), represented by the Research Ethical Approval Committee (REAC) of the Nursing Faculty at the University of Baghdad in Ref:30, Date: 19/11/2025, provided official approval. The researcher agrees to maintaining the confidentiality of the participants' identities and utilizing the gathered data without causing any actual or possible harm on the subjects of the study. The study instrument was developed to protect the participant's right to anonymity. After obtaining official approval from hospitals, participants received the opportunity to voluntarily participate in the study by signing a consent form, which informed them that their involvement was optional and that their information would be handled confidentially and utilized only

for scientific research purposes. Before utilized the questionnaire, approval permission was taken from the original researchers that translated the Hospital Survey on Patient Safety Culture and Six-Dimension Scale of Nursing Performance.

RESULTS

The result of the study revealed (table 1) that the age group (20 – 29) the majority of participant and the mean age of the respondent was $MS \pm SD = 29.43 \pm 6.319$ years. A more than half (60.5 %) of critical care nurse's participant were female and married (52.4%). The majority holding diploma (44. 0%). Higher percentage had experience at hospitals (1 – 5) years and same result at critical care unites experience. Table 2 demonstrate that there weren't statistically significant differences between sociodemographic variables and the level of nursing performance in the field of communication and professional skill for both the assessment and evaluation, all significance values were greater than ($P > 0.05$), Table 3 show the chi – squared test between the sociodemographic characteristics of the participants and the domains patient safety culture displayed no statistically significance in general , as most p – value were greater than 0.05 level .However the result showed a significance relationship between age and the Number of incidents reported at the hospital($p = 0.028$).A statistically significance relationship was also found between education level and patient safety culture assessment domains ($p = 0.030$) of patient safety culture at the hospital by the critical care nurses . Table 4 relationship between nursing performance (communication and professional domains) and patient safety culture display strong statistically significance for both patient safety culture and assessment of patient safety culture at the hospital with communication domains (evaluation and assessment) as most p – value was less than 0.05 level ($p = 0.000$), while there was no statistically significance between communication domain and number of incidents reported (G) p – value were greater than 0.05 level. The professional skill domains showed statistically significance with overall patient safety culture ($p = 0.000, 0.320^{**}$), was no significance correlation between professional skill domains and of all reporting about incident ($p = 0.285$) and assessment of patient safety culture ($p = 0.151$) by nurses working in critical care unites at the teaching hospital.

DISCUSSION

Regarding nurses' socio-demographic characteristics, as a result the table 1 the present study findings indicated that more than half of the respondents were female (60.5 %) and the remainder were male. The majority of them were in the age group 20 - 29 years with a mean age of 29.43 ± 6.31 years. It indicates that the nursing workforce is often in the early stages of their careers. This can be explained by the greater recruitment of new graduates to critical units as a consequence to the ongoing need for nursing staff, as well as the reality that more than half of participants were had experience at hospital for 1- 5 years. The length of time a person has worked in a hospital and certain units indicates their ability to possess more experience working as nurses. Experience influences communication satisfaction, which helps to improve speech quality. As a result, people with good knowledge require adequate communication skills in order to pique the interlocutor's interest and help them understand the information provided. As a result, good coordination has the potential to improve communication among nurses and other healthcare workers. this result line with cross-sectional research was stated that total number of nurses used in the research, 42 (82.4%) aged 20-30 years. The majority showed that 76.5% (39 nurses) were female. the number of those that worked in hospitals for 1-5 years The current with (23). Additionally, high percentage (52.4 %) of participants were married and had critical care experience 1-5 years , These result lain with other a cross-sectional design study (24 , 25) that had 76% of participants were married. In terms of clinical experience in critical care settings, 44% reported having 1-5 years of experience. Table 2 demonstrate that there weren't statistically significant differences between sociodemographic variables and communication and professional skill domains for both the assessment and evaluation, also there weren't statistically significant differences between sociodemographic variables (sex , marital status , hospital experience and critical care experience) and patient safety culture domains table 3 , all significance values were greater than ($P > 0.05$), these findings suggest that nurses attitudes and perception toward safety culture ,communication and professional skill domains more influenced by organizational context and personal characteristics particularly in critical care setting . These result lain with other studies that conducted the absence of significant associations between sociodemographic variables and communication and professional skill highlights the predominant role of professional and organizational than nurse personal characteristics (26). However, a statistically significant relationship between level of education and the assessment of patient safety by the participant for the hospitals included in the study ($r = 0.237, p = 0.030$). This finding is in agreement with the previous study revealing that he relationship between patient safety and nurse education level has implications for nurses. In addition, a statistically significant association was found between age and number of accident reported by critical care nurses at last 12 months ($r = 0.837, p =$

0.028) this result align with cross-sectional study(27). that found relationship between age and incident reporting were significant ($r=0.265$; $p=0.005$).

Table 4 represent there is a significant positive correlation between overall patient safety culture and communication and ($p < 0.05$, $r = 0.417$) This alignment suggests that higher level of clinical communication between critical nurses directly contribute to a more robust patient safety climate this result strongly supported by other studies that emphasized that (28) The results showed a significant relationship between nurse communication satisfaction and the quality of patient safety culture. Furthermore, the higher the nurses' level of communication, the better the applied quality of patient safety culture ($r = 0.338$). The role of communication in the critical care environment is an essential part of good nursing practice as it directly affects patient outcomes, emotional health, and organization of complex medical interventions. Nurses in intensive care units (ICUs) and emergency departments tend to deal with highly ill, nervous or speechless patients. Under these conditions of high level of stress, nurse communication skills, which are and efficient are critical to patient safety and provision manner(29). Conversely, as indicated in table wasn't significant association between nursing performance (communication and professional skill) and the number of incidents report all significance values were greater than ($P > 0.05$), and this alignment suggests that a survey conducted in eastern Ghana showed that more than 70% of the interviewed professionals did not report any AE in the last twelve months, a scenario similar to the Brazilian one with a study pointing to the underreporting of these events (30). The notification process needs attention and investment from managers and can be better structured in intensive care services, as it must be seen as a measure for identifying and preventing incidents(31).Among the main reasons reported by health professionals for not carrying out notifications, there are: fear of pressure from managers, work overload, forgetfulness, devaluation of AE, lack of knowledge about how to perform notification and lack of feedback when these notifications are made(32). These result lain with other study that conducted where nursing technicians were the professionals who most selected the option "no event" reported in the last 12 months; indicating that the practice of notifications has not yet been rooted by the team, with the prevailing culture influencing the communication of events, as well as the feeling of fear/guilt.(33) Thus, in order to achieve the target results in free care or with the least possible damage, it is essential that care is provided in compliance with the uniqueness and multifaceted reality of each patient, in addition to the management support which must be operative and effective in health services(34). The results presented bring important contributions to the knowledge about patient safety, understood as necessary for the development of actions in health institutions, when associated with the view of professionals with objective data as described in this study.

LIMITATIONS

The data collected in the study was based on self-reported responses, which may have introduced biases or inaccuracies in the results.

CONCLUSIONS

In conclusion, our study result confirms that nursing communication and professional practice, is an important factor in developing patient safety culture in critical care unites. However, this doesn't automatically translate into higher incident reporting rates. This disparity highlights that personal competency of nurses alone cannot overcoming on systemic obstacles

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CONFLICTS OF INTEREST

No conflicts of interest have been declared by the authors. Ethics Approval and Consent to Participate Ethical approval was sought first from the Ethical and Scientific Committee at the Faculty of Nursing in the University of Bagdad and the Institutional Review Board (IRB) of the chosen settings. All participants provided verbal consent to participate in the survey and their participation and attendance was voluntary

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Table 1. Socio-demographical characteristics of critical care nursing

Socio-demographic variables	Subgroups	F* .	%
1.Sex	Male	98	39.5
	Female	150	60.5
	Total	248	100
2.Age Group	20-29 Year	157	63.3
	30-39Year	65	26.2
	40-49Year	23	9.3
	50 – 59 Year	3	1.2
	Total	248	100
	MS±SD = 29.43±6.319		
3. Marital Status	Single	104	41.9
	Married	130	52.4
	Divorced	13	5.2
	Separated	1	0.4
	Total	248	100
4.Level of Education	Nursing School	52	21
	Diploma Graduate	109	44
	Bachelor	85	34.3
	High Diploma	2	0.8
	Total	248	100
5. Hospital Experience	1-5 Year	145	58.5
	6-10Year	58	23.4
	11-15Year	25	10.1
	16-20Year	7	2.8
	21Year and Above	13	5.2
	Total	248	100
6.Critical Care Unite Experience	1-5 Year	191	77
	6-10Year	33	13.3
	11-15Year	13	5.2
	16-20Year	4	1.6
	21Year and Above	7	2.8
	Total	248	100

Table 2: Chi-square test for Socio-demographic characteristics and nursing performance (Communications Domain, Professional Domain)

Socio-demographic variables	Nursing performance (Assessment)			Nursing performance (Evaluation)		
	Chi- Square	P Value	Sig*.	Chi- Square	P Value	Sig*.
Communications Domain						
1. sex	0.3	0.766	NS	0.317	0.631	NS
2. Age	0.515	0.93	NS	0.541	0.809	NS
3. Level of education	84	0.397	NS	0.607	0.274	NS
4. Marital status	0.576	0.533	NS	570	0.582	NS
5. Hospital experience	0.594	0.958	NS	0.601	0.941	NS
6. Critical care experience	0.527	1	NS	0.563	0.993	NS
Professional Domain (Evaluation)						
	Chi- Square	P value	Sig*.			
1. sex	0.364	0.135	NS			
2. Age	0.477	0.945	NS			
3. Level of education	0.495	0.884	NS			
4. Marital status	0.494	0.887	NS			
5. Hospital experience	0.516	0.996	NS			
6. Critical care experience	0.498	0.999	NS			

Table 3: Chi-square test for Socio-demographic characteristics and patient safety culture

Socio-demographic variables	Patient Safety Culture			Number of incidents reported at the hospital			Assessment of patient safety culture at the hospital		
	Chi-Square	P. value	Sig.	Chi-Square	P. value	Sig.	Chi-Square	P. value	Sig.
1. Sex	0.533	0.5	NS	0.152	0.334	NS	0.067	0.573	NS
2. Age	0.872	0.886	NS	0.837	0.028	S	0.186	0.196	NS
3. Level of education	0.789	0.999	NS	0.283	0.178	NS	0.237	0.03	S
4. Marital status	0.823	0.99	NS	0.205	0.792	NS	0.177	0.254	NS
5. Hospital experience	1.115	0.156	NS	0.321	0.182	NS	0.157	0.634	NS
6. Critical care experience	1.117	0.141	NS	0.32	0.188	NS	0.233	0.098	NS

Table4: relationship between nursing performance (communication and professional domains) and patient safety culture

Overall patient safety culture (A, B, C , D, F)				Patient safety assessment (E)			Number of incidents reported (G)		
Variable	(r)	P. value	Sig .	(r)	P. value	Sig.	Pearson (r)	P. value	Sig .
Communications Domain									
Assessment	0.417**	0	S	0.154*	0.015	S	-0.05	0.437	NS
Evaluation	0.317**	0	S	0.232**	0	S	-0.019	0.765	NS
Professional Domain									
Evaluation	0.320**	0	S	0.092	0.151	NS	0.068	0.285	NS