

Practices Regarding Patient Safety Measures Among Staff Nurses In Tertiary Care Hospital

Dr. Sudha Annasaheb Raddi ¹, Dr. Sunil Malhar Kulkarni², Dr. Mrs. Vaishali Santosh Jadhav ³,
Dr. Suresh Kumar Ray⁴

1. College of Applied Medical Sciences, University of Bisha, Saudi Arabia
2. Dr. Sunil M. Kulkarni. Bharati Vidyapeeth (Deemed to be University), Pune, College of Nursing, Navi Mumbai Maharashtra, India
3. Dr. Mrs. Vaishali Jadhav. Dean Faculty of Nursing & Principal, Bharati Vidyapeeth (Deemed to be University), Pune, College of Nursing, Navi Mumbai Maharashtra, India
4. Dr. Suresh Kumar Ray. I/C Principal. Bharati Vidyapeeth (Deemed to be University), Pune, College of Nursing, Sangli. Maharashtra, India

Corresponding author: Dr. Sunil M. Kulkarni. Email ID: sunilmalharkulkarni@gmail.com

Abstract

Introduction: Patient safety is an important concern of health care for treatment and for preventing complications. Patient safety includes several aspects like medical errors, infection control, medication safety, communication and handover, staff training and competency. Patient Safety positively impacts on the health outcome, which reduces the cost of health care.

Methodology: The study was conducted by using non-experimental approach and descriptive survey research design. 100 samples were selected by using probability sampling-simple random sampling technique. Established the content validity of the tool from 22 experts of different areas. Corrections were made as per the suggestion and the final tool was prepared. The check list was used as a tool to assess practices regarding patient safety measures. The reliability co-efficient was done by using test-retest method and 'r' value was calculated by Karl Pearson formula and found that the tool is reliable as the 'r' value is 0.9186.

Result and conclusion: The frequency and percentage distribution of practices regarding patient safety, the staff nurses got highest practice score ie, 98% score. Avoid unnecessary noise, especially during nighttime and resting periods. Staff nurses got the lowest practice score ie, 77% in following institutional policies and procedures for accessing and sharing patient information. Study results showed that nurses were doing accurate practices regarding patient safety measures in tertiary care hospitals. Study findings show that there is a need for education regarding patient safety among staff nurses, as it is a major area in patient care aspect.

Key words: Practices, Patient safety, measures, Staff nurses, Tertiary care hospital.

INTRODUCTION:

Patient safety is one of the main metrics that all healthcare companies worldwide keep an eye on since it is thought to be essential to the quality of care. Because of the nature of their employment, nurses are essential to preserving and advancing patient safety.[1]

Patient safety is one of the most crucial aspects of high-quality healthcare and a worldwide concern. Medical error raises serious concerns about patient safety and is associated with higher health care costs since it can result in death, morbidity, or extended hospital stays. [2]

Patient safety is an important concern of health care for treatment and for preventing complications. Providing a safe environment for patients is a primary goal for healthcare organizations all around the world. Patient Safety positively impacts the health outcome, which reduces the cost of health care. Patient safety includes several aspects like medical errors, infection control, medication safety, communication and handover, staff training and competency. Nurses have an important role in dealing with these events. Inadequate staffing can cause many of the safety measures to be adverse. Data published shows that out of ten patients a minimum of 3- 4 patients face the problem of patient safety.[3]

The title of study is “A study to assess the practices regarding patient safety measures among staff nurses in selected tertiary care hospitals in the Sangli- Miraj- Kupwad corporation area”. The objective of this study is to assess the practices regarding patient safety measures among staff nurses. The assumption is that staff nurses may have some practices regarding patient safety

RESEARCH METHODOLOGY

The present study was conducted using Non-Experimental, descriptive study design. Samples were selected by using probability simple random sampling technique. Staff, with less than six months, were excluded from the study. 100 staff nurses were selected from tertiary care hospitals as samples. Ethical approval was received from the Institutional Ethical Committee, BVDU, College of Nursing, Sangli. Tool validity was done with 22 experts for nursing field, statistician and language A checklist was used to assess practices regarding patient safety measures among staff nurses. The test- re-test method was used to check the tool's reliability. Reliability was done with the help of Karl Pearson's formula. The reliability coefficient $r=0.9186$. The Spearman-Brown prophecy formula is expressed as $R = (2r)/(1+r)$, $r = 0.9575$. Pilot study was conducted to check the feasibility of the main study.

The data collection tool had two sections: Section I: Demographic Variables. It consists of nurses' age, gender, educational qualification, and work experience. Section II: Checklist of practices regarding patient safety measures. Which had 33 statements for assessing patient safety practices. The demographic variables were computed by using descriptive statistics in the form of frequency and percentage.

ANALYSIS OF DATA

Data analysis was done under two headings

1. Frequency and percentage distribution of the demographic variables
2. Frequency and percentage distribution of practice regarding patient safety among staff nurses.

Table No. 1: Frequency and percentage distribution of the demographic variables.

n= 100

Sr. No.	Demographic Variables		Frequency	Percentage (%)
1	Age in years	20- 30	62	62
		31 - 40	25	25
		41 - 50	12	12
		51 - 60	1	1
2	Gender	Male	39	39

		Female	61	61
3	Educational Qualification	GNM	61	61
		PBBScN	16	16
		BSc Nursing	19	19
		MSc Nursing	4	4
4	Working Experience	6 months - 11 months	27	27
		1 year - 5 years	38	38
		6 years - 10 years	24	24
		11 years - 15 years	11	11

The above table shows 62% of staff nurses belong to the age group of 20- 30 years & 25% were between 31- 40 years. 61% staff nurses were female. 61%. staff nurses belong to the educational qualification group of GNM, 19% were B. Sc Nurses. 38% of staff nurses have work experience between 1 to 5 years and 27% have working experience in between 6 months to 11 months.

Section II: Frequency and percentage distribution of practice regarding patient safety among staff nurses.

Table no.2 : Frequency and percentage distribution of practices regarding patient safety

n=100

Sr. No	Statement	Frequency	Percentage (%)
	Patient consent		
1	Take informed consent has been obtained from the patient or their legal representative before any procedure or treatment	90	90
2	Confirm that the patient understands the purpose, risks, benefits, and alternatives of the proposed intervention.	86	86
3	Verify that consent forms are signed and dated by the appropriate person.	84	84
4	Address any questions or concerns raised by the patient regarding the consent process within charge, nurse or other health team member.	82	82
	Medicines safety		
5	Verify the medication orders and check for patient allergies before administering any medication.	79	79
6	Follow the "Five Rights" of medication administration: e.g. Right patient, right medication, right dose, right route, and right time.	82	82

7	Administer medications according to institutional policies and procedures. (Keeping the narcotics in lock, Put the LASA drugs in separate compartments.)	95	95
8	Educate patients about their medications, including dosage, frequency, and potential side effects.	94	94
9	Monitor patients for adverse reactions and medication interactions and report any concerns to the healthcare team.	80	80

Table No 2 shows the practices regarding patient consent and medicine safety. 90% were aware of the consent before any procedure but 82% were gave the answer to the questions of patient or relatives. In medicine safety 94% educate their patients regarding their medication but only 79% verify the medication order and check for medication allergies.

Table No: 3: Frequency and percentage distribution of practice regarding patient safety measures

n=100

	Safe Environment	Frequency	Percentage (%)
10	Keep the floor clean and dry without obstacles to prevent fall.	96	96
11	Inform or instruct the patient and relative about how to use hot water supply(geyser) and tap water supply.	96	96
12	Inspect electrical appliances regularly for proper functioning and signs of damage.	86	86
13	Avoid unnecessary noise, especially during nighttime and resting periods.	98	98
	Infection Prevention		
14	Do hand wash before and after procedure.	95	95
15	In case of respiratory infection, a mask should be used.	79	79
16	Use PPE while collecting samples and taking care of highly infected patients or immunosuppressive patients.	95	95
17	Use sterile articles.	87	87
	Equipment safety		

18	Medical device safety and functioning must be checked before use	97	97
19	Take care while using sharp and pointed instruments for patient care e.g., Injection needles.	97	97
20	Regular medical equipment inspection and maintenance for identifying potential safety issues.	93	93

The above table shows that 98% of staff nurses avoid unnecessary noise, especially during nighttime and resting periods. And 97% of staff nurses check the safety of the devices and take precautions while using sharp instruments. Only 79% were using masks while caring for the patient with respiratory infection

Table No:4 : Frequency and percentage distribution of practice regarding patient safety measures n=100

	Correct Patient identification	Frequency	Percentage %
21	Call the patient by name and confirm with relatives	95	95
22	Ensure that patient identification bands are always worn and legible.	78	78
23	Label the patient's name and details on all specimens and other identifying information.	87	87
24	Educate patients about the importance of accurate patient identification and encourage their participation in the process.	94	94
	Keep safe Patient record		
25	Maintain accurate and complete documentation of patient information and care activities.	84	84
26	Use standardized formats and terminology for documenting patient records	93	93
27	Protect patient records from unauthorized access, loss, or theft.	79	79
28	Store paper records in secure and locked areas when not in use.	78	78
29	Regularly back up electronic patient records to ensure data integrity and availability.	96	96
30	Hand over patients record as hospital protocol.	93	93

The above table shows that 95% of staff nurses call their patient by name and 94% of staff nurses educate their patient regarding the importance of correct identification and their participation for identification process. 96% regularly backup their electronic patients records and 95% handover the patients records as hospital protocol. Only 79% protect patient records from unauthorized access or theft.

Table No :5 : Frequency and percentage practices regarding patient safety measures

n=100

	Personal information security	Frequency	Percentage (%)
31	Protect patient confidentiality by maintaining the privacy of patient information.	94	94
32	Avoid discussing patient information in public areas where it may be overheard.	79	79
33	Follow institutional policies and procedures for accessing and sharing patient information.	77	77

Table no 5 shows that 94 % of samples protect patients' confidentiality by maintaining privacy, but only 77% follow institutional policies for sharing information.

DISCUSSION:

The study's objective is to evaluate staff nurses' practices regarding patient safety measures in tertiary care hospitals in the Sangli, Miraj, and Kupwad Corporation area. The study's findings have been discussed with reference to objectives.

In Demographic Variables 62% of staff nurses belong to the age group of 20- 30 years.61% of staff nurses were female.61% of staff nurses belong to the educational qualification group of GNM.38% of staff nurses have work experience between 1 to 5 years. The present study shows that age group of 20 to 30 years includes 61% of staff nurses that indicates the highest scoring frequency. The frequency of female staff was 61% and the male staff were 39%. 61% of staff nurses belong to the educational qualification group of GNM. 38% of staff nurses have work experience for between 1 to 5 years.

The analysis of the data showed that the practice regarding patient safety 98% were used to take consent before doing procedure, but only 82% were used to clarify the doubts of patients.

Regarding practices regarding patient identification 95% calls the patients by name and confirm with relatives. But only 75% followed putting identification bands for the patients. Regarding records of patients 96% used to update the electronic records of the patients, but only 78% used to keep the papers regarding patients under lock and key. In personal information safety 95% protects the confidentiality of the patient .77% follows policies and procedures regarding providing patients information.

The similar study was conducted by Noufa A Alonazi, Aisha A Alonazi, Elshazaly Saeed and Sarar Mohamed on "The perception of safety culture among nurses in a tertiary hospital in Central Saudi Arabia" .Total of 224 nurses responded with a response rate of 44.8% shows that most participants were females 188(84%), non- Saudi 187(97%), staff nurses 200 (90%), and with bachelor level of education191 (93.2%). Most of the participants were working in surgery, pediatrics and accident and emergency units (Table1). The Overall

perceptions of safety amongst nurses are shown in. Seventy-four percent of the participants thought that patient safety is never sacrificed to get more work done and that the hospital systems are supporting preventing errors from happening (62.9%). Thirty percent of the respondents indicated that they have patient safety problems in their units. shows patient safety culture composites which ranges from (43.5 % to 73 %), with 73 % of the Participants strongly agree that the team work in their unit is an area of strength for supporting the patient's safety. However, 43.5% believe that their supervisor and manager expectations and action promoting patient safety is an area for improvement to maximize the patient safety. Overall, 59.9% had a positive response regarding the perception of safety. Most participants thought that their work units were good in preventing errors by implementing measures to improve patient safety. The overall frequency of reporting events was high in the participants' work units. Regression analysis shows that staffing and non-punitive response were the main two variables contributed to the overall patient safety. [4]

In another study conducted by Hisham Aljadhey, Basmah Al-Babtain, Mansour Adam Mahmoud, Sinna Alaqeel, Yusuf Ahmed on "Culture of Safety among Nurses in a Tertiary Teaching Hospital in Saudi Arabia". The results show that the questionnaires given to 492 nurses, only 418 complete ones, were returned, giving a response rate of 84.9 %. Most of the participants (354, 84.7 %) were staff nurses and the majority, 112 (26.8 %), had working experience of ≥ 20 years. Job satisfaction was perceived as the most common dimension of culture of safety among nurse participants (92.7 ± 14.6) followed by working conditions (82.1 ± 16.6) and safety (75.5 ± 15.5) and teamwork (75.5 ± 16.7). Stress recognition (41.9 ± 25.2) and perception of management (68.1 ± 19.1) ranked as the least common dimensions of safety culture among study subjects. A significant difference in mean score was found between males and females for both working conditions ($p = 0.035$) and teamwork ($p = 0.045$). Significant differences were also observed in terms of job satisfaction dimension scores regarding years of work experience ($p = 0.045$). A significant difference was also observed in terms of stress recognition dimension scores in terms of years of work experience ($p = 0.007$).[5]

Study conducted by Addisu D Wake, Techane Sisay Tuji, Berhanu K Gonfa, Eskeder T Waldekidan, Etalem D Beshaw, Mohamed A Mohamed, Shawlem Tadesse Geressu on "Knowledge, attitude, practice and associated factors towards patient safety among nurses working at Asella Referral and Teaching Hospital, Ethiopia: A cross-sectional study".The result shows that a total of 172 nurses were enrolled in to the study, resulting a response rate of 99.4%. The mean age of the nurses was 32.53 years. More than half 94(54.7%) of them were female. The majority 133(77.3%) of them were qualified for degrees and above. The majority 155(90.1%) of them had working experience of ≤ 13 years. The nurse's level of good knowledge, positive attitude, and good practice towards patient safety was 58.7% ($n = 101$, [95% CI; 51.7, 66.7]), 52.9% ($n = 91$, [95% CI; 43.6, 61.4]), and 50% ($n = 86$, [95% CI; 43.6, 57%]) respectively. The multivariable logistic regression analysis showed; working in the operation theatre unit on advocate on record [AOR = 5.01, 95% CI; 1.36, 18.46], having information on patient safety during initial education [AOR = 4.99, 95%CI; 1.87, 13.31], and having information on patient safety during continuing education [AOR = 2.85, 95% CI; 1.14, 7.12] were factors significantly associated with knowledge towards patient safety. Being male [AOR = 3.09, 95% CI; 1.38, 6.95], having working experience of >13 years [AOR = 8.37, 95% CI; 1.36, 51.70], having information on patient safety during initial education [AOR = 3.36, 95%CI; 1.11, 10.15], having information on patient safety during continuing education [AOR = 3.33, 95% CI; 1.25, 8.85], and having good Knowledge towards patient safety [AOR = 2.74, 95% CI; 1.21, 6.21] were factors significantly associated with attitude towards patient safety. Having information on patient safety during initial education [AOR = 5.35, 95%CI; 1.77, 16.17] and having a positive attitude towards patient safety [AOR = 3.02, 95% CI; 1.32, 6.91] were factors significantly associated with practice towards patient safety [6]

IMPLICATIONS:

The results of the present study have brought out certain facts that have implications for nursing practice, nursing education, nursing administration and nursing research.

Nursing practice: All nurses practice patient safety measures while taking care of patients in hospital or family care in community health settings. Nurses should practice safety measures related to patient unit environment, patients' belongings and patients' records. **Nursing education:** Patient safety measure units must be included separately in each nursing syllabus. Patient safety measures must be demonstrated in nursing labs and hospitals by nursing teachers. **Nursing administration:** Study findings help nurse administration to plan CNE (continuing nursing education) on patient safety measures. The nurse administrator should observe all the patient safety measures regularly and keep their records. And take measures protentional harmful areas to prevent any harm. **Nursing research:** Study findings help as evidence-based practice further research. The nurse researcher will share this information with nurse practitioners and nurse educators to implement it.

CONCLUSION

Study concluded that the nurses who are working in hospital had knowledge regarding safety practices in terms of patient consent, medicine safety, safe environment, infection prevention, equipment safety, correct patient identification, keep safe patient record, personal information security .But still need an improvement in practices regarding putting identification band to the patients, safe keeping of patients records ,Regarding notification of adverse reactions on medication ,usage of mask for respiratory tract infection etc.

REFERENCES

1. Ali A, Ayman K, Joshua K, Renu Geetha Krishnan, SN Al. Patient safety culture among nurses. International nursing review.2015. 62: (1); 102-110.
2. Hisham A, Basmah Al, Mansour A, Sinna A, Yusuf A. : Culture of safety among nurses in a tertiary teaching hospital in Saudi Arabia. Tropical Journal of Pharmaceutical Research 2016.15: (3); 639-644. doi: 10.4314/tjpr.v15i3.28
3. Rosanna R, Catherine C.: Patient safety culture among nurses at a tertiary government hospital in the Philippines: Applied Nursing Research. 2018. 44; 67-75. DOI: 10.1016/j.apnr.2018.09.007
4. Noufa A , Aisha A , Elshazaly S, Sarar M. The perception of safety culture among nurses in a tertiary hospital in Central Saudi Arabia. Sudan J Paediatr. 2016;16(2):51-58. Accessed on 23 September 2023. <https://pubmed.ncbi.nlm.nih.gov/28096559/>
5. Hisham A , Basmah Al, Mansour A , et.al .: Culture of Safety among Nurses in a Tertiary Teaching Hospital in Saudi Arabia. Tropical Journal of Pharmaceutical Research March 2016; 15 (3): 639-644. doi: 10.4314/tjpr.v15i3.28. Accessed on 15 Oct. 2023. https://www.tjpr.org/admin/12389900798187/2016_15:_3_;28.pdf
6. Addisu D, Techane S, Berhanu K, ct.al. : Knowledge, attitude, practice and associated factors towards patient safety among nurses working at Asella Referral and Teaching Hospital, Ethiopia: A cross-sectional study. PLoS One. 2021. Jul 1;16(7):254-258. doi: 10.1371/journal.pone.0254122. eCollection 2021. Accessed on 18 November 2023. <https://pubmed.ncbi.nlm.nih.gov/34197548/>

ADDITIONAL INFORMATION

Funding: Self-funding

Conflict of interest: There is no conflict of interest among authors

Acknowledgement: Authors are thankful to Hon. Management team of BVDU, Pune, validators and most important our participant.

Full form: GNM -General Nursing Midwifery. BScN- Bachelor of Science, P B B Sc N- Post Basic Bachelor of Science, M Sc N- Master of Science BVDU- Bharati Vidyapeeth Deemed to be University.