

A Study to Assess Knowledge and Attitude of Nursing Personnel Regarding Patient Safety in a Selected Hospital of Kolkata, West Bengal

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ABSTRACT

Patient safety is a major area of concern for health care professional especially nurses. So, a study to assess knowledge and attitude of nursing personnel regarding patient safety in a selected hospital of Kolkata, West Bengal was conducted with the aim to assess knowledge and attitude regarding patient safety among nursing personnel, to find association between level of knowledge and attitude with selected demographic variables, and to find relation between knowledge and attitude regarding patient safety. Quantitative descriptive survey research design was adopted to collect data among 100 staff nurses selected by non-probability convenience sampling technique. Demographic proforma, structured knowledge questionnaire regarding patient safety, attitude scale regarding patient safety were administered by self-report method to collect data. Findings revealed, that majority (53%) of the staff nurses have inadequate knowledge, but majority (76%) of the staff nurse have positive level of attitude and there was significant association between level of knowledge with selected demographic variables such as gender, qualification, In service education on patient safety, issues faced regarding patient safety and there was significant association between level of attitude with selected demographic variables such as age, qualification, total years of experience, in service education on patient safety. Low negative correlation (-0.305) was found between knowledge and attitude regarding patient safety. Present study had several implications in nursing practice, education, administration and research.

Keywords: Patient safety, Knowledge, Attitude

INTRODUCTION

Patient safety is a health care discipline that emerged with evolving complexity in health care system and resulting rise of patient harm in health care facilities. Its aim to prevent and reduce risk, errors and harm that occurs to the patient during provision of health care such as medication errors, unsafe surgical procedures, health care-associated infections, diagnostic errors, patient falls, pressure ulcers, patient

misidentification, unsafe blood transfusion and venous thromboembolism. Safety of patient during the provision of health services that are safe and of high quality is a prerequisite for strengthening health care system and making progress toward effective universal health coverage (UHC). [1]

According to WHO, 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. [2]

Above 50% of harm (1 in every 20 patients) is preventable; half of this harm is attributed to medications. [2]

In India, around 5.2 million medical errors take place annually. Nurses should play a leadership role to achieve the goals of patient [3]. Nurses are in better position to improve the safety among patient as the largest healthcare providers.

In Vietnam, the rate of surgical site infection in patients after surgery at some hospitals ranged from 4.1% to 7.9%, in which the rate of surgical site infection is high in the group of patients undergoing small bowel surgery (19.5%); colon surgery (11%) and stomach surgery (7.9%) [4].

It has been noticed that very few studies had been conducted related to patient safety and also personal experience of investigator observed the lacuna and lacking of knowledge among staff nurses working in private or government hospital in West Bengal. So, the researcher recognizes the importance to conduct study to assess knowledge and attitude of nursing personnel regarding patient safety which will help to enhance the knowledge and attitude of nursing staff regarding patient safety.

PURPOSE OF THE STUDY

The purpose of the study is to assess the knowledge and attitude of nursing personnel regarding patient safety.

OBJECTIVES

- To assess knowledge of nursing personnel regarding patient safety.
- To assess attitude of nursing personnel regarding patient safety.
- To find association between level of knowledge with selected demographic variables.
- To find association between level of attitude with selected demographic variables.

- To find correlation between knowledge and attitude of nursing personnel regarding patient safety.

LITERATURE REVIEW

The research and non- research related literatures were reviewed through an online search, journals and organized under the following headings:

Literature related to-

- Knowledge of nurse towards patient safety.
- Attitude of nurse towards patient safety.

Literature related to knowledge of staff nurses towards patient safety

Biresaw H, Asfaw N, Zewdu F conducted a cross-sectional study on Knowledge and attitude of nurses towards patient safety at University of Gondar specialized hospital. This study aims to assess knowledge, attitude and associated factors towards patient safety among nurses working at University of Gondar specialized hospital. Data was collected from 386 nurses using a pre-tested, structured and self-administered English version questionnaire. EPI data 3.1 was used for data enter and SPSS version 22 for analysis. A binary model was utilized to identify factors associated with knowledge and attitude of nurses towards patient safety. Study showed that 48.4% of the respondents were found to have good knowledge. Similarly, 56.1% of the respondents had a favorable attitude regarding patient safety. Training (AOR = 2.9, 95% CI = 1.34, 6.3), age (AOR = 3.3, 95% CI = 1.79, 6.0) and information about patient safety during continuing education (AOR = 3.07, 95% CI = 1.6, 5.45) showed a positive and significant association with both knowledge and attitude of nurses. [5]

Literature related to attitude of staff nurses towards patient safety

Shahenda SA, Reshia FAA, Bashir WAH, Omar AM, Elwasefy SA conducted a descriptive cross-sectional study assessing Egyptian nurses' attitude to patient safety and the factors that affect their attitude. Data

were collected using the staff information form and safety attitudes questionnaire. The study population was 350 nurses working in Mansoura University Hospital. Data were analyzed with frequency, percentage, mean, standard deviation, the Chi square test, and ANOVA tests using SPSS. None of the six domains of safety attitude – job satisfaction, teamwork, safety climate, the perception of management, stress recognition, and working conditions – were awarded a positive mean score above 75. 51.4% of the nurses had a neutral attitude toward patient safety. The main associated factors were educational level, experience, and attending training courses related to patient safety, which had a high effect on nurses’ attitude (p-value < 0.01); age and marital status had a slight effect (p-value < 0.05), while gender and working unit had no significant relationship (p-value > 0.05).^[6]

MATERIALS & METHODS

A quantitative descriptive survey research approach was adopted to collect data from 100 staff nurses selected by non-probability convenience sampling technique. Structured knowledge questionnaire & Attitude scale

were administered by self reporting method to collect data related knowledge & attitude towards patient safety among staff nurses.

STATISTICAL ANALYSIS

Descriptive and statistical analysis were used to analyse the data. The level of knowledge and attitude was computed by frequency and percentage distribution. The association between level of knowledge and attitude with socio demographic variables were assessed by Chi Square test. The correlation between knowledge and attitude were computed by coefficient of correlation formula.

RESULT

The findings revealed that majority 53 (53 %) of staff nurses had inadequate knowledge regarding patient safety and majority 76 (76%) of the staff nurses had positive level of attitude regarding patient safety. The main factors associated with the knowledge like gender, qualification, exposure to any in-service education on patient safety, issue faced regarding patient safety was significant at 0.05 level of significance.

Table 1: Association between level of knowledge and selected demographic variables. n=100

Sl.no	Variables	Below median knowledge	Above median knowledge	χ^2	Df	P value	Significant
1	Age						
1.1	21-25	35	24	1.73	2	5.99	NS
1.2	26-30	14	17				
1.3	Above 25	6	4				
2	Gender						
2.1	Male	15	31	26.29	1	3.84	S*
2.2	Female	40	17				
3	Qualification						
3.1	GNM	30	19	35.18	2	5.99	S*
3.2	Post B.Sc	10	17				
3.3	B.Sc Nursing	15	9				
4	Area of working						
4.1	CCU	15	17	2.95	2	5.99	NS
4.2	Wards	38	24				
4.3	Emergency	2	4				
5	Total years of experience						
5.1	1-2 years	38	36	1.5	1	3.84	NS
5.2	>2 years	17	9				
6	In service education on patient safety						
6.1	Yes	47	31	3.93	1	3.84	S*

6.2	No	8	14				
7	Issue faced regarding patient safety						
7.1	Yes	47	27	8.43	1	3.84	S*
7.2	No	8	18				

NS- Non significant, S*-Significant

The data presented in the table 1 shows that the calculated chi square values between knowledge and demographic variables like Age in years, area of working, total working experiences, were not significant at 0.05 level of significance.

Hence, the null hypothesis was failed to be rejected by depicting that there is no significant association between level of knowledge regarding patient safety among staff nurses with selected demographic variables like Age in years, area of working, total working experiences.

But the calculated values between knowledge and selected variables like gender, qualification, exposure to any in-service education on patient safety, issue

faced regarding patient safety was significant at 0.05 level of significance. Therefore, null hypothesis was rejected and research hypothesis was accepted by depicting that there is a significant association between level of knowledge regarding patient safety among staff nurse with selected demographic variables like gender, qualification, in service education on patient safety and issue faced regarding patient safety.

The main factors associated with attitude and selected demographic variables like age in years, professional qualification, total working experiences, exposure to any in service education on patient safety were significant at 0.05 level of significance.

Table 2: Association between level of attitude and selected demographic variables. n=100

Sl.no	Variables	Below median	Above median	χ^2	df	P value	Significant
1	Age						
1.1	21-25	20	39	17.56	1	3.84	S*
1.2	Above 25	29	12				
2	Gender						
2.1	Male	19	24	0.68	1	3.84	NS
2.2	Female	30	27				
3	Qualification						
3.1	GNM	17	32	8.98	2	5.99	S*
3.2	Post B.Sc	15	12				
3.3	B.Sc Nursing	17	7				
4	Area of working						
4.1	CCU	15	17	0.78	2	5.99	NS
4.2	Wards	30	32				
4.3	Emergency	4	2				
5	Total years of experience						
5.1	1-2 years	32	42	21.7	1	3.84	S*
5.2	>2 years	17	09				
6	In service education on patient safety						
6.1	Yes	31	47	12.14	1	3.84	S*
6.2	No	18	4				
7	Issue faced regarding patient safety						
7.1	Yes	36	38	0.01	1	3.84	NS
7.2	No	13	13				

NS- Non significant, S*- Significant

The data presented in the table 2 shows that the calculated chi square values between level of attitude and demographic variables like gender, area of working, any patient safety issue faced previously were not significant at 0.05 level of significance.

So, the null hypothesis was failed to be rejected by depicting that there is a no significant association between attitude regarding patient safety among staff nurses with selected demographic variables like gender, area of working and any patient safety issue faced previously.

But the calculated values between attitude and selected demographic variables like age in years, professional qualification, total working experiences, exposure to any in service education on patient safety were significant at 0.05 level of significance. Therefore, null hypothesis was rejected and research hypothesis was accepted by depicting that there is a significant association between level of attitude regarding patient safety among nurse with selected demographic variables like age in years, professional qualification, total working experiences, exposure to any in service education on patient safety

Table 3: Correlation between knowledge and attitude regarding patient safety. n=100

Variables	Mean	Median	SD	'r' value
Knowledge	13.05	12.75	4.69	-0.305
Attitude	28.52	29.79	9.81	

The data presented in table 3 shows the mean and standard deviation of knowledge score was 13.05 ± 4.69 and attitude was 28.52 ± 9.81 . The median of knowledge and attitude were 12.75 and 29.79 respectively. Mean & median were close to each other so, data related to knowledge seemed to be unimodal and negatively skewed. Mean & median were close to each other so, data related to attitude was unimodal and negatively skewed. The calculated coefficient of correlation was $(r) = -0.305$. So negative and low co-relation was existed. Hence it can be interpreted as definite but small negative relationship

existed between knowledge and attitude of staff nurse regarding patient safety.

DISCUSSION

In the present study the sample characteristics shows that, majority (59%) of the nursing personnel belonged to the age group of 21-25 years, majority (57%) of the nursing personnel were female, maximum (49%) of the nursing personnel were GNM, majority (62%) of the nursing personnel works in ward, majority (74%) of the nursing personnel had 1-2 years of experience. Majority (78%) of nursing personnel were attended in service classes, majority (74%) of nursing personnel had faced issue related to patient fall.

The first objective was to assess knowledge of nursing personnel regarding patient safety.

The finding of the present study showed that based on the total score of knowledge among nursing personnel regarding patient safety, majority (53 %) of the staff nurses have inadequate knowledge regarding patient safety and, (47%) had adequate knowledge regarding patient safety.

The present study findings were supported by following study:

BiresawaH, Asfawb N, Zewdue F, conducted an Institution based cross-sectional study to assess knowledge, attitude and associated factors towards patient safety among nurses working at University of Gondar specialized hospital, Ethiopia 2018. The study result revealed that among 386 nurses, nearly 51.6% of nurses in Ethiopia had poor knowledge about patient safety and (48.4%) were found to have good knowledge^[5].

The second objective was to assess attitude of nursing personnel regarding patient safety.

The finding of the present study showed that based on the total score of level of attitude among nursing personnel, majority (76%) of the staff nurses have positive level of attitude regarding patient safety.

The present study finding was supported by following study:

Wake AD, Tuji TS, Gonfa BK, Waldekidan ET, Beshaw ED, Mohamed MA, et.al conducted a study to assess knowledge, attitude, practice, and associated factors towards patient safety among nurses working at Asella referral and teaching Hospital. Institution based cross-sectional study was conducted on 172 nurses working at Asella referral and teaching Hospital, Arsi Zone, Oromia regional State, Ethiopia. The result revealed that the nurse's level of positive attitude, good knowledge and good practice towards patient safety was 52.9% (n = 91, [95% CI; 43.6, 61.4]), 58.7% (n = 101, [95% CI; 51.7, 66.7]), and 50% (n = 86, [95% CI; 43.6, 57%]) respectively. In the present study, more than half of the nurse's had positive attitude and good knowledge towards patient safety. However, only half of the nurses had good practice towards patient safety.^[7]

The third objective was to find association between level of knowledge with selected demographic variables of nursing personnel

In the present study, there was significant association between knowledge and selected demographic variables like gender, qualification, In-service education and Issue faced regarding patient safety.

The present study finding was supported by following study:

Hasballah SM, ElganyShaor AO, Mohamed MA & Mohamed AK conducted a descriptive study to assess nurses' knowledge and attitude for patient safety in cardiac catheterization at Heart Hospital, Assuit University, 2019. The current study was found association between nurse's knowledge and some socio- demographic characteristics of the sample for 40 nurses, the result showed that there is significant relationship among age groups, and level of education with nurse's knowledge. This result showed that qualification has great effect on the nurses' knowledge^[8].

The fourth objective was to find association between level of attitude with selected demographic variables of nursing personnel

In the present study, there is a significant association between level of attitude and selected demographic variables like age, qualification, total years of experience and in-service education at 0.05 level of significance.

The present study finding was supported by following study:

Wake DA, TujiT, Gonfa BK, Waldekidan ET, Beshaw ED, Mohamed MA, Geressu ST conducted an Institution based Cross-sectional study to assess Knowledge, attitude, practice and associated factors towards patient safety among nurses working at Asella Referral and Teaching Hospital, from December 28, 2020 to January 05, 2021, this study showed that being male, having working experience of >13 years, having information on patient safety during initial education], having information on patient safety during continuing education], and having good Knowledge towards patient safety were factors significantly associated with attitude towards patient safety^[7].

The fifth objective was to find correlation between knowledge and attitude of nursing personnel regarding patient safety.

In the present study, based on value of calculated coefficient of correlation is (-0.305) there was a negative low co-relation, definite but small relationship between knowledge and attitude among nursing personnel regarding patient safety.

The present study finding was supported by following study:

Asem N, Sabry HA and Elfar E conducted a study to assess physicians' knowledge, influence, and attitude toward patient's safety in the faculty of medicine, Cairo university. The result shows there was a weak positive significant correlation between knowledge and influence scores and between influence and attitude scores (r

= 0.25, $p = 0.002$; $r = 0.27$, $p < 0.001$ respectively)^[9].

CONCLUSION

Based on the findings, the study concluded that majority of the staff nurses have inadequate knowledge but majority of the staff nurses have positive level of attitude towards patient safety. The level of knowledge and attitude among staff nurses were not- significantly associated with age in years, gender, professional qualification, area of work, total working experiences, exposure to any in-service education on patient safety.

There was a negative low, definite but small relationship existed between knowledge and attitude among nursing personnel regarding patient safety.

Declaration by Authors

Ethical Approval: Ethical approvals were obtained from Institutional Ethics Committee of BM Birla Heart Research Centre and written inform consent from individual subject. Administrative approvals were obtained from principal of B.M. Birla college of Nursing, Chief of Nursing of B.M. Birla Heart Research Centre and Chief of Nursing of Fortis Hospital Anandpur Kolkata.

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