



NURSES' KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING PATIENT FALLS IN INTENSIVE CARE UNIT (ICU) OF SELECTED HOSPITALS KAMRUP (M), ASSAM: A DESCRIPTIVE STUDY.

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ABSTRACT Patient falls are the most common adverse event in hospital. Falls in hospitals are the most frequently reported incidents among all safety incidents **Aims:** To assess knowledge, attitude and practices of nurses regarding patient falls in ICU. **Methodology:** Descriptive research design was undertaken on 140 nurses by using convenience sampling technique. Participants were selected on the basis of inclusion criteria. Structured knowledge questionnaires, 5-point Likert scale and inventory checklist were used to assess knowledge, attitude and practices. The data was collected and analysed in terms of descriptive and inferential statistics. **Results:** Majority 61.5% had moderately adequate knowledge with mean score 13.82 ± 2.95 , 60% had moderately favorable attitude with mean score of 50.59 ± 5.99 and 95.7% of nurses had adequate practice with the mean score of 15.84 ± 3.84 . There is weak positive correlation between knowledge and attitude ($r=0.072$), between knowledge and practices ($r=0.047$), between attitude and practices ($r=0.021$). There was significant association between knowledge with working experience ($2=16.420$, $p=0.012$), attitude with gender ($2=4.752$, $p=0.029$), and practice with gender ($2=12.182$, $p=0.002$). **Conclusions:** Keeping in view the findings, it is recommended that regular incentive programs, training and in-service education to improve nurses' knowledge, attitude and practices regarding patient safety and patient falls should be done in these areas.

KEYWORDS : Falls, Consequences, safety incidents, falls assessment, prevention, ICU

INTRODUCTION:

Patient falls are the most common adverse event in hospitals, resulting in devastating physical, psychological and financial consequences. Falls in hospitals are the most frequently reported incidents among all safety accidents and can lead to significant complications in patients.^[1]

Epidemiologic studies have found that falls occur at a rate of 3–5 per 1000 bed-days, and the Agency for Healthcare Research and Quality estimates that 700,000 to 1 million hospitalized patients fall each year.^[2]

The American Nurses Association (1999) and the National Quality Forum (2004) use patient falls as a nursing-sensitive quality indicator, placing the responsibility for patient falls directly on nursing staff.^[3] The framework of the present study was based on the Modified Nola J Pender's Health Promotion Model (1982).

OBJECTIVES:

1. To assess the nurses' knowledge regarding patient falls in ICU of selected hospitals Kamrup (M), Assam.
2. To assess the nurses' attitude regarding patient falls in ICU of selected hospitals, Kamrup (M), Assam.
3. To assess the nurses' practices regarding patient falls in ICU of selected hospitals, Kamrup (M), Assam.
4. To find the correlation between knowledge, attitude and practices of nurses regarding patient falls in ICU of selected Hospitals, Kamrup (M) Assam.
5. To determine the association between knowledge, attitude and practices of nurses regarding patient falls in ICU of selected Hospitals, Kamrup (M), Assam with demographic variables.

Hypothesis

- H1: There is significant correlation between knowledge, attitude and practices regarding patient falls among nurses in ICU at 5% level of significance.
- H2: There is significant association between knowledge, attitude and practices regarding patient falls among nurses in ICU with demographic variables at 5% level of significance.

Delimitations:

The study was delimited to nurses who are directly involved in patient care.

RESEARCH METHODOLOGY

Research approach: Quantitative research approach

Research design: Descriptive research design

Variable of the study:

1. **Research variables:** Knowledge, attitude and practices.
2. **Demographic variables:** Age, gender, marital status, educational level, working area, years of working experience in ICU, any training done on patient falls, attended any in-service education on patient falls.

Setting of the study:

The study was conducted at GNRC Dispur Hospital and Hayat Hospital of Guwahati, Assam.

Population: Nurses.

Target Population: Nurses working in ICU.

Accessible population: Nurses working in ICU of selected hospitals of Kamrup (M), Assam

Sample: Nurses working in ICU of selected hospitals of Guwahati who fulfilled the inclusion criteria.

Sample Size: 140

Criteria For Selection Of Sample:

1. **Inclusion Criteria:** Nurses
 - who were willing to participate
 - who were present on the day of data collection
2. **Exclusion Criteria:** Nurses
 - who were shifted from ward to General ICU, ICCU, Semi-ICU, CTVS-ICU only for 1-2 days.

Tools:

Structured knowledge questionnaire, 5-point Likert scale and Inventory checklist was used to assess knowledge, attitude and practices.

Techniques: Self-report.

Description Of The Tools

Section A: Demographic data

Section B: Structured knowledge questionnaire to assess knowledge

Scoring key: To interpret the level of knowledge, the score were

converted into percentage and were categorized as follows:

1. <50% (<10) = Inadequate knowledge
2. 50-75% (10-15) = Moderately adequate knowledge
3. >75% (>15) = Adequate knowledge

Section C: 5-Point Likert Scale

Scoring key: To interpret the attitude the scores were converted in to percentage and was categorised as follows:

1. <50% (<35) = Unfavorable attitude
2. 50-75% (35-53) = Moderately favorable attitude
3. >75% (>53) = Favorable attitude

Section D: Inventory checklist

Scoring key: To interpret the level of practices, the score was converted into percentage and were categorized as follows:

1. <50% (<8) = Inadequate practice
2. 50-75% (8-12) = Moderately adequate practice
3. >75% (>12) = Adequate practice

Content Validity Of The Tools:

The tool was validated by 6 Nursing Experts in the field of Medical Surgical Nursing, 2 Nursing Experts in the field of Community Health Nursing, 1 Nursing Expert in the field of Nursing Administrator, 2 Medical Expert in the field of Medicine, and 1 Medical Expert in the field of Orthopedic.

Reliability Of The Tools:

The reliability of knowledge questionnaire, 5-pont Likert scale and inventory checklist was 0.83, 0.98 and 0.9 respectively.

Ethical Considerations

The following were the ethical consideration of the study:

- Permission from the INS Trust Ethics Committee (GNRC complex), Dispur, Guwahati, Assam, was obtained before starting the final data collection.
- Permission was obtained from the Medical Superintendent and HOD of ICU department of selected hospitals (GNRC hospital, Hayat hospital) to carry out the study.
- Nature of the study and the purpose was explained to the selected samples and written as well as verbal informed consent was obtained.
- The subjects were assured of confidentiality and anonymity of the data obtained.
- Participants had the liberty to leave the study at any point of time as they desire.
- The study utilized non-invasive procedure and it was ensured that there would be no physical and physiological harm to the participant.

Pilot Study

Time period: 22nd to 27th March, 2021
 Setting: GNRC Hospital, Sixmile, Guwahati, Assam
 Sample: Nurses who fulfilled the inclusion criteria
 Sample size: 10

Main Study

Period of data collection: 13th April 2021 to 18th May 2021.

Data collection process:

The data was collected after obtaining the verbal and written consent from each participant. The participants were selected by using non-probability convenience sampling technique and the inclusion criteria was taken into consideration. Data collection was done by administering the structured knowledge questionnaire, 5-point Likert scale and inventory checklist. The participants took approximately 30-45 minutes to complete the research tools. An average of 5-7 samples every day were collected.

RESULTS:

Table 1: Frequency and percentage distribution of respondents according to demographic variables n=140

Demographic variables	Frequency (f)	Percentage (%)
Age in Years		
21 – 25 years	71	50.7%
26 – 30 years	51	36.4%
31 – 35 years	11	7.9%

Above 35 years	7	5.0%
Gender		
Male	11	7.9%
Female	129	92.1%
Transgender	0	0%
Marital Status		
Married	19	13.6%
Single	121	86.4%
Divorcee	0	0
Widow	0	0
Educational Level		
GNM	72	51.4%
B.Sc. Nursing	56	40.0%
Post Basic B.Sc. Nursing	11	7.9%
M.Sc. Nursing	1	0.7%
Working Area		
General ICU	98	70.0%
ICCU	20	14.2%
Semi – ICU	3	2.1%
CTVS-ICU	19	13.6%
Total Years of Working Experience in ICU		
<1 Year	54	38.6%
1 – 5 Years	63	45.0%
5 – 10 Years	18	12.9%
>10 Years	5	3.5%
Training Done on Patient Falls		
Yes	52	37.1%
No	88	62.9%
Attended In-Service Education		
Yes	63	45.0%
No	77	55.0%

Table 1 represent data regarding frequency and percentage distribution of the respondents according to the demographic profile. n=140

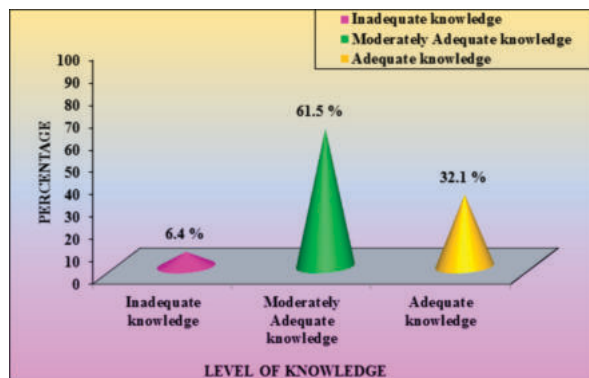


Figure 1: Cone Diagram Showing The Percentage Distribution Of The Respondents According To The Level Of Knowledge Regarding Patient Falls n=140

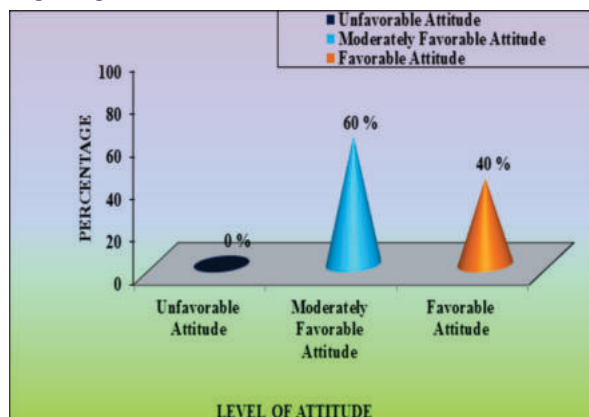


Figure 2: Cone Diagram Showing The Percentage Distribution Of The Respondents According To The Level Of Attitude Regarding Patient Falls n=140

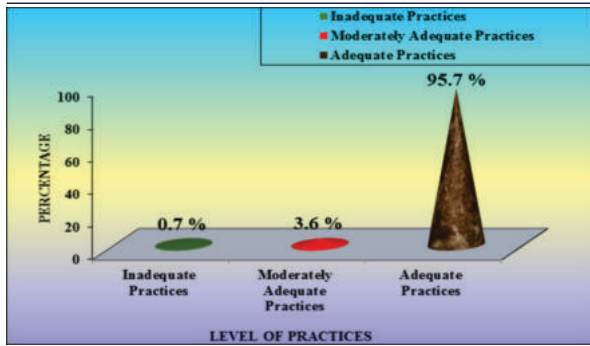


Figure 3: Cone Diagram Showing The Percentage Distribution Of Respondents According To The Level Of Practices Regarding Patient Falls.

Table 2: Correlation Between Knowledge And Attitude Of Respondents Regarding Patient Falls. n=140

VARIABLES	MEAN	S.D.	CORRELATION COEFFICIENT VALUE (r)	p-VALUE	REMARK
Knowledge	13.82	2.95	r=0.072	p=0.397	NS
Attitude	50.59	5.99			

****Significance at p<0.05, NS – not significant**

Table 2 shows the “r” value is 0.072, p-value is 0.397, which was not found to be significant at p<0.05 level of significance which signifies that there was weak positive correlation between the knowledge and attitude regarding patient falls among nurses.

Table 3: Correlation Between Knowledge And Practice Of Respondents Regarding Patient Falls. n=140

VARIABLES	MEAN	SD	CORRELATION COEFFICIENT VALUE (r)	p-VALUE	REMARK
Knowledge	13.82	2.95	r = 0.047	p=0.582	NS
Practices	15.84	3.84			

****Significance at p<0.05, NS – not significant**

Table 3 shows the “r” value is 0.047, p-value is 0.582, which was not found to be significance at p<0.05 level of significance which signifies that there was weak positive correlation between the knowledge and practices regarding patient falls among nurses

Table 4: Correlation Between Attitude And Practices Of Respondents Regarding Patient Falls. n=140

VARIABLES	MEAN	S.D.	CORRELATION COEFFICIENT VALUE (r)	p-VALUE	REMARK
Attitude	50.59	5.99	r=0.021	p=0.807	NS
Practices	15.84	3.84			

****Significance at p<0.05, NS – not significant**

Table 4 shows the “r” is 0.021, p-value is 0.807, which was not found to be significance at p<0.05 level of significance which signifies that there was weak positive correlation between the knowledge and practices regarding patient falls among nurses.

Table 5: Association Of Knowledge Regarding Patient Falls With Demographic Variables Of The Respondents. n=140

Demographic variables	Chi-square value χ^2	df	p-value	Remarks
Age in years	7.971	6	0.240	NS
Gender	0.299	2	0.892	NS
Marital status	3.353	2	0.187	NS
Educational level	2.601	6	0.857	NS
Working area	5.362	6	0.498	NS
Total years of working experience in ICU	16.42	6	0.012	S
Training done on patient falls	2.074	2	0.355	NS
Attended any in-service education on patient falls	4.475	2	0.107	NS

***p<0.05, NS-Not Significant, S-Significant, df-degree of freedom, p value-probability value**

Table 5 shows that the demographic variable total area of working experience in ICU had shown statistically significant association with knowledge regarding patients fall in ICU among nurses at p<0.05 with chi-square value of ($\chi^2=16.420, p=0.012$).

Table 6: Association Of Attitude Regarding Patient Falls With Demographic Variables Of The Respondents. n=140

Demographic variables	Chi-square value χ^2	df	p-value	Remarks
Age in years	2.989	3	0.393	NS
Gender	4.725	1	0.029	S
Marital status	1.715	1	0.190	NS
Educational level	0.756	3	0.860	NS
Working area	7.600	3	0.055	NS
Total years of working experience in ICU	0.256	3	0.968	NS
Training done on patient falls	0.005	1	0.860	NS
Attended any in-service education on patient falls	1.231	1	0.267	NS

***p<0.05, NS-Not Significant, S-Significant, df-degree of freedom, p value-probability value**

Table 6 shows that the demographic variable gender had shown statistically significant association with attitude regarding patients fall in ICU among nurses at p<0.05 with chi-square value of ($\chi^2=4.752, p=0.029$).

Table 7: Association Of Practices Regarding Patient Falls With Demographic Variables Of The Respondents. n=140

Demographic variables	Chi-square value χ^2	df	p-value	Remarks
Age in years	5.267	6	0.510	NS
Gender	12.182	2	0.002	S
Marital status	0.984	2	0.611	NS
Educational level	2.779	6	0.836	NS
Working area	1.450	6	0.963	NS
Total years of working experience in ICU	3.375	6	0.761	NS
Training done on patient falls	1.729	2	0.421	NS
Attended any in-service education on patient falls	0.883	2	0.643	NS

***p<0.05, NS-Not Significant, S-Significant, df-degree of freedom, p value-probability value**

Table 7 shows that the demographic variable gender had shown statistically significant association with practice regarding patients fall in ICU among nurses at p<0.05 with chi-square value of ($\chi^2=12.182, p=0.002$).

DISCUSSION

In this study, the investigator assessed the nurses' knowledge, attitude and practices, regarding patient falls in ICU of selected hospitals, and to find out correlation and the association between knowledge, attitude and practices with demographic variables. The study findings showed most nurses 86.4% were single, 51.4% were GNM, and most of them 62.9% and 55.0% did not attend any training and in-service education on patient falls respectively.

Majority of the nurses 50.57% were in the age group between 21-25 years, and 92.1% were female. 61.5% of the nurses had moderately adequate knowledge on patient falls. The mean score of knowledge was 13.82 ± 2.95. There is significant association between knowledge with total years of working experience ($\chi^2=16.42, p=0.012$), between attitude with gender ($\chi^2=4.725, p=0.029$), and between practices with gender ($\chi^2=12.182, p=0.002$). These findings were correlated with the study done by James KM et al. (2020) on knowledge, attitude and awareness on hospitalized patient falls risk factor among 339 nurses in selected Hospitals Chennai, India. They found that majority 51.3% of the nurses were in the same age group (21-25 years) and majority 25.7% of the respondents were female. 57.5% of the nurses had moderately adequate knowledge regarding patient falls, the average mean knowledge was 10.05 ± 2.219, and years of experience in nursing

has significant association ($\chi^2=20.814$, $p=0.008$) with level of knowledge on falls and also there is significant association between attitude with gender ($\chi^2=33.288$, $p=0.001$) on patient falls.

The present study findings show that 45.0% of the nurses working for 1-5 years in ICU, and 60.0% of the nurses had moderately favorable attitude toward patient falls. The mean score of attitude was 50.59 ± 5.99 . And most nurses 95.7% had adequate practice regarding patient falls. The mean score of practices was 15.84 ± 3.84 . These findings were correlated with the study done by Ganbhathi M, et al. (2017) on nurses' knowledge, attitude and fall prevention among 220 nurses in King Abdul Aziz Hospital, Kingdom of Saudi Arabia. They found that majority of the nurses had less than 5 years of experience, majority 94.9% had positive attitude and had good practice.

In the present study the correlation coefficient value "r" between knowledge and attitude was 0.082, between knowledge and practices was 0.047 and between attitude and practices was 0.021 which shows a weak positive correlation. These findings were correlated with the study done by Han YH et al. (2020), where they assessed the effect of knowledge and attitude on fall prevention activities among 138 nursing staff in selected long-term care hospitals. They found that the correlation "r" between knowledge and attitude is 0.05, knowledge and fall prevention activities is 0.27, attitude and fall prevention activities is 0.42 which shows a positive correlation.

Limitation Of The Study:

The investigator used inventory checklist for assessment of practices of nurses regarding patient falls and therefore actual practices could not be observed.

Recommendations

- The present study may be replicated on a larger sample size, thereby findings could be generalized for the large population.
- The similar study can be conducted in different settings.
- The similar study can be conducted among other health care professional.

Implications Of The Study

Nursing education:

The study suggested that it is necessary for the nurses to have sound knowledge about patient falls, and knowledge about attitude and prevention of patient falls so that they can impart their knowledge to other nurses.

Nursing practice:

The findings would enable the nursing personnel to develop insight into the importance of education programme on patient fall in clinical practice to enhance their knowledge, attitude and practice on patient falls for maintaining the overall health of the patients.

Nursing administration:

Findings of the study will help the nurse administrators to make policies, protocols and to plan programmes on various aspects of patient falls for improving the knowledge, attitude and practice among nurses in the hospital.

Nursing research:

The findings of the present study can be utilized in further studies related to the topic.

CONCLUSION:

Out of 140 nurses, majority 86 (61.5%) had moderately adequate knowledge, 45 (32.1%) had adequate knowledge and 9 (6.4%) had inadequate knowledge regarding patients falls. For attitude, majority 84 (60%) had moderately favorable attitude, 56 (40%) had favorable attitude regarding patients falls. For practices, majority 134 (95.7%) had adequate practice, 5 (3.6%) had moderately adequate practice and 1 (0.7%) had inadequate practice regarding patients falls.

The correlation value between knowledge and attitude was $r=0.072$, between knowledge and practices was $r=0.047$, and between attitude and practices was $r=0.021$ which shows a weak positive correlation between knowledge, attitude and practices regarding patient falls among nurses in ICU. There was significant association between knowledge with working experience, attitude and practices with gender among nurses in ICU.

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