



Survey on nurses perception on care of Traumatic Brain Injury (TBI) patients

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ABSTRACT

Traumatic brain injury (TBI) is a leading cause of illness, death, disability and socio-economic damage in India and other developing countries. Each year, approximately 1.5–1.7 million people are neurologically disabled due to TBI in India. Nurses are health professionals who see the full impact of TBI and have the skills to change a patient's recovery path. Nurses have a large role to play in the acute and chronic management of patients with moderate-to-severe TB because nurses are important members of interdisciplinary teams. Nurses have a lot of responsibilities in caring for these patients at all stages of treatment and recovery. The research approach adopted for the study was cross-sectional, exploratory design to determine nurses' perceptions about care for patients with traumatic brain injury (TBI). As samples, 120 Staff nurses were selected through purposive sampling technique at PESIMSR Hospital in Kuppam, Andhra Pradesh. The collected data were analyzed by using descriptive and inferential statistics in terms of Frequencies, Percentage distribution and chi-square test. Majority of the samples were 26-30 years old, female, undergraduates, critical care nurses, had 2.1-5 years of working experience and had no specific training regarding TBI patient care. Majority of the nurses had moderate knowledge and high level of confidence on care of TBI patients. The perceived confidence of nurses at PESIMSR hospital on care of TBI patients was significantly higher than their perceived knowledge. Age, professional qualification and professional experience of nurses had significant association with their perceptions. Results of this study suggested enhancing the knowledge of critical care and emergency room nurses through additional education and training on evidence-based TBI care.

Keywords: Survey, Critical care, Nurses, Perception, TBI Patients.

1. INTRODUCTION

“All our knowledge has its origin in our perception”

Traumatic brain injury (TBI) is an injury. It impairs normal brain function and can be caused by a bump, jerk to head, rapid acceleration and deceleration or a penetrating head injury. Each year, approximately 1.5–1.7 million people are neurologically disabled due to TBI in India. Primary brain injury can lead to severe disability due to neuronal destruction. Encephalitis, hematoma formation, hypoxia and hypotension can result in cerebral ischemia and later exacerbation due to secondary brain injury.

It is estimated that 1.5 to 2 million people are injured and 1 million yield to death every year in India. Road traffic injuries are the leading cause of TBI (60%), falls (20% –25%) and violence (10%). Alcohol was involved in TBI between 15% –20% at the time of injury.

Nurses are health professionals who see the full impact of TBI and have the skills to change a patient's recovery path. An effective nursing management strategy for adults with severe traumatic brain injury (TBI) is still a recognizable problem and a difficult task for neurologists and critical care nurses. Nurses need knowledge and skills to provide quality care for adults with TBI.

Critical care nurses have a large role to play in the acute and chronic management of patients with moderate-to-severe TBI because nurses are important members of interdisciplinary teams. Nurses have a lot of responsibilities in caring for these patients at all stages of TBI treatment and recovery. Since the perceived knowledge and practices of critical care nurses is important for overall TBI patients' outcome. The purpose of this study was a survey of nurses' perception on care of TBI patients.

2. REVIEW OF LITERATURE

Literature related to survey of nurses perception on care of TBI patients:

Tolu O.Oyesanya et.al (2017) conducted a cross sectional survey on Caring for Patients with Traumatic Brain Injury: A Survey of Nurses’ Perceptions. The Perception of Brain Injury Survey (PBIS), was completed electronically by 513 nurses between October and December 2014. Data were analyzed with structural equation modeling, factor analysis, and pair side comparisons. Using latent class analysis, divided the nurses into three homogeneous sub-based groups based on perceived knowledge: low, medium and high. The study result shows that nurses caring for patients with traumatic brain injury confidence were found to have the highest, but least perceived knowledge.

Mariam Sabry Shehab.et.al (2018) carried out a survey on Nurses' perceived knowledge and practice regarding care of traumatic brain injury patients at Intensive Care Unit. . The study, which included all available nurses, worked approximately 300 nurses in the intensive care unit at Suez Canal University Hospital in Ismailia. The following evidence suggests that the group of nurses who had low based perceived knowledge had a smaller nursing experience, who worked primarily in the inpatient unit compared to high evidence based perceived knowledge nurses .

3. STATEMENT OF THE PROBLEM

“A survey on nurses’ perception on care of Traumatic Brain Injury (TBI) Patients at Pesimsr Hospital, Kuppam, Andhra Pradesh.”

3.1 Objectives

- To determine the level of perceived knowledge of nurses on caring for patients with TBI.
- To determine the level of perceived confidence of nurses on caring for patients with TBI.
- To find out the association between the level of perceived knowledge and level of perceived confidence of nurses on care of TBI patients in PESIMSR hospital with their selected demographic variables.

4. MATERIALS AND METHODS

- **Research approach:** Quantitative research approach.
- **Research design:** A cross sectional survey was adopted for this study.
- **Setting of the study:** The study was conducted in PESIMSR Hospital, Kuppam, Andhra Pradesh.
- **Sample:** Nurses working in Critical care units and Emergency room who cared the patients with any stage of TBI.
- **Sample size:** The total sample size was 120.
- **Sampling technique:** Non-probability purposive sampling technique was adopted.
- **Tools of Data Collection:** Data was collected from the samples using structured knowledge and confidence questionnaires which had each 20 items to assess the level of knowledge and confidence to care TBI patients.

5. RESULTS

Table 1: Frequency & Percentage distribution of nurses participated in survey

S no.	Demographic variables	Frequency (N=120)	Percentage
1	Age in years		
	21-25	31	26
	26-30	49	41
	31-35	24	20
	Above 35	16	13
2	Gender		
	Male	53	44
	Female	67	55
3	Professional qualification		
	Diploma	46	38
	UG Degree	62	52
	PG Degree	12	10
4	Currently working in		
	Critical care unit	72	60
	Emergency room	48	40
5	Professional working experience		
	1-2 years	29	24
	2.1-5 years	47	39
	5.1-10 years	25	21
	More than 10 years	19	16
6	Previous training or courses attended regarding TBI patient care		
	Yes	44	37
	No	76	63

The table 1 depicted the frequency & percentage distribution of nurses who were the samples of this study. Among 120 samples, majority 41% were 26-30 years old, 55% were female, 52% were undergraduates, 60% were critical care nurses, 39% had 2.1-5 years of working experience and 63% had no specific training regarding TBI patient care.

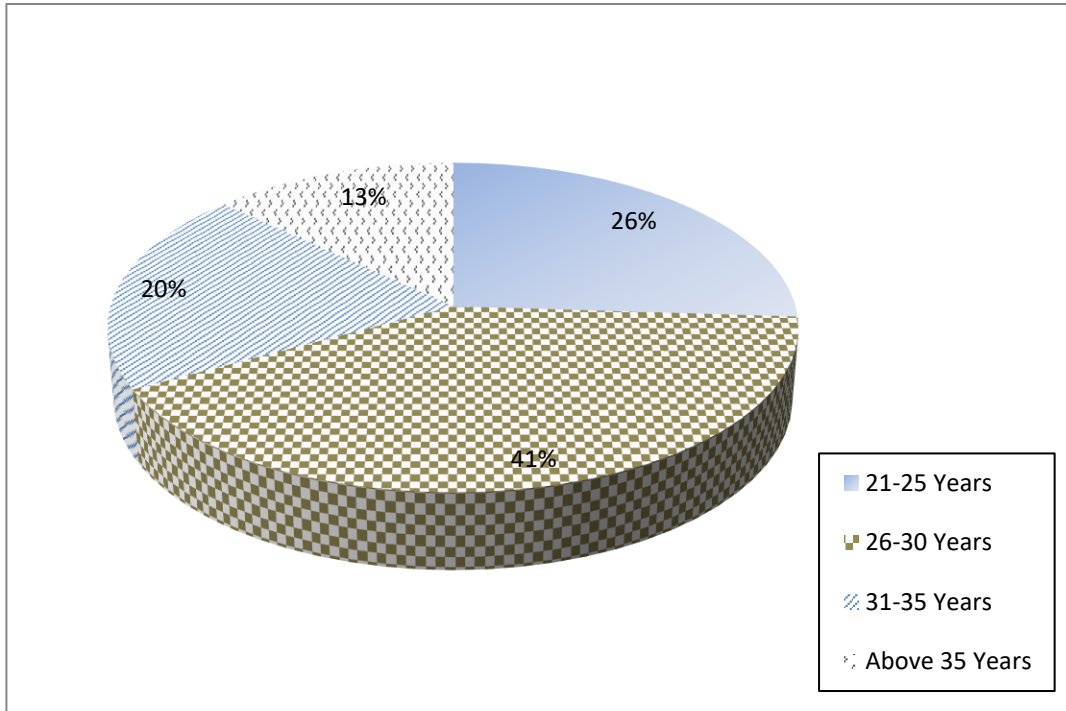


Fig. 1: Percentage distribution of age of the nurses

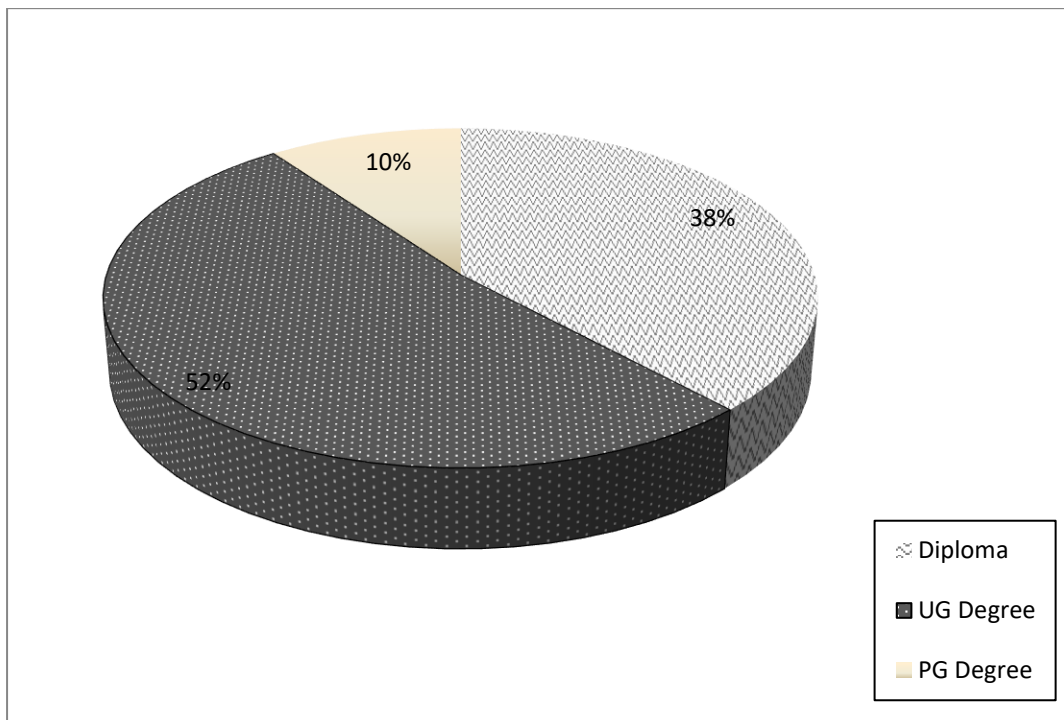


Fig. 2: Percentage distribution of professional qualification of the nurses

Table 2: Frequency and Percentage distribution of level of perceived knowledge on care of TBI patients among nurses at PESIMSR hospital

Level of perceived knowledge	Frequency (N=120)	Percentage
Adequate	39	33
Moderate	58	48
Inadequate	23	19

The table 2 represented on frequency & percentage distribution of level of perceived knowledge on care of TBI patients among nurses at PESIMSR hospital. About 48% of the nurses had moderate knowledge, 33% had adequate knowledge and only 19% had inadequate knowledge on care of TBI patients.

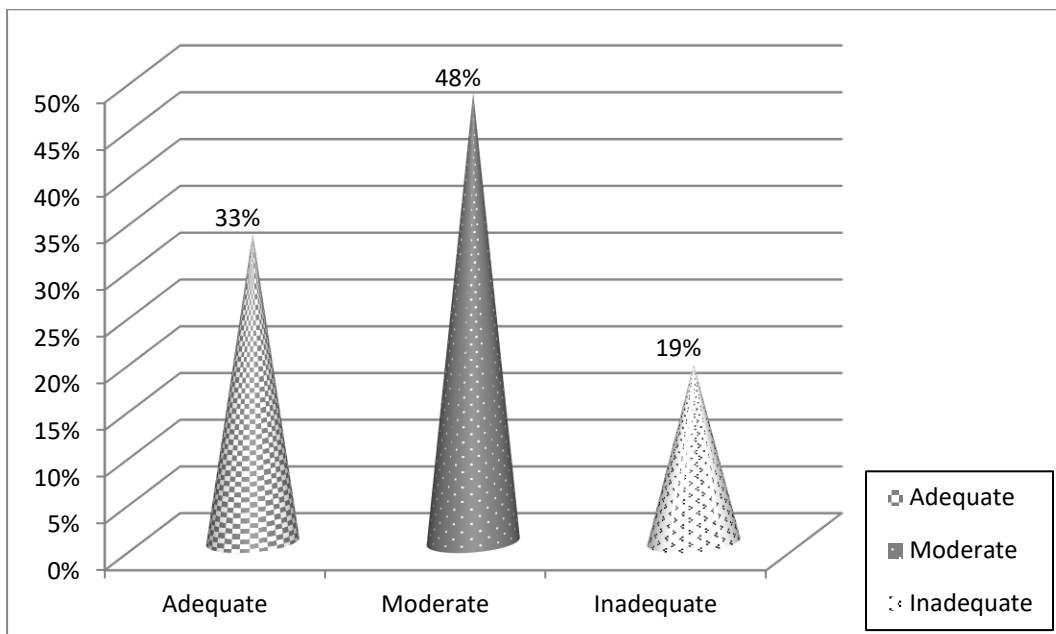


Fig. 3: Percentage distribution of level of perceived knowledge on care of TBI patients among nurses.

Table 3: Frequency and Percentage distribution of level of perceived confidence on care of TBI patients among nurses at PESIMSR hospital

Level of perceived Confidence	Frequency N=120	Percentage
High	56	47
Moderate	46	38
Low	18	15

The table 3 represented on frequency & percentage distribution of level of perceived confidence on care of TBI patients among nurses at PESIMSR hospital. About 47% of the nurses had high level of confidence, 38% had moderate level of confidence and only 18% had low level of confidence on care of TBI patients.

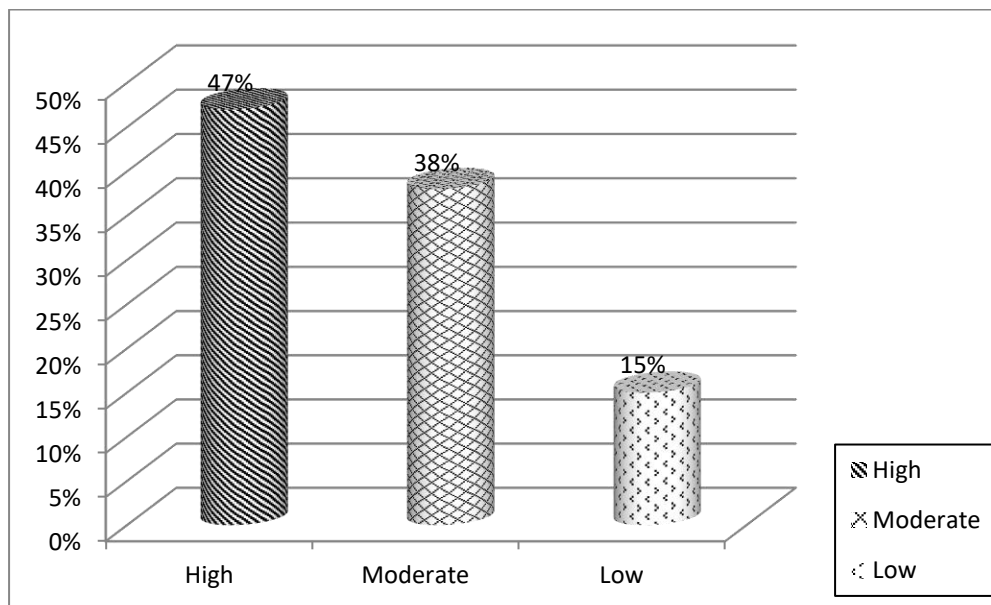


Fig. 4: Percentage distribution of level of perceived confidence on care of TBI patients among nurses.

Table 4: Mean level of perceived knowledge & perceived confidence on care of TBI patients among nurses at PESIMSR hospital

Variables	Mean	SD	Independent t-test
Perceived knowledge	63.4	2.15	18.35
Perceived confidence	77.8	1.63	S**

As shown in table 4, the mean level of perceived knowledge of nurses on care of TBI patients was 63.4 with SD of 2.15. The mean level of perceived confidence of nurses on care of TBI patients was 77.8 with SD of 1.63. There was a significant difference found in independent t test at $p > 0.05$ level. Hence, the perceived confidence of nurses at PESIMSR hospital on care of TBI patients was significantly higher than their perceived knowledge.

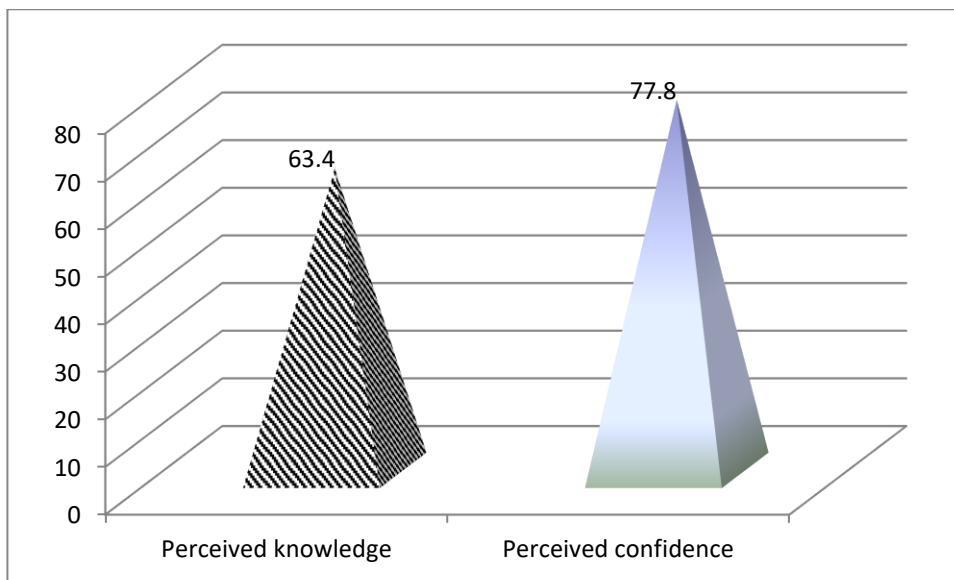


Fig. 5: Mean level of perceived knowledge & perceived confidence on care of TBI patients among nurses.

Table 5: Association between level of perceived knowledge of nurses at PESIMSR hospital with their selected demographic variables: N=120

S no.	Demographic variables	Percentage	Chi square value
1	Age in years		14.22 S**
	21-25	26	
	26-30	41	
	31-35	20	
2	Gender		3.21 NS
	Male	44	
3	Professional qualification		11.38 S**
	Diploma	38	
	UG Degree	52	
4	Currently working in		3.46 NS
	Critical care unit	49	
5	Professional working experience		3.64 NS
	1-2 years	24	
	2.1-5 years	39	
	5.1-10 years	21	
6	Previous training or courses attended regarding TBI patient care		2.58 NS
	Yes	37	
	No	63	

Table 5 represented the association between level of perceived knowledge of nurses at PESIMSR hospital with their selected demographic variables. On Chi-square analysis, there was a significant association found between age and professional qualification of nurses with their level of perceived knowledge.

Table 6: Association between level of perceived confidence of nurses at PESIMSR hospital with their selected demographic variables: N=120

S no.	Demographic variables	Percentage	Chi square value
1	Age in years		15.56 S**
	21-25	26	
	26-30	41	
	31-35	20	
2	Gender		2.15 NS
	Male	44	
	Female	55	

		Professional qualification	
3	Diploma	38	5.24 NS
	UG Degree	52	
	PG Degree	10	
		Currently working in	
4	Critical care unit	49	2.35 NS
	Emergency room	51	
		Professional working experience	
5	1-2 years	24	13.72 S**
	2.1-5 years	39	
	5.1-10 years	21	
	More than 10 years	16	
		Previous training or courses attended regarding TBI patient care	
6	Yes	37	4.06
	No	63	NS

Table 6 represented the association between level of perceived confidence of nurses at PESIMSR hospital with their selected demographic variables. On Chi-square analysis, there was a significant association found between age and professional experience of nurses with their level of perceived confidence.

6. DISCUSSION

This study was aimed to assess the nurses perception on care of TBI patients at PESIMSR hospital, Kuppam, Andhrapradesh. The research approach and design adopted for the study was Quantitative, survey design. Through purposive sampling technique, 120 Staff nurses were selected. Data was collected from the samples using structured questionnaires to assess the level of knowledge and confidence to care TBI patients. The collected data were analyzed by using descriptive and inferential statistics in terms of Frequencies, Percentage distribution and chi-square test.

Results shown that, majority of the samples were 26-30 years old, female, undergraduates, critical care nurses, had 2.1-5 years of working experience and had no specific training regarding TBI patient care. Majority of the nurses had moderate knowledge and high level of confidence on care of TBI patients. The perceived confidence of nurses at PESIMSR hospital on care of TBI patients was significantly higher than their perceived knowledge. Age, professional qualification and professional experience of nurses had significant association with their perceptions.

7. PRACTICE IMPLICATIONS

Assessing nurses' knowledge is a key step in implementing evidence-based care for patients with moderate to severe TBI. The implications of these results suggested the need to increase the perceived knowledge of critical care and emergency room nurses and provide additional education on evidence-based TBI care.

8. REFERENCES

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