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Sivakami S

*College of Nursing, NIMHANS, Bangalore, Karnataka, India, kokisaran2004@gmail.com*

Kanitha D

*College of Nursing, NIMHANS, Bangalore, Karnataka, India, dkanitha78@gmail.com*

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# The satisfaction of nursing care among traumatic brain injury patients: Cross-sectional study

Sivakami S\*, Kanitha D

Email: kokisaran2004@gmail.com

## Abstract

Nursing services are considered as one of the most important components of hospital services. Quality nursing care adds to the overall satisfaction of patient hospitalization experience. Patient satisfaction is one of the indicators in determining the quality of care in healthcare settings. **Objectives:** To assess the level of satisfaction on nursing care among traumatic brain injury patients and associate the level of satisfaction on nursing care with their sociodemographic variable. **Method:** A descriptive research design was adopted to study the satisfaction of nursing care among traumatic brain injury patients in a selected setting. A non-probability convenience sampling technique was used to select 100 traumatic brain injury patients. After obtaining consent, data were collected by interview method using the patient satisfaction with Nursing Care Scale. **Result :** The majority (79%) of the respondents were male, 41% were in the age group of 15-30 years, 65% belonged to the Hindu religion, 36% were educated up to high school and 72% were married. Regarding the length of stay in the hospital, the majority (60%) were admitted 3-12 days, and 66% of the respondents were not previously hospitalized. The findings of the study revealed that 46% of the respondents stated that the nursing care in the trauma centre was very good and 27% of them stated excellent care. A significant association was found between the level of satisfaction on nursing care with their religion and education. **Conclusion:** The study concluded that most traumatic brain injury patients were satisfied with the nursing care provided during the hospitalization.

**Keywords:** traumatic brain injury, nursing care, satisfaction, cross-sectional

## Introduction

The focus of the healthcare services is to provide a high quality of care to the patients. Patient satisfaction has gained attention as one of the key indicators of outcome from global scholars. Nurses are the primary care providers to have direct contact with the patients for the care in the hospital (Tang, Soong, & Lim, 2013). For day-to-day routine care, traumatic brain injury (TBI) patients are dependent on nurses.

The term traumatic brain injury (TBI) is used primarily to signify cranio-cerebral trauma. TBI may cause

physical, emotional, intellectual, and social challenges for the survivor (Stocchetti & Zanier, 2016). TBI constitutes a major portion of the global injury burden and there is an increase in its incidence over recent years (GBD 2016 Traumatic Brain Injury and Spinal Cord Injury Collaborators, 2019). TBIs are a major public health problem in India, resulting in disabilities and deaths of young and productive people of society. India has the highest rate of TBIs, with an incidence of one million trauma-related deaths every year, of which half is constituted by TBIs (Maas, 2017).

The emergency department is considered a major section of hospital care. It provides comprehensive treatment to the trauma patients of which nursing care plays an essential role. Patient satisfaction is a 'subjective evaluation of their cognitive and emotional reaction as a result of interaction between their expectations regarding nursing care and their perception of actual nursing care.' It is a combination of experiences, expectations,

Sivakami S<sup>1</sup>, Kanitha D<sup>2</sup>

<sup>1</sup> Clinical Instructor, College of Nursing, NIMHANS, Bangalore, Karnataka, India

<sup>2</sup> Lecturer, College of Nursing, NIMHANS, Bangalore, Karnataka, India

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\*Corresponding Author

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and needs to be perceived (Ozsoy, Ozgur, & Akyol, 2007). Several studies have shown that patients who are more satisfied with their care are more likely to follow medically prescribed regimens (Buchanan et al., 2015; Mohanan, Kaur, Das, & Bhalla, 2010). Another study found that hospitals with higher patient satisfaction with nursing care had lower severity-adjusted mortality (Jaipaul & Rosenthal, 2003).

Patient satisfaction surveys help to identify the ways of improving nursing and healthcare services. It also assists to learn about patient's expectations, suggestions, and feedbacks (Buchanan, Dawkins, & Lindo, 2015; Sitzia & Wood, 1997). So a valid and reliable instrument is required to measure patient satisfaction that can help in identifying the prioritized needs of the patient for further management (Buchanan et al., 2015).

Patient satisfaction with nursing services gained significant importance, owing to the nature of nursing. Patient's perception of the healthcare system is given little attention by healthcare administrators in developing countries (Sharma & Kamra, 2013). Patient satisfaction in the trauma centre can be enhanced with the availability of consultants in the triage area, improvements in communication, casualty pharmacy, and reducing the waiting time (Uppin et al., 2019). Nursing care in the trauma centre could be improved with compassion and general behaviour modification (Gupta, 2016). The result of the pilot study of TBI patient's overall satisfaction in the trauma care centre was good (Prasad et al., 2013).

Most of the studies reported patient satisfaction towards trauma care intervention in general. The status of nursing care in the context of trauma is crucial. There were limited literature surveys among TBI patients' satisfaction with nursing care and the setting selected by the investigator had an average of 200 trauma patients every day in the emergency department. Hence, there is a lack of empirical evidence on this subject of inquiry. Therefore, this study aims to assess the level of patient satisfaction with nursing care among TBI patients to strengthen the quality of nursing care that the patients receive.

## Objectives

To assess the level of satisfaction on nursing care among TBI patients and to associate the level of satisfaction on nursing care with their selected socio-demographic variables.

## Methods and materials

Descriptive and cross - sectional study was carried out among TBI patients in a selected setting. It has a pledged Emergency ward, observation ward, and TBI ward.

## Participants

The participants were selected through a convenient sampling technique. TBI patients aged 18 years or older, who were conscious with a GCS score of 14-15 (mild TBI) and able to respond to the questions, were included in the study. Participants who did not give informed consent were excluded. The sample size was limited to 100.

## Measures

The tool used for data collection had two parts. The first part of the tool consisted of seven items related to socio-demographic characteristics of participants such as age, gender, religion, marital status, education, length of hospital stay, and previous hospitalization. The second part consisted of patient satisfaction with the Nursing Care Quality Questionnaire (PSNCQQ) to assess the satisfaction of patients. Written approval was obtained from Laschinger, who developed the scale to use patient satisfaction with PSNCQQ.

The PSNCQQ consists of 19 items about the features of a wide range of nursing activities including nurses' attention, kindness, respect, courtesy, skills, competence, and fulfillment of patient needs. Participants' responses are provided using a 5-point Likert-type scale that include (1 = excellent, 2 = very good, 3 = good, 4 = fair, 5 = poor). Total possible scores range from 19-95. Lower total scores indicate greater satisfaction with nursing care. Data were collected through face-to-face interviews with patients. Cronbach's  $\alpha$  for the PSNCQQ, calculated to determine internal consistency and uniformity, was  $r=0.98$ , which demonstrated an appropriate level of reliability.

### Ethical considerations

Formal administrative permission was obtained from the Medical Superintendent and Administrative Officer of the hospital to conduct the study. Written informed consent was obtained from the participants before the study. Confidentiality and anonymity were maintained throughout.

### Data collection procedure

Formal permission was obtained from selected settings. Informed consent was taken from each participant after explaining the purpose of the study and methods of filling the questionnaire. Data related to patient satisfaction were collected through the interview method. It took 30 minutes for each participant to answer the PSNCQQ. In the end, the participants were thanked for their cooperation.

### Data analysis

Data were analyzed using SPSS software (Version 21.0). The analysis included descriptive statistics such as frequencies, percentages, means, and standard deviation. Descriptive statistics were used to describe demographic characteristics. Inferential statistics were used to find out the association between patient satisfaction scores with their socio-demographic variables.

## Results

### *Socio - demographic characteristics*

Table 1:

*Description of the Socio Demographic Variables*

(N=100)

Sample characteristics	Description	Frequency (f)
Age	15-30 yrs	41
	31-45 yrs	37
	>46 yrs	22
Sex	Male	79
	Female	21
Religion	Hindu	65
	Christian	21
	Muslim	14
Education	Illiterate	19
	School	36
	Hr secondary	31
	Graduate	14
Marital status	Married	72
	Unmarried	28

Sample characteristics	Description	Frequency (f)
Length of hospital Stay	3-12 days	60
	13-22 days	36
	>23 days	4
Previous Hospitalization	Yes	34
	No	66

Table 1 shows that the majority (79%) of the participants were male, 41% were between the age group of 15-30 years. The most of participants were (65%) belonged to the Hindu religion, 36% educated up to high school and 72% were married. Regarding the length of stay in the hospital, more than half of the participants (60%) were admitted 3-12 days, and 66% of the participants were not previously hospitalized.

Table 2:

*Distribution of Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) Scores*

(N=100)

Items	M	SD
1. How clear and complete the nurses' explanations were about tests, treatments, and what to expect	2.22	1.08
2. How well nurses explained how to prepare for tests and operations	2.50	1.02
3. Willingness of nurses to answer your questions	2.49	1.03
4. How well nurses communicated with patients, families, and doctors	2.54	1.02
5. How well the nurses kept them informed about your condition and needs	2.53	0.96
6. How much they were allowed to help in your care	2.43	1.06
7. Friendliness and kindness	2.44	0.87
8. How often nurses checked on you and how well they kept track of how you were doing	2.53	0.93
9. How much nurses ask you what you think is important and give you choices	2.50	1.15
10. Willingness of the nurses to be flexible in meeting your needs	2.61	1.05
11. How well they adjusted their schedules to your needs	2.45	1.04
12. Ability of the nurses to make you comfortable and reassure you	2.42	0.88
13. How quick they were to help	2.47	0.90

14. How well things were done, like giving medicine and handling IVs	2.41	0.95
15. The teamwork between nurses and other hospital staff who took care of you	2.32	1.22
16. Amount of peace	2.23	0.86
17. Provisions for your privacy by nurses	2.29	0.87
18. How clearly and completely the nurses told you what to do and what to expect when you left the hospital	2.51	1.38
19. Nurses' efforts to provide for your needs after you left the hospital	2.72	1.42

M=Mean, SD= Standard Deviation, Minimum Score=1, Maximum Score=5

Table 2 revealed patient satisfaction regarding nursing care. The item for which satisfaction levels were highest (2.22 SD 1.08) was the “Information You Were Given”: “How clear and complete the nurses’ explanations were about tests, treatments, and what to expect” item. The item for which satisfaction levels were lowest (2.72 SD 1.42) was the “Coordination of Care after Discharge”: “Nurses’ efforts to provide for your needs after you left the hospital” item. Overall, patients’ PSNCQQ scores ranged between 2.22 to 2.72 with an average score of 2.43 (SD 1.03). This indicated that the level of satisfaction with nursing care was good. The overall PSNCQQ scores indicate that nursing care was good.

**Table 3:**  
*Association between the Levels of Patient Satisfaction on Nursing Care with their Socio-Demographic Variable*

(N=100)

Variables	Class	Frequency	< median	> median	Chi square df p value
Age	15-30 yrs	41	23	18	2.273
	31-45 yrs	37	19	18	df 2
	≥ 46 yrs	22	8	14	.32
Sex	Male	79	38	62	2.623
	Female	21	12	9	df 1
					.105

Variables	Class	Frequency	< median	> median	Chi square df p value
Religion	Hindu	65	25	40	8.425*
	Christian	21	15	6	df 2
	Muslim	14	9	5	.014
Education	Illiterate	19	6	13	11.473*
	School	36	13	23	df 3
	Hr Sec	31	19	12	.009
	Graduate	14	11	3	
Length of hospital stay	3-12 days	60	33	27	4.711
	13-22 days	36	17	19	df 2
	≥ 23 days	4	0	4	.094
Previous hospitalization	Yes	34	16	18	.178
	No	66	34	32	df 1
					0.673

\*Significant at (p<.05)

Table 3 shows that there was a statistically significant association found between the level of satisfaction on nursing care with their selected demographic variables such as religion and education of the participants.

### Discussion

Healthcare organizations are working persistently to improve the quality of care received by the patient during hospitalization. Quality nursing care improves the attitude of the patients and feels satisfied towards nursing care. The findings of the present study depicted that majority (2.43 (SD 1.03)) of the TBI patients were satisfied with the nursing care during their hospitalization. This result is consistent with the findings that 63.9% of the patients were satisfied with the nursing care offered during hospitalization (Karaca & Durna, 2017). Patient satisfaction surveys are integral in the progression of value-based care

(Bickmore & Kathleen, 2019). In the healthcare agency, patient satisfaction is a quality indicator to improve the skill in nursing care. Mean and SD of aspects such as care and concern as well as nurses' daily routine shows that TBI patients were highly satisfied (2.44 (0.87) and 2.45 (1.04) in this study. This result is similar to patient satisfaction with nursing care in Ethiopia which was 55.15% (95% CI (47.35, 62.95) (Mulugeta et al., 2019).

TBI patients admitted to the hospital expect clear and sound information regarding the facility, procedure, and treatment, especially from the nurses as a key member of the healthcare team. This makes TBI patients free from fear and feel comfortable. The present study highlights that the participants had a high level of satisfaction (2.22 (1.08)) with the information provided by the nurses regarding the tests and treatments. The PSNCQQ score level also indicates that TBI patients were more satisfied with the restful atmosphere provided by the nurses (2.23 (0.86)). A similar study conducted in the spine department shows that 95% of the people were satisfied with the care and behaviour of the nurses. About 90% of the people were satisfied with the activities carried out by the nursing department (Srivasta & Goel, 2018).

Regarding the overall satisfaction with the quality of nursing care, 41% of the participant stated that it was very good and 51% of them stated that they would recommend the hospital to their families and friends. The study also states the need for the nurses to improve on the information-giving process. Studies have demonstrated excellent satisfaction with the quality of nursing care received during their stay in the hospital (Olowe, Folami, & Odeyemi, 2019). It was found that 91.8% of the patients were satisfied with nursing care in government hospitals.

A low level of satisfaction (2.72 (1.42)) among TBI patients was found in the area of coordination of care after discharge, it shows that nurses had to improve their efforts in providing discharge teaching plans once the patient leaves the hospital. This result is consistent with the study conducted among 100 patients in District Headquarters Hospital. The results of the study show that nurses forgot the request raised by the patients and 90% were not feeling comfortable talking to nurses.

About 84% of the patients had negative experiences that nurses were not attentive to their needs especially at the night (Khan et al., 2014).

There was a statistically significant association found between the level of satisfaction on nursing care with their selected demographic variables such as religion and education ( $p < .05$ ). The findings of the present study were consistent with the study conducted by Sharma and Karma (2013) indicated that that the majority of the patients belonged to the Hindu religion, got married, and studied up to matric. Another study found that college or university graduates were more satisfied when compared to illiterate patients. Regarding the gender majority, (79%) were male and it is not affecting the attitude of patient satisfaction. A similar finding was found like patients' gender did not affect the satisfaction value and concluded that men were more than women (Srivasta & Goel, 2018). The result of the study depicts that nurse administrator has a responsibility to educate the nurses regarding the importance of discharge plan and follow up care to the TBI patients. This study also recommends an annual continuous educational program on patient satisfaction.

The study was limited to 100 TBI patients and conducted in one setting hence the findings cannot be generalized. Further, the author recommends conducting a comparative study between private and public hospitals. Qualitative research would help describe the patient's perception of satisfaction and the meaning of quality care.

## Conclusion

The present study concluded that the TBI patients had good satisfaction with nursing care provided during the hospital stay and reported that they will recommend this hospital to their families and friends. However, standard discharge teaching practices are suggested to improve overall patient satisfaction as well as to prevent secondary complications in TBI patients. Nursing administrators and nurses can utilize these findings to recognize the strengths and weaknesses of nursing services and adopt necessary measures in enhancing the quality of nursing care to increase patient satisfaction.

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