Cloud Publications
International Journal of Advanced Nursing Science and Practice
2015, Volume 2, Issue 1, pp. 36-40 Med-208
ISSN: 2320 – 0278

Case Study | Open Access

Nursing Students Knowledge on Sports Brain Injury Prevention

Umadevi A.K. and Gandhimathi M.

Department of OBG, RMCON, Annamalai University, Annamalai Nagar, Chidambaram, Tamil Nadu, India

Correspondence should be addressed to Umadevi A.K., umadeviak@yahoo.co.in

Publication Date: 19 March 2015

Article Link: http://medical.cloud-journals.com/index.php/IJANSP/article/view/Med-208

Abstract A descriptive study was conducted with the aim of to assess the knowledge on sports brain injury prevention among nursing students at a selected nursing college, Bangalore, Karnataka. Quantitative research approach and non-experimental exploratory research design was used to accomplish the stated objective. The investigator selected a sample of 146 female nursing students using a convenient sampling technique. The data were collected by using self-administered knowledge questionnaire. Descriptive statistical analysis was performed by using SPSS-IBM 21. Results were calculated by using P value < 0.01. The result revealed that out of 146 nursing students only 2 (1.4%) had adequate knowledge score (>75%), 93 (63.7%) students had in adequate knowledge score (<50%). This is concluded from the result of this study that nursing students need to have education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.
Keywords *Nursing Students Knowledge; Sports Trauma; Brain Injury Prevention*

1. Introduction

“Health is Wealth” and “Prevention is better than cure”. Health is an essential factor for a happy and contented life. Advances in nursing science and nursing research focus on violence, injury and human safety [5].

Head is the top part of the human body containing brain, mouth and sense organs. It is regarded as the seat of intellect, the ornamental top of a pillar. Accident is the principle cause of head injury. It is the leading cause of emergency room visits and hospitalization [5].

According to the Centers for Disease Control and Prevention (CDC) there are 1.7 million documented TBIs each year, with estimates closer to around 3.8 million. About two third are of those younger than 30 years [2].

Traumatic Brain Injury (TBI) has received increased attention, both in the medical literature and social media, particularly in the field of sports. There are 1.7 million documented TBIs annually, with estimates closer to around 3.8 million [1], 173,285 of which are sports- and recreation-related TBIs among children and adolescents. As the number of participants in youth sports continues to grow, the incidence of brain injury is proportionally increasing as well. The activities most commonly associated with TBI-related ED visits included bicycling and football; followed by playground activities, basketball, and soccer [2].

The study aims to assess the knowledge on sports brain injury prevention among nursing students at a selected nursing college, Bangalore, Karnataka.

2. Materials and Methods

Research Approach and Research Design

For the present study quantitative research approach and non-experimental exploratory research design were used to accomplish the stated objectives.

Attribute Variable

Age, type of programme, year of study and source of information.

Dependent Variable

Knowledge of nursing students regarding sports brain injury prevention.

Research Setting

Kempegowda College of Nursing, Bangalore, Karnataka.

Sample and Sampling Technique

The investigator selected a sample of 146 female year nursing students using a convenient sampling technique.

Inclusion Criteria

Students who were willing to participate.

Exclusion Criteria

Students who were absent on the day of data collection.
Students who already had head injury.
Students who had participated in pilot study.

Description of Tool

The tool consisted of following two parts:

Part I: Socio Demographic Characteristics

This part consisted of 10 items i.e. age, type of programme, year of study, family income, source of information etc.

Part II: Knowledge Questionnaire Related to Sports Brain Injury Prevention

This part consisted of 30 self-administered structured multiple choice questions. Each question had four options. Each correct answer carried one mark and wrong answer carried zero mark.

Reliability of Tool

The reliability of tool was established by split half method and was calculated using Karl Pearson's coefficient of correlation and Spearman's Brown Prophecy formula, r'=0.79.

Data Collection Procedure

The data was collected by using self-administered structured knowledge questionnaire regarding sports brain injury prevention.

Ethical Consideration

Prior to the data collection, formal written permission was taken from the Principal, Kempegowda College of Nursing, Bangalore. Informed written consent was taken from the nursing students.

3. Statistical Analysis

Statistics were performed by using SPSS-IBM 21. Results were calculated by using P-value <0.01. Chi-square was used to associate the knowledge score with selected demographic variables. Frequency and percentage distribution was used to analyse the demographic variables. Mean and SD was used to assess the knowledge.

4. Results

Table 1: *Distribution of Demographic Characteristics*

Demographic Variables		Frequency	%
Age	18 Yrs- 25 Yrs	146	100
Course of Study	Basic B.Sc.	133	91.1
	Post B.Sc.	13	8.9
Year	I – Year	32	21.9
	II- Year	37	25.3
	III- Year	29	19.9
	IV- Year	48	32.9
Mother Tongue	Tamil	1	0.7
	Telugu	5	3.4
	Kanata	29	19.9
	Malayalam	103	70.5
	Hindi	8	5.5
Religion	Hindu	49	33.6
	Muslim	0	0
	Christian	97	66.4
Family Income	Rs. 0 to 10,000	43	29.5
	Rs. 10,001 to 20,000	75	51.4

	Rs. 20,001 to 30,000	28	19.2
Place of residence	Hosteller	119	81.5
	Days Scholar	27	18.5
Previous exposure to education	Yes	16	11.0
	No	130	89.0
Family History of TBI	Yes	0	0
	No	146	100
Engaged in sports actively	Yes	46	32.5
	No	100	68.5

Table 1 depicts majority of students 133 (91.1%) were from Basic B.Sc. (N) programme. Among 133 majority 48 (32.9%) of them were 4th year B.Sc. students, 16 (11%) of them had previous exposure to sports brain injury prevention education. Whereas 46(32.5%) students were engaged in sports activity such as throw ball, table tennis, shuttle, swimming and athletic games.

Table 2: *Level of Knowledge*

Level of Knowledge	No. of Frequency	Percentage
Inadequate knowledge	93	63.7
Moderately knowledge	51	34.9
Adequate knowledge	2	1.4
Total	146	100

Table 2 reveals the knowledge score of nursing students regarding sports brain injury prevention. Out of 146 students 2(1.4%) had adequate knowledge, 51(34.9%) had moderately adequate knowledge and 93(63.7%) had inadequate knowledge.

Association with the level of knowledge of students and their selected demographic variables:

Among the demographic variables analyzed in this study there was a significant association at p 0.05 between the course of study, year of study, previous exposure to education and students engaged in sports actively.

Thus it shows that majority of nursing students need to have education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.

5. Discussion

The present study confirms that the overall knowledge level of nursing students was significantly low with the mean score of 63.7%.

The study findings are supported by a study conducted on Effect of Structured Teaching Programme on First Aid and Emergency Management of Head Injury in Salem. The result revealed that the mean of the overall total knowledge score was 93.33% in pre test and there was a significant association between previous knowledge and level of knowledge of students [5].

The research hypothesis H_2 stated in the study is accepted since there was a significant association between the level of knowledge of students and their selected demographic variables.

The results of the study suggest that there is a need for education regarding sports trauma brain injury prevention as a part of their curriculum which may help to increase knowledge and skill in clinical settings.

6. Limitation of the Study

a. Duration of the study was short.
b. There was no follow up.

7. Recommendations

Based on the present study findings it is recommended that;

a. Large scale replica study can be conducted.
b. Comparative study can be conducted.
c. Structured teaching programme can be implemented and knowledge can be assessed.

8. Conclusion

From this study it was concluded that, increase knowledge of students will improve their skill in patient care. Education is the key for development of excellent nursing practice. Student nurses need to give strong emphasis on giving incidental teaching in their clinical area. The hospital can provide timely information and training to the nurses to update their knowledge and encourage them to use the Brain Trauma Foundation recommendations in their day to day nursing practice.

References

[1] Debra L. Ryan. *Caring For Patients with Traumatic Brain Injuries: Are You Up To the Challenges?* American Nurse Today. 2009. 23.

[2] Adnan A. Hyder and Prasanthi Puvanachandra. *The Burden of TBI in ASIA: A Call for Research*. Pak J Neurological Science. 2009. 4 (1) 27-32.

[3] Esther Bay and Samuel. *Mild Traumatic Brain Injury: An Update for Advanced Practice Nurses*. Journal of Neuro Science Nursing. 2007. 39 (1) 43-51.

[4] Adnan A. Hyder and Prasanthi Puvanachandra et al. *The impact of TBI: A Global Perspective*. Neuro Science Rehabilitation. 2007. 22; 341-353.

[5] Maragatham, S. et al. *Effect of Structured Teaching Programme on First Aid and Emergency Management of Head Injury*. The Nursing Journal of India. 2011. CII (12) 293-294.