KNOWLEDGE OF FIRST AID SKILLS AMONG STUDENTS OF A NURSING COLLEGE IN GURUGRAM

Ms. Parul Saini
Assistant Professor, Amity College of Nursing, Amity University, Haryana.

The adequate knowledge required for handling an emergency without hospital setting at the site of the accident or emergency may not be sufficient as most the colleges do not have formal first aid training in the teaching curriculum. The aim of this study is to assess the level of knowledge of medical students in providing first aid care. This study was conducted among 100 nursing students. Data was collected using a self-administered questionnaire. Based on the scores obtained in each condition requiring first aid, the overall knowledge was graded as Excellent, good, fair and poor. Excellent knowledge about first aid was observed only in 12%, good knowledge in 29%, fair knowledge in 27% and poor knowledge in 32% of students. All students felt that first aid skills need to be taught from the school level onwards and all of them were willing to enroll in any formal first aid training sessions. The level of knowledge about first aid was not good among majority of the students. The study also identified the key areas in which first aid knowledge was lacking. Thus there is a need for formal first aid training.

Introduction:

First aid is a vital tool in quickly responding to accidents to ensure that injuries can be efficiently and promptly dealt with before professional medical care is available. It includes the assessment and interventions that can be performed with minimal or no medical equipment. (1)

Accidents can happen anytime and anywhere – at home, on the road, at a public place like the mall or a park, and also at study place or workplace. A first aider can save life and prevent degradation of situation. It helps to stabilize the situation until the professional medical help arrives.

During the course nursing students are taught how to handle emergencies in a hospital emergency setting where medical equipments, drugs and other necessities are available. (2,3) However, handling an emergency situation without any medical equipments is different task.

Studies have found that the knowledge of first aid amongst medical professionals has always been a neglected subject. Hence, it should not be surprising to note that even some of them at certain hospitals failed to perform the satisfactorily first aid skills. (4)
In recent years the incidence of medical emergencies have risen, hence it is important to ensure that health personnel are trained adequately to deal with such situations.(5,6) Limited studies have been performed to assess the knowledge of nurses regarding first aid.

The objectives of this study was to assess the level of knowledge of undergraduate nursing students in providing first aid care.

**Subjects and Methods:-**
A descriptive cross sectional study was conducted among the Nursing students. A sample of 100 nursing students were drawn using stratified random sampling technique. Data was collected through a self-structured questionnaire, which was distributed randomly among the students through Faculty In-charge of nursing program.

The questionnaire consisted of personal data and background information followed by a knowledge questionnaire. The knowledge questionnaire consisted of 30 questions related to the common first aid emergencies such as seizures, unconsciousness, epistaxis, drowning, burns, fractures, chest pain, choking etc. one mark was given for correct answer and zero mark was given for wrong answer. Total score ranges from 30 to 0. Maximum possible score which could be obtained was 30 and minimum score was 0. The score which ranges from 23-30 was considered excellent, 19-22 as good, 16-18 as fair and 0-15 as poor knowledge about first aid. The study was approved by Institutional Ethical Committee and confidentiality of information and anonymity of subjects was maintained. The data was collected after obtaining the verbal consent of the subjects. Data was analyzed using SPSS version 17 and data was presented using descriptive statistics.

**Results:-**
The sample consists of 100 nursing students. The sample characteristics are described in terms of age, gender, religion, residence, professional qualification, previous knowledge regarding first aid and source of information

| Table 1: Socio-demographic characteristics of the students | N =100 |
|-----------------------------------------------------------|-------|
| **Socio-demographic characteristics**                      | f (%) |
| **Age in years**                                           |       |
| 17                                                        | 42 (42)|
| 18                                                        | 16 (16)|
| 19                                                        | 17 (17)|
| 20                                                        | 14 (14)|
| ≥21                                                       | 11(11) |
| **Gender**                                                 |       |
| Male                                                      | 34 (34)|
| Female                                                    | 66 (66)|
| **Religion**                                               |       |
| Hindu                                                     | 87 (87)|
| Muslim                                                    | 4 (4) |
| Sikh                                                      | 3 (3) |
| Christian                                                 | 6 (6) |
| **Place of residence**                                     |       |
| Urban                                                      | 62 (62)|
| Rural                                                     | 26 (26)|
| Semi-urban                                                | 12 (12)|
| **Previous knowledge regarding first aid**                |       |
| Yes                                                       | 64 (64)|
| No                                                        | 36 (36)|
| **If yes, then Source of information**                    |       |
| Certification course                                      | 0     |
| Nursing curriculum                                        | 38    |
| Others                                                    | 26    |
The data presented in Table 1 depicts that majority of students (42%) belonged to age of 17 years and 66% of student nurses were females. Majority of nurses (87%) were Hindu by religion followed by 6% Christian, 4% Muslim and 3% Sikh. 62% of student nurses resides in urban area, 26% in rural and remaining 12% in semi-urban areas. More than half of the student nurses i.e. 64% had previous knowledge about first aid; out of which 38% have gained this knowledge from nursing curriculum and none of the student nurse had done any certificate course of first aid training.

Table 2: Range, Mean, Median, Standard Deviation of knowledge score of student Nurses regarding First Aid N=100

| Knowledge score | Range   | Mean  | Median | Standard Deviation (SD) |
|-----------------|---------|-------|--------|-------------------------|
| Minimum Score   | 2-28    | 17.11 | 18     | 5.13                    |
| Maximum Score   | 30      |       |        |                         |

Table 2 depicts that mean knowledge score of nurses was 17.11 ± 5.13 and median was 18 with the range of score between 2-28.

Table 3: Frequency and percentage distribution of student nurses according to level of knowledge regarding First aid. N= 100

| Level of knowledge | Range of score | Frequency | Percentage |
|--------------------|----------------|-----------|------------|
| Excellent          | 23-30          | 12        | 12         |
| Good               | 19-22          | 29        | 29         |
| Fair               | 15-18          | 27        | 27         |
| Poor               | < 15           | 32        | 32         |

Table 3 shows that the maximum frequency was 32% in poor knowledge score of student nurses regarding First Aid and Minimum frequency was 12% in excellent level of knowledge score of student nurses, frequency was 27% in fair level of knowledge score and frequency was 29% in good level of knowledge score of student nurses regarding First Aid. It indicates that student nurses are having inadequate knowledge regarding First Aid. Highest possible score was 30, none of the student nurses could reach perfect score indicating inadequate knowledge.

Discussion:-
In the present study very few students had good knowledge about first aid, similarly, a Peruvian study reported that in spite of 52.5% students having had prior training regarding medical emergencies, 60.4% had poor knowledge about first aid.(7) A study conducted in Lucknow, India showed that there was less than adequate knowledge (52%) and practices (54%) in all groups of participants. (8) In the present study, females had slightly better knowledge about first aid than males, which was similar to the findings of a study performed in Karachi. (2) Overall knowledge of first aid among students in this study was poor in comparison to student's knowledge level in other studies. Hence, a formal first aid session is introduced into nursing curriculum it will help the students to have good knowledge and practical skills as proven by a United Arab Emirates based study. (9)

Use of modern techniques like simulation with the aid of computerized mannequins as an educational and assessment tools has been used widely and was found to be very effective in few studies.(10,11) As current nursing undergraduate training does not ensure new graduates can intervene effectively in an emergency, these simulation based workshops should be incorporated into the undergraduate curriculum both for education and assessment of competence in emergency management.(10) The other alternative would be patient simulation, which provides a safe learning environment (where events can be scheduled, repeated and observed) offering the potential for greater efficiency and rigor over traditional methods. Simulation has in fact been described as an ethical imperative, but has not yet been widely incorporated into the nursing undergraduate curriculum the way it should have been.[17,18]

Conclusion:-
The level of knowledge about first aid was observed as poor among majority of the students. Hence there is need for introducing formal first aid training classes in nursing curriculum so that the students can be trained in an effective manner to deal with medical emergencies and can provide the first aid independently in real life scenarios. More such studies should be conducted to evaluate the knowledge and skills of first aid among nursing students in India.

References:
1. Markenson D, Ferguson JD, Chameides L, Cassan P, Chung KL, Epstein J, et al. Part 17: First aid: 2010 American Heart Association and American Red Cross Guidelines for First Aid. Circulation. 2010;122:S934–46.
2. Khan A, Shaikh S, Shuaib F, Sattar A, Samani SA, Shabbir Q, et al. Knowledge attitude and practices of undergraduate students regarding first aid measures. J Pak Med Assoc. 2010;60:68–72.
3. Tekian A. Have newly graduated physicians mastered essential clinical skills? Med Educ. 2002;36:406–7.
4. Tan EC, Severien I, Metz JC, Berden HJ, Biert J. First aid and basic life support of junior doctors: A prospective study in Nijmegen, the Netherlands. Med Teach. 2006;28:189–92.
5. Bildik F, Kilicaslan I, Dogru C, Keles A, Demircan A. Need of first aid awareness among first aid teachers. Tr J Emerg Med. 2011;11:166–70.
6. Lima: Peru, UN; 2004. [Cited on 2012 Aug 14]. United Nations in Peru. Disasters and humanitarian crisis [Internet] Available from: http://www.onu.org.pe/Publico/infocus/accionhumanitaria.aspx .
7. Mejia CR, Quezada-Osoria C, Moras-Ventocilla C, Quinto-Porras K, Ascencios-Oyarce C. Level of knowledge in medical emergencies among medical students of Peruvian universities. Rev Peru Med ExpSaludPublica. 2011;28:202–9.
8. Kumar S, Agarwal AK, Kumar A, Agrawal GG, Chaudhary S, Dwivedi V. A study of knowledge, attitude and practice of hospital consultants, resident doctors and private practitioners with regard to pre-hospital and emergency care in Lucknow. Indian J Surg. 2008;70:14–8.
9. Das M, Elzubeir M. First aid and basic life support skills training early in the medical curriculum: Curriculum issues, outcomes, and confidence of students. Teach Learn Med. 2001;13:240–6.
10. Weller J, Robinson B, Larsen P, Caldwell C. Simulation-based training to improve acute care skills in medical undergraduates. NZ Med J. 2004;117:U1119.
11. Abbas A, Bukhari SI, Ahmad F. Knowledge of first aid and basic life support amongst medical students: A comparison between trained and un-trained students. J Pak Med Assoc. 2011;61:613–6.
12. Gordon JA, Wilkerson WM, Shaffer DW, Armstrong EG. “Practicing” medicine without risk: Students’ and educators’ responses to high-fidelity patient simulation. Acad Med. 2001;76:469–72.
13. Ziv A, Wolpe PR, Small SD, Glick S. Simulation-based medical education: An ethical imperative. Acad Med. 2003;78:783–8.