A study to assess the knowledge, attitude and practice regarding blood donation among the nursing students in selected nursing college of Kanpur

Shivnetri Chauhan[1], Sheetal Kanaujia[2]

ABSTRACT

Blood donation is itself considered as the backbone for saving lives of people via safe blood transfusion practices. Blood donation is not only helpful for recipient but it also gives some of the benefits to donor such as blood donation reduces the chances of getting myocardial infarction in regular voluntary donors. The present descriptive study was conducted in Rama University. The samples were collected by using non-probability convenience sampling. The sample size was 300 nursing students from Faculty of nursing, Rama University, Kanpur. The data was collected by using self-structured knowledge questionnaire, self-structured 5 point Likert scale and self structured checklist. While assessing the knowledge, majority percentage 65% were having good knowledge, 35% students were having poor knowledge. In attitude, majority percentage 66.67% had positive attitude and 33.33% had negative attitude. In practice, majority students 60% had good practice and 40% had poor practice. The association between knowledge, attitude and practice score with their selected demographic variable was analyzed by using one way ANOVA. It was found that there is no significant association between knowledge, attitude and practice with their selected demographic variable at 0.05 level of significance. Hence, hypothesis H01 was accepted. The correlation coefficient was calculated by using Karl Pearson r value. The correlation between knowledge and attitude was 0.6002, between knowledge and practice it was 0.0824 which signifies moderate positive correlation between knowledge- attitude and knowledge-practice. The correlation value between attitude and practice was (-0.2028) which represents the negative correlation. Hence, hypothesis H2 was accepted. The study concluded that there is a significant correlation between knowledge, attitude and practice regarding blood donation among the nursing students in selected nursing college of Kanpur.

Keywords: Voluntary blood donation, Blood transfusion practices

1 Introduction

Blood is an indispensable, life-sustaining fluid in our body. The cells of the physical body could not receive adequate oxygen and nutrients if there is not sufficient amount of blood present in the body, which is required for the person to survive healthy. Large volume of blood loss might be occur due to result of countless varying serious conditions such as Road traffic accidents which is much more common nowadays, Obstetric and Gynecological Hemorrhages which are also prevalent, Surgery, Physical injury , Chemotherapy(drug therapy for cancer), and Long-term therapies furthermore as anemia of medical or hematologic conditions or certain type of cancer. Because of these types of serious conditions blood transfusion is taken into account as a necessary and crucial element of a health care system. Besides, transfusion could be a part of complicated medical and surgical medication which improves the life expectancy and Life quality in patients with a range of numerous acute and chronic conditions. Therefore, blood transfusion is now considered as an important component of medical management for such a lot of diseases [1].Blood donation has long been educated as an act of kindness and humbleness which we can show to the persons who are suffering from any certain type of diseases. Three blood components that is plasma, blood components, whole blood may be derived useful to specific patient needs from a single donation of a person. A pack of blood may extend the lives of patients with blood loss, Leukemia(blood cancer), Hemophilia(Royal's disease), Maternal deliveries, Major physical injuries and even for those who are for any type of organ transplants. Similarly, blood donation is considered as an essential measure in emergency preparedness for disaster and a crucial component in the organization of the health care delivery system. There are certain guidelines that must be observed for a person to donate blood which may include an ideal body weight, normal range of B. P, pulse rate, Hemoglobin values of at least 125 gm/dL and most important that they are not having medical conditions like cancer, cardiac

[1]Nursing tutor in Child health nursing department, Faculty of nursing, Rama University, Mandhana, Kanpur, Uttar Pradesh, India

[2] Nursing tutor in Mental Health nursing department, Faculty of nursing, Rama University, Mandhana, Kanpur, India

diseases, STDs, lung diseases, or those who exposed on high risk occupation disorders among others. The need for blood is practiced by all countries across the world but is found to be more of a challenge by most developing countries such as in India primarily because of the lack of knowledge in people who are willing to donate blood, and also the lack of blood donor system [2].Adolescent people are the most probable blood donors in every society and students compose a large portion of them[3].The highest priority of all blood transfusion centers is to Increase in the level of awareness and positive attitude towards blood donation . The initial step for attaining this goal is to perform comprehensive studies measuring the current situation of awareness, knowledge, beliefs, and attitude of the population towards blood donation. [4].Normal amount of blood in a human body is 76 ml/kg Body weight in males and 66 ml/kg body weight in case of females. Humans need only 50 ml/kg body weight of blood for daily work. Hence 26 ml blood per kg body weight is more in males and 16 ml blood per kg body weight in females. A healthy person can easily donate around 8 ml per kg body weight in blood donation.For donation minimum weight is 45kg [5]. Minimum Blood taken in donation is 350ml in India. An average person has 5 liters of blood. The average blood volume is 4 to 6 liters. Blood is a type of liquid connective tissue. The various components of blood are red blood cells, white blood cells (leukocytes), plasma and platelets (thrombocytes).The major function of blood is transport. There are about one billion RBCs in 2 to 3 drops of blood. For every 600 red blood cells, there are about 40 thrombocytes and one white blood cell [6].

2 Objectives of study

- To assess the knowledge, attitude and practice regarding blood donation among the nursing students of selected nursing college in Kanpur.
- To determine the association between knowledge, attitude and practice score with their selected demographic variables.
- To determine the correlation between knowledge, attitude and practice score.

3 Hypothesis

$H0_1$: There is no significant association of knowledge, attitude and practice score with their selected demographic variables.

$H0_2$: There is no significant correlation between knowledge, attitude and practice score.

H_1: There is a significant association of knowledge, attitude and practice score with their selected demographic variables.

H_2: There is a significant correlation between knowledge, attitude and practice score.

4 Methods and Materials

Research Approach

- The quantitative research approach was employed in this study.

Research Design

- The research design adopted for the current study was Descriptive research design.

Setting of the study

- The study was conducted in Rama University, Kanpur.

Variables:

Research variables

- Knowledge, attitude and practice of nursing students regarding blood donation was the dependent research variable.

Demographic variables

- The demographic variables are: Age, Gender, Educational status, Residence, History of blood donation.

5 Population

Target Population:

- Target population for the present study was students of Rama University, Kanpur.

Accessible Population:

- Accessible population for the current study was Students of Faculty of Nursing, Rama University, and Kanpur.

Sample:

- In this study, the sample was students of Faculty of nursing, Rama University, Kanpur.

Sample size:

- The sample size within the present study was 300 nursing students from Faculty of Nursing, Rama University, and Kanpur.

Sampling Technique:

- In this study, Non-probability Convenience sampling technique was used.

Sampling Criteria:

- Criteria sampling involves selecting cases that needs some predictor mined criterion of importance.

Inclusion criteria:

- Students from Faculty of Nursing, Rama University, Kanpur.
- Students available at the time of study.
- Students who are having minimum age of 17 years.

Exclusion Criteria:

- Students who are not having interest to participate in the study.
- Students who are no related from field of nursing.

6 Methods of Data Collection

The tool accustomed to collect the data was a demographic performer, self-structured knowledge questionnaire, self -structured 5 point Likert scale

and self- structured Checklist for assessing the knowledge, attitude and practice regarding blood donation among the nursing students in selected nursing college of Kanpur.

Development and Outline of the Tool:
The tools used for the study was self- structured knowledge questionnaire, self -structured 5 point Likert scale and self -structured checklist.
The tool consists of four sections:

- **Section-A:** It deals with the demographic data such as age, gender, educational status, area of residence and history of blood donation.
- **Section –B:** Consists of 20 multiple choice questions associated with knowledge regarding blood donation. There have been 20 items and every item had an option with one most appropriate answer. The maximum score for the right response to every item is 1 and for incorrect response it absolutely was 0. The overall highest score is 20.
- **Section-C:** Consists of statements associated with attitude regarding blood donation. It consists of 20 statements. Maximum score is 100 and minimum score is 20.Its scoring pattern was supported by 5 point Likert scale.
- **Section-D:** Consists of statements related to practice regarding blood donation. It consists of 20 statements. Its maximum score is 20. Its scoring pattern was based on yes-no checklist.

7 Results and Findings

Section-A
The major findings of the present study were:

- Majority of the scholars 38% were within the cohort of 19-20 years.
- Majority of the students 86% were girls.
- Majority of the students 60.33% were pursuing the B.Sc. nursing.
- Majority of the students 52.66% were from rural geographical area.
- Majority of the students 76% had the past history of blood donation.

Section-B
Knowledge, Attitude and Practice regarding Blood donation among the nursing students of selected nursing college in Kanpur.

Table 1: Percentage wise distribution of nursing students according to their knowledge score.

S. no.	Level of Knowledge	Score Range	Frequency	Score in %	Mean	S.D
1.	Poor	1-10	105	35%	12.1	7.49
2.	Good	11-20	195	65%		
	Total	20	300	100%		

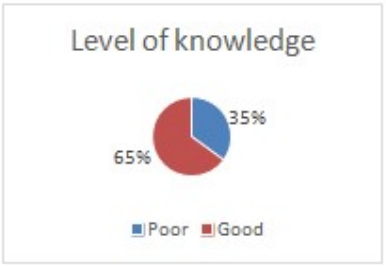

Figure 1: Pie represents the percentage wise distribution of nursing students according to their knowledge score.

(Table no.1 and Fig. No 1). It shows that 65% girls are having good knowledge and 35%girls are having poor knowledge. With the mean and standard deviation as 12.1 and 7.49 respectively.

Table 2: Percentage wise distribution of nursing students according to their attitude score.

Sr no	Attitude	Score Range	Frequency	Score in percentage	Mean	S.D
1.	Positive	61-100	200	66.67%	69.91	17.22
2.	Negative	20-60	100	33.33%		
	TOTAL	100	300	100%		

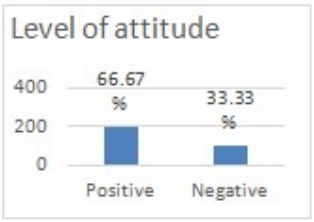

Figure 2: Bar diagram represents the percentage wise distribution of nursing students according to their attitude

(Table no.2 and Fig. no.2). It shows that 66.67% girls are having positive attitude and 33.33%girls are having negative attitude. With mean and standard deviation of 69.91 and 17.22 respectively.

Table -3: Percentage wise distribution of nursing students according to their practice score

Sr. no.	Practice	Score Range	Frequency	Score in percentage	Mean	S.D
1.	Poor	1-10	120	40%	11.68	6.77
2.	Good	11-20	180	60%		
	TOTAL	20	300	100%		

Figure 3: Doughnut represents the percentage wise distribution of nursing students according to their practice score.

(Table no.3 and Fig. no.3) It shows that 40% girls are having poor practice and 60%girls are having good practice. With mean and standard deviation of 11.68 and 6.77 respectively.

Section-C

Association of knowledge, attitude and practice score with their selected demographic variable.

The major findings are:

- There is no significant association of knowledge, attitude and practice score with their selected demographic variable such as age, gender, and educational status, area of residence and history of blood donation.

Section-D

Correlation between Knowledge, attitude and practice score

Table 4: Correlation between knowledge and attitude score

Area	Knowledge score	Attitude score	Correlation	Inference
Overall	12.1±7.49	69.91±17.22	r= 0.6002	p<0.05 Significant moderately positive correlation.

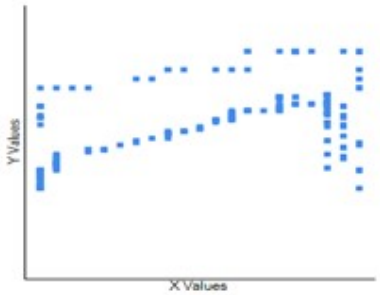

Figure no 4: Graphical representation showing correlation between knowledge and attitude.

Table 4: and figure no.4 represents that there is moderate positive correlation between knowledge and attitude.

Table 5: Correlation between knowledge and practice score

Area	Knowledge score	Practice score	Correlation	Inference
Overall	12.1±7.49	11.68±6.77	r= 0.0824	P<0.05 Significant positive correlation.

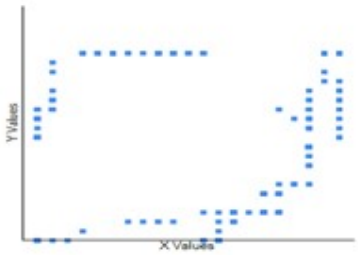

Figure no: 5 Graphical representation showing correlation between knowledge and practice.

Table-5 and figure no.5 represents that there is positive correlation between knowledge and practice.

Table 6: Correlation between attitude and practice score

Area	Attitude score	Practice score	Correlation	Inference
Overall	69.91±17.22	11.68±6.77	r= (-0.2028)	Significant negative correlation.

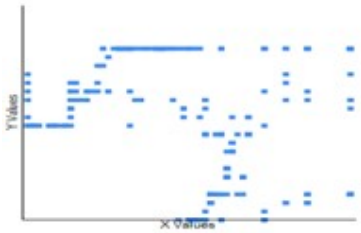

Figure no 6: Graphical representation showing correlation between attitude and practice

Table-6 and figure no.6 represents that there is a negative correlation between attitude and practice.

Implications:

- The findings of the study have an implication in nursing education, nursing research and practice.

Nursing Education:

- The nurse educators can recommend this topic to the students for health education activities of the community for increasing the knowledge level of people regarding blood donation. Awareness programme can be conducted among the community people to get better understanding regarding blood donation.

Nursing Administration:

- The findings of the study help the nurse administrators to take appropriate measures about knowledge, attitude and practice regarding blood donation among the people.

Nursing Practice:

- The nurses can educate the people regarding the importance of blood donation as well its benefits for the whole world.

Nursing Research:

Use of research findings should become the part of quality assurance evaluation to enhance the individual performance as a whole.

8 Recommendations

Based on these findings of the study, the following recommendations have been made:

- A similar study can be repeated by increasing the size of samples.
- A similar study can be repeated in other schools, colleges or in community areas.
- A similar study can be conducted by using True experimental approach.

9 Conclusion

From the findings of the present study, it can be concluded that there is no significant association of knowledge, attitude and practice score with their selected demographic variables at 0.05 level of significance. Hence, hypothesis $H0_1$ is accepted. There is a significant correlation between knowledge, attitude and practice score. Hence, hypothesis H_2 was accepted.

References

[1]. M. Amatya, "Study on knowledge, attitude and practice of blood donation among students of different colleges of Kathmandu, Nepal," International Journal of Pharmaceutical and Biological Archives, vol. 4, no. 3, pp. 424–428, 2013.

[2]. Sandborg, E. (2000). Getting People to Give Blood. VoxSanguinis, 78 (Suppl. 2), pp 297–301.Shan, H., Wang, J., Ren, F., Zhang, Y., Zhao. H., Gao, G., Ji, Y. & Ness, P. (2002). Blood Banking in China. The Lancet, 360(9347), pp 1770–1775.

[3]. Nigatu A and Demissie DB. Knowledge, attitude and practice on voluntary blood donation and associated factors among Ambo University regular students, Ambo Town, Ethiopia. J Comm Med Health Educ2014; 4:315. doi:10.4172/2161-0711.1000315

[4]. Javadzadeh Shahshahani H, Yavari MT, Attar M and Ahmadiyeh MH .Knowledge, attitude and practice study about blood donation in the urban population of Yazd, Iran, 2004. Transfuse Med 2006; 16:403–409.

[5]. Haj IZA. Blood and its function. Available from:http://www.slideshare.net/Zahra_Haj_Issa/blodits-functions?related=1.

[6]. Waugh A, Grant A. Anatomy and physiology inhealth and illness. 9th Edn. Chapter 60, Chapter 4, the blood. Churchill Livingstone: Elsevier, 2005: 57-65