

A Comparative Cross Sectional Study to Assess the Knowledge, Attitude and Practice Regarding Blood Donation among the College Student of Rural and Urban Area: In View to Developed Information Leaflet

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Abstract: *There is no ideal substitute of blood and hence, blood transfusion still remains a vital component of patient management. Thus, safety and availability of blood and blood products is an important issue of concern. A comparative cross section study was conducted among the college students in rural and urban area. Data was collected by using semi structured questionnaire. Data was analyzed by using descriptive and inferential statistics. The study result shows that knowledge score good among the urban area than rural area but attitude and practices is more in rural area than urban. There was need to create awareness regarding blood donation.*

Keywords: Blood Donation, Knowledge, Attitude, Practices, College students, Rural area, Urban Area

1. Introduction

Human Blood is universally recognized as the most precious and essential element of human life. The collection of blood from voluntary, non-remunerated blood donors is an important measure for ensuring the availability and safety of blood transfusion. Adequate and safe blood supply is a demanding challenge in developing countries like India. Every year, some of the state is visited by lakhs of visitors during pilgrimage season and where natural calamities and accidents are very common, the availability of blood is of utmost importance.

Blood services are facing shortage of blood all over the world. Demand for blood is rising day by day, and current blood donation is insufficient to meet the demand. Evidence-based strategies for provision of safe and adequate blood supply have been successfully implemented in developed countries. Developing and transitional countries are making efforts toward this goal by utilizing the time-tested approach based on surveys carried out to identify knowledge, attitude, and practice on the subject of blood donation.

According to Zee News, India has a population of 1.2 billion people and annually requires over 12 million blood units. However, only nine million units are collected. This means the country faces a shortage of over three million units of blood every year. There is a shortage of 1, 00,000 units of blood in the National Capital Region (NCR) itself. Several deaths can be caused due to severe blood loss in case there is a shortage of blood, plasma, or platelets. Over the past few years, there has been wastage of blood due to lack of coordination between the hospitals and blood banks. Blood, including life-saving components such as plasma and red blood cells, has been disposed of as it could not be used before the expiry date.

2. Literature Survey

According to The Times of India, the biggest offenders were states like Maharashtra, Karnataka, Uttar Pradesh, and Tamil Nadu who just did not dispose of the blood but also these life-saving components. Six percent of cumulative wastage translated into the loss of six liters of blood, which can be used to fill over 53 water tanks. Blood is made up of four major components namely plasma, red blood cells, white blood cells, and platelets, each one of them having unique functions. Plasma has a year-long shelf life, which is much longer as compared to the red blood cells and whole blood that has a deadline of only 35 days. Despite having much longer shelf life, 50 percent wastage of plasma was observed.

A study was conducted to assess the knowledge, attitude and practice on Blood Donation among 410 Health Science Students in a University campus, South India. The result of the study stated that the overall knowledge on blood donation was good, but majority (62%) of students never donated blood. Knowledge level was found highest among allied health science (53.1%) and lowest among pharmacy students (20.7%). 'Feeling of medically unfit' and 'never thought of blood donation' were the major reasons for not donating blood. A significant association was observed between different streams of students and levels of knowledge and attitude about blood donation. This study elicits the importance of adopting effective measures in our campuses to motivate about blood donation among students.

3. Problem Definition

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4. Objectives

- 1) To assess the knowledge attitude and practices regarding blood donation among the college students of rural and urban
- 2) To determine the association between Knowledge scores & demographic variables among the college students of Rural and Urban area.
- 3) To developed an information leaflet on the blood donation for college students.

5. Methodology/ approach

The research approach used in this study was quantitative and research design was comparative cross section survey design. The investigator used simple random sampling to select 300 college students (150 from urban and 150 from rural) college students from rural and urban area. The data was collected through semi stretched questionnaire. Data was analysis by frequency, percentage and association done by Chi square test and comparison done with the help of unpaired 't' test.

6. Results

Semi-Structured questionnaire was used for data collection. The analysis was done with the help of descriptive & inferential statistics such as mean, SD, percentage, 't' test, & 'p' value.

The data was analyzed and is presented in the following sections:-

Section -I

- 1) **Age of the college students:** According to age in the urban most of them 59.33% were between 18-20 years of age group, 37.33% were between 20-22 years of age, 3.33% between 22-24 years. According to age in the rural most of them 78.67% were between 18-20 years of age group, 19.33% were between 20-22 years of age, 2% between 22-24 years.
- 2) **Gender of the college students:** According to gender in the urban 44.67% were males and 55.33% were females. According to gender in the rural 38.67% were males and 61.33% were females.
- 3) **Educational Stream of the college students:** According to educational stream in the urban 12.67% from arts, 23.33% were from science and 64% from commerce. According to educational stream in the rural 4.67% from arts, 32.67% were from science and 62.67% from commerce.
- 4) **Years of Education of the college students:** According to years of education in the urban 30% from the first year, 50.67% from the second year and 19.33% from the third year. According to years of education in the rural 53.33% from the first year, 24.67% from the second year and 21.33% from the third year.
- 5) **Religion of the college students:** According to religion in the urban 80% from the Hindu, 10.67% from the Muslim, 3.33% were Christian, 5.33% were Buddhist and 0.67 were from the other. According to religion in the rural 95.33% from the Hindu, 2.67% from the

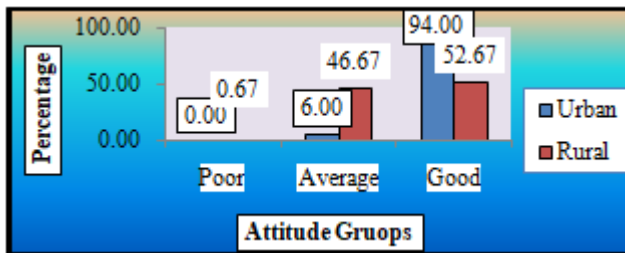
Muslim, 0.67% were Christian, 0.67% were Buddhist and 0.67 were from the other.

- 6) **Residence of the college students:** According to Residence in the urban 10% from the rural, 88.67% from urban and 1.33% from the tribal .According to Residence in the rural 92% from the rural, 1.33% from urban and 6.67% from the tribal.
- 7) **Monthly Income of the college students:** According to Monthly Income in the urban 32% with income up to 10000, 25.33% in the 10001-15000, 14.67% in the 15001-20000 and 28% from the group above 20001. According to Monthly Income in the rural, 38.67% with income up to 10000, 16.67% in the 10001-15000, 19.33% in the 15001-20000 and 25.33% from the group above 20001.
- 8) **Blood Group of the college students:** According to blood group in the urban 23.36% with blood group A, 26.17% with B, 13.08% were with blood group AB and 37.38% from the blood group O. According to blood group in the rural 15.70% with blood group a, 33.88% with B, 11.57% were with blood group AB and 38.84% from the blood group O.
- 9) **Know about blood donation of the college students:** To the question knowledge about the blood donation, in the urban group 96.67% say yes and 3.33% say no. To the question knowledge about the blood donation, in the rural group 78% say yes and 22% say no.
- 10) **Source of Information of the college students:** According to the source of information about the blood donation, in the urban group 24.83% from the social media, 31.72 from the friends, 6.21% from the newspapers, and 37.24% from the blood donation camp. According to the source of information about the blood donation, in the rural group 9.09% from the social media, 31.40 from the friends, 25.62% from the newspapers, 29.75% from the blood donation camp and 4.13 from the other sources.

Test	Groups	Score	Rural	
			Frequency	Percentage
Knowledge	Poor	0-8	39	26.00
	Average	9-16.	108	72.00
	Good	above 17	3	2.00

Section-II: - Analysis and interpretation of data shows that, knowledge score regarding Blood Donation of the college students from urban and rural area was concerned majority (91.33) & (72.00) belong to average source regarding blood donation knowledge in urban and rural area respectively.

Section-III: - This section highlighted that, as far as Attitude score regarding Blood Donation of the college students from urban and rural area was concerned majority (94.00) & (52.67) belong to good attitude score regarding blood in urban and rural area respectively.



Section IV: Shows that, as far as self-reported practice score regarding Blood Donation of the college students from urban and rural area was concerned majority (12) & (14.67) are donate blood in urban and rural area respectively.

Section V: This section shows that, as far as comparisons of the knowledge were done by the paired t test. The urban area average score was 13.64 with standard deviation of 2.01. The rural area average score was 10.63 with standard deviation of 2.76. The value of paired t test was 10.78 with p value 0.00. Shows that, there was significant difference in the average knowledge score of the urban and rural college students.

Knowledge	Frequency	Mean	S.D.	t value	P value
Urban	150	13.64	2.01	10.78	0.000
Rural	150	10.63	2.76		

Section VI: As far as comparisons of the attitude towards blood donation among the college students of rural and urban area done by paired t test. The urban area average score was 46.29 with standard deviation of 3.2. In rural area average score was 40.71 with standard deviation of 4. The test statistics value of the paired t test was 13.35 with p value 0.00. Shows that, there was significant difference in the average attitude score of the urban and rural college students.

Attitude	Frequency	Mean	S.D.	t value	P value
Urban	150	46.29	3.2	13.35	0.000
Rural	150	40.71	4		

Section VII :- This section VII (A) deals with the significant association bet age (10.24), residence (54.32) monthly income (17.37), know about Blood group (17.74) and source of information (20.78) where more than table value and level of significance (0.05). This indicated H_1 is accepted and H_0 rejected. Section VII (B) deals with the significant association between age (41.34), gender (11.19), year of education (12.83), religion (40.06) residence (50.41) monthly income (13.80), know about Blood group (18.82) where calculated t value is more than table value and level of significance (0.05). This indicated H_1 is accepted and H_0 rejected.

7. Discussion

The finding of the study showed that, the knowledge, attitude and practice regarding blood donation among the college students of rural as well as in urban area was found inadequate. However the knowledge and attitude score was more in college students of urban area comparing the rural area. When it's come to the association of knowledge and attitude with demographic variable is significance. There is

need to create awareness regarding blood donation among the college students and general public.

8. Conclusion

During this study it was observed that all college students are very conscious and interested to learn regarding blood donation. The result of the study revealed that there is lack of knowledge and practices regarding blood donation but attitude was good. In comparison with rural and urban college students knowledge and attitude is good among the urban college students than rural whereas practice is more in rural area than urban. In this study an attempt has been made to know the knowledge attitude and practice regarding blood donation among the college student of rural and urban area.

9. Future Scope

The future scope of this study has implications for nursing administration, nursing education, nursing research and nursing practice.

Nursing practice

Implication of practice and awareness the finding of the study can be utilized by the nurse to take effort to improve knowledge of patients and their friends and family member regarding Blood Donation. The finding of the study can be utilized to prevent the gap between supply and demand of blood and blood products

Nursing education

Nurse educator play an important role to educate the college students and general public. More emphasis has to be placed in the regular and periodical teaching section on Blood Donation. Nurse educator can be motivate to organize the teaching programs to enhance the knowledge and practice regarding Blood Donation.

Nursing research

Nursing research is an essential aspect of nursing as it uplift the profession to develop new nursing norm and body of knowledge here, another research has been added to the nursing literature. Very few study have been conducted on a similar basis. The research design, finding of the tool can be used as avenues for further research. A similar study can be conducted on large scale sample. The finding of the study show the knowledge regarding blood donation among the college students is average, good attitude towards blood donation but practices is very poor. The study will motivate the beginners to conduct study on large scale on comparative basis. It also motivates the young researcher for implementation of information leaflet.

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Author Profile



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