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Study on Blood Donation Among Medical Students of Udaipur City, Rajasthan

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ABSTRACT

Background: This study has been carried out to know the knowledge, attitude and behavior about blood donation among medical college students of Udaipur city. Human blood is an essential element of life and it cannot be substituted other than human blood. Blood is needed crucially for transfusion in multiple diseases, episodes of injuries and the only source of blood is donation.

Methods: This cross-sectional study was conducted in Udaipur city of Rajasthan on medical college students, to explore their knowledge, attitude and practice on blood donation. Sample of 150 respondents was studied, during the period of October 2016-December 2016.

Results: Majority of respondents was aware, and had the good knowledge on blood donation. Blood group "O" is a universal donor is also known to majority of the subjects. The minimum age to donate blood was known to majority of the respondents and most of them were willing to donate blood with a view that the blood donation is useful and beneficial to society. Very few of the study subjects have ever donated blood and the frequency of blood donation was observed more in male donors than female. Majority of the donor's preferred to donate blood to their relatives.

Conclusions: This study reveals that having good knowledge on blood donation, less number of respondents had ever donated the blood. Major steps should be initiated to overcome the obstacles with provision of adequate literature, advertisements and communication material for enhancing positive attitude of medical college students so that they start to take part willingly in voluntary blood donation. A good positive attitude may lead to higher eagerness for blood donation. .

Key Words: Voluntary, Awareness, Emergency, Relatives, Human life

INTRODUCTION

Blood is a very specialized body fluid of humans which deliver necessary substances such as nutrients and oxygen to the cells and help in transportation of metabolic waste products away from the cells¹.

Blood is manufactured by human beings and donation of blood by humans is the only way of acquiring blood to meet emergency requirements in cases of road traffic accidents, complications of pregnancy like ant partum and post partum hemorrhage, blood loss during childbirth, various anemic disorders and surgical emergencies².

According to world health organization, an estimated 38% of reported voluntary blood donations are contributed by people under the age of twenty five. World health organiza-

tion also insists the developing and developed countries, to focus on young people, to achieve hundred per cent voluntary unpaid blood donation³. India needs about 7 million units of blood annually and every year there is gradual increase in this demand⁴ due to various anemic disorders, accidents and emergencies. Millions of lives are saved each year in the globe, through blood transfusions, but the percentage of voluntary unpaid donors and the safety of blood transfusion is still a concern, particularly in the developing countries⁵.

It is estimated that donation by 1% of the population is sufficient to meet a nation's most basic requirements for blood⁵. The World health organization recommends that the blood which is to be donated should be tested for some important infections like HIV, Hepatitis B, Hepatitis C,

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Syphilis, Malaria as these infections can be transmitted by blood donation to the recipients⁶.

Blood services are facing shortage of blood all over the world. Demand of blood is rising day by day and the current blood donation is insufficient to meet the demand. The WHO has categorized India as having less than 10 blood donations per 1000 population, with voluntary collection of 50%--89% of the total blood collection.

The medical students were aimed at for conducting our study because they represent the potential blood donors among the young population pool of tomorrow for our nation.

OBJECTIVES

To know the knowledge, attitude and behavior towards blood donation among medical college students.

MATERIALS AND METHODS

This cross sectional study was conducted on 150 first MBBS students of Geetanjali Medical College and Hospital, Udaipur, during October 2016 to December 2016. Information regarding knowledge, attitude and practice for blood donation was recorded in a pre tested proforma, after obtaining the written consent from study subjects. Data was analyzed and results were expressed as using proportional percentage.

RESULTS

Table 1: Age wise distribution of study subjects (n=150).

Age (Years)	Male	%	Female	%	No.	%
17-18	2	(1.33%)	4	(2.66%)	6	(3.99%)
18-19	40	(26.67%)	40	(26.67%)	80	(53.34%)
19-20	23	(15.33%)	25	(16.67%)	48	(32.0%)
20-21	10	(6.67%)	6	(4.00%)	16	(10.67%)
Total	75	(50%)	75	(50%)	150	(100%)

The study sample consisted of (50%) males and (50%) females.

The study participants included age range of 17-21 years. (53.34%) of study participants belonged to 18-19 years age group followed by (32.0%) in age group 19-20 years. Minimum participants (3.99%) were of 17-18 years of age. The mean age of students was 18.95±0.71S.D. Years.

Table 2: Knowledge regarding essentials for blood donation among study subjects (n=150).

* Correct knowledge regarding blood donation	No.	%
Which blood group is universal donor?	117	(78%)
Which blood group is universal recipient?	114	(76%)
Types of blood groups are?	147	(98%)
Do you know your blood group?	129	(86%)
What is the minimum weight to donate blood of donor?	120	(80%)
What is the maximum age to donate blood of donor?	127	(84.66%)
How much ml. blood volume is collected in one donation?	50	(33.33%)
Can blood be collected without being tested for certain diseases?	150	(100%)
At what duration blood can be donated, if donated once?	123	(82%)

* Multiple responses, total not additive.

(78.0%) of the study subject knew that the blood group "O" is universal donor, (76.%) knew about the blood group "AB" is universal recipient. Majority (98%) knew, regarding 4 types of blood groups and (86%) knew for their own blood group. (80%) of the subjects knew that the 45 kg is minimum weight to donate blood, and (84.66%) were know that the 60 year of age is maximum age to donate the blood, (82%) were know after 90 days blood can be donated if donated once, (33.33%) of the subjects have the knowledge about 350ml of blood volume is collected in one spell of donation and all (100%) subject were know that blood of the donor, must be tested for HIV, Hepatitis B, Hepatitis C, Syphilis, Malaria before blood collection.

Table 3: Distribution of study subjects according attitude toward blood donation.

Attitude towards blood donation	Responses of study subjects	No.	%
Do you willing to donate blood? (n=150)	Yes	144	(96%)
	No	06	(4%)
	Total	150	(100%)
Do you believe that blood donation is beneficial to society? (n=150)	Yes	147	(98%)
	No	03	(2%)
	Total	150	(100%)
Do you always take permission before blood donation? (n=150)	Yes	50	(33.33%)
	No	100	(66.67%)
	Total	150	(100%)
Do you want to voluntary unpaid blood donor? (n=150)	Yes	143	(95.33%)
	No	7	(4.67%)
	Total	150	(100%)
Do you encourage people to donate blood?(n=150)	Yes	150	(100%)
	No	0	(0%)
	Total	150	(100%)

Out of 150 study subjects, (96%) were willing to donate the blood, (98%) of the subjects believed that blood donation is beneficial to society. (66.67%) of the study participants had the opinion to take permission from elderly before blood donation. (95.33%) of study participants want to become voluntary unpaid donor. All 150 study participants encouraged the people for blood donation.

Table 4: Distribution of study subjects according to behavior about blood donation.

Behavior towards blood donation	Responses	No.	%
Ever donated blood (N=150)	Yes	21	(14%)
	No	129	(86%)
	Total	150	(100%)
Ever donated blood, gender wise (N=21)	Male	17	(80.95%)
	Female	04	(19.04%)
	Total	21	(100%)
Ever donated blood, if asked (n=21)	Voluntary	21	(100%)
	Non - voluntary	0	(0%)
	Total	21	(100%)
Blood donated to whom (n=21)	Friends	06	(28.57%)
	Relatives	14	(66.67%)
	Unknown persons	01	(4.76%)
	Total	21	(100%)

Out of 150 study subjects only (14%) ever donated blood. Out of 21 who ever donated blood (80.95%) were male against (19.4%) female. (100%) of the subjects donated blood voluntarily and majority (66.67%) of donors donated blood to their relatives.

Table 5: Distribution of study subjects for reasons for not donating blood (n=129).

Reasons for not donating blood among Non-donor Students	No.	%
No support from family	12	(9.31%)
Afraid of procedure	61	(47.29%)
Fear of Weakness	06	(4.65%)
Fear of contracting any disease	06	(4.65%)
Why to Donate to Unknown	04	(3.10%)
No one asked them	40	(31.00%)
Total	129	(100%)

In the present study the cause of not to ever donate blood in majority was afraid of procedure (47.29%) followed by (31.0%) no one asked them, (9.31%) not supported by family and only (3.10%) were of the opinion that there is no need to donate blood to unknown persons.

DISCUSSION

The 150 study participants, included age range of 17-21 years. (80%) of students had knowledge regarding the minimum necessary body weight for blood donation ie 45 kg. Similar findings (72%) were observed by Giri PA et al⁷. Majority (84.66%) of study subjects were aware of the appropriate age for blood donation ie 18 years to 60 years. The appropriate age was known to (92%) of the study subjects in study by Giri PA et al⁷ while less values (11.7%) were observed by Hossein S. et al⁸. Shahshahani HJ et al⁹ found in their study in Iran that less than 50% of the respondents were aware about the minimum age for blood donation.

(14%) of study subjects in our study, did not know their own blood group. This was similar to (18.18%) the findings of study conducted by Arun et al¹⁰. Majority (96%) of study subjects showed positive attitude towards blood donation, against the values observed in various studies, by Hossain GM et. al.¹¹ (82%), S Manikandan et al¹² (63.58%), Abhishek et al¹³ (93.77%) and Shenga N et al¹⁴ (87.23%). In present study majority (98%) of the participants viewed that the blood donation is beneficial to society, similar to finding by Arun et. al¹⁰ (97.6%). Majority (86%) of study subjects have not donated blood ever, similar findings were observed (87.3%) and (75.4%) by Shenga N et. al.¹⁴ and Hossain S et. al⁸ respectively. In study among married women homemakers conducted at Tehran by Khadir M et.al¹⁵ showed that (24.1%) had ever donated blood and in another study in Pal-estina central bureau of statistic¹⁶ revealed only (20%) had ever donated blood but in our study this data is low (14%) compared to others.

Among the donors in our study, majority of them were males (80.95%) against females (19.05%). Similar findings were observed by Shailesh K Mishra et al¹⁷ (75.8%) and (24.2%) on 1000 college going students at Chandigarh, while Hos-sain S et al⁸ observed (33.33%) male donors to (18.7%) fe-males donors.

In our study the common cause for not to donate the blood was fear of procedure (47.29%), while Arun et al¹⁰ observed (31.34%), S. Manikandan et al¹² in their study of Chennai, observed only (27.4%) while low figures (9.75%) were ob-served by Abhishek et al¹³.

No one asked to donate the blood for the cause (31%), was observed in our study, similar to S Manikandan¹² (32.21%), and Arun et al¹⁰ (26.12%), where as Shailesh K Mishra¹⁷ ob-served only (9.8%), and Abhishek et al¹³ observed (42.68%)

The cause due to fear of weakness for not to donate the blood was observed by S. Manikandan et al¹² (12.61%) and Shailesh K Mishra et al¹⁷ (19.0%) respectively against our findings (4.65%).

In our study (4.65%) of the respondents did not donate the

blood due to fear of contracting any disease, this finding is supported by the study of Shailesh K Mishra et al¹⁷ (4.6%).

No one asked them was the reason observed among (31%) of the respondents in our study, similar to the study by S Manikandan et al¹² (32.21%), while Shailesh K Mishra¹⁷ observed only (9.8%).

No support from the family, the cause of not to donate the blood was (9.31%) in our study while Abhishek et al¹³ observed (14.6%).

CONCLUSION

It is evident by our study that greater knowledge about blood donation does not lead to high frequency of blood donation by medical college students. Special campaign is to be conducted to convert in to the actual blood donation by the medical students. If the medical college students set an example of blood donation on the eve of world donation day, that will in turn motivate and boost the morale of the community people for saving the human lives by donating blood. Voluntary blood donation by medical students with provision of adequate communication materials to masses, more advertisements to address the fears related to blood donation, shall increase the awareness among general masses in the society and it will also enhance the morals of voluntary blood donors to donate blood on regular basis to meet the challenges of blood transfusion of needy people.

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