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A Descriptive Study on factors Affecting Blood Donation among Young Adult Students

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ABSTRACT

Introduction: Blood transfusion saves lives and improves health andthe need for blood transfusion may arise at any time in both urban and rural area.Adequate and safe blood supply has remained a challenge in developing countries like India and the shortage of blood is due to an increase in the demand, with fewer voluntary blood donors. The present study explores the practice of blood donation among the young adult students.

Methods: A cross sectional study of 583 students among threedegree colleges during June 2014 to August 2014 by systematic sampling. Data was collected using semi-structured questionnaire after taking informed consent.

Results: As age increased practice of blood donation decreased and it was statistically significant with p- value <0.001.Prevalence of blood donation in males (22%) was more than females (1.5%) and was statistically significant with p value <0.001.Overall 70 (12%) had donated blood and 86.6% were willing to donate blood.

Conclusions: Young adult males are future potential donors who can be approached in colleges as most of them are students.Conducting awareness programs regularly in the colleges keeps them well informed and motivated. This awareness about blood donation should be coupled with the prevention strategies of the major disease that consume much of the blood.

Keywords: Blood donation; Young adults; Students; Practice.

INTRODUCTION

Blood is a complex fluid which has no substitute. Therefore, blood donation by human will continue to be the only source for blood and blood components.One unit of blood is converted into packed cell volume, fresh frozen plasma, platelet concentrate, cryoprecipitate and granulocytes concentrate.[1] Thus a single unit of blood can benefit several patients.The need for blood transfusion may arise at any time in both urban and rural area. The unavailability of blood has led to deaths and many patients suffering from ill health. In high-income countries, the most frequently transfused group is elderly patients for supportive care in surgery, trauma and malignancies. In low- and middle-income countriesmajority of transfusions are for children to manage severe childhood anaemia and forpregnancy-related complications.[2]Around 112.5 million blood donations are collected globally every year.[3]The 11 countries in the South-East Asia Region reported the collection of 15% of global blood donations, though these countries represent 26% of the global population.[4]The average blood donationsper 1000 population per year is 1.8 to 30.8 (median 7.9) in South-East Asia.[4]WHO estimates that blood donation by 1% of the population is generally the minimum needed to meet a nation's most basic requirements for blood.[5]

Blood donation practice is influenced by various factors like age, gender, education, socio-economic

status, altruism, social responsibility, peer influence, access to health communication, knowledge about importance of blood donation, previous donations, influence of active blood donors.[6,7] Family/replacement donors are usually unaware about conditions that may make them unsuitable to donate blood. Paid donors often lead lifestyles that expose them to the risk of infections that could be transmitted through their blood and are motivated by monetary gain whichmake them vulnerable to exploitation.An adequate and reliable supply of safe blood can be assured by a stable base of regular, voluntary, unpaid blood donors as they are motivated by altruism or social responsibility and are rewarded with personal satisfaction and self-esteem. Communication is at the core of a successful and sustainable voluntary blood donor programme.Young people are the hope andfuture of a safe blood supply in the world as they are healthy and enthusiastic.As majority of them will be pursuing their education, schools and colleges can become a good platform for motivational activities. To achieve this, we should know the prevailing attitude and reasons for not donating blood among youth. Thusthe present study determines the prevalence of blood donation practice among young adult students and various factors influencing it.

METHODS

This is a cross sectional study conducted among students of three degree colleges at Mysore after getting the ethical clearance.Purposive sampling method was followed and all these colleges under Mysore university providing different courses for students were selected. Maharaja college provides arts and commerce courses for males, Maharani college provides all courses for females and Yuvaraja college provides courses in science for both males and females. The study was conducted from June 2014 to September 2014. Students of all the years from different courses, who were present at the time of study and who gave consent were included. Data was collected by direct interview methodby using predefined semi-structured questionnaire after informed consent. Awareness program was conducted for students following the study.

Data was analyzed using SPSS version 20 software. Descriptive tests like chi-square was applied to find the association between different factors. Probability value less than 5% was considered as statistically significant.

RESULTS

The mean age of participants was 19 years and 88% belong to age <20 years. Many (51.6%) were males and 93% were Hindus.Among 188 students from B.A course 125 were males from Maharaja college and 227 students from Yuvaraja college were all from B.Sc. Females were almost equally distributed in all four courses (Table 1).

Table -1: Socio-demographic profile of the students

Socio-Demographic Variable	Participants (n=583) (%)
Age	
<= 20	513 (88)
21 - 26	67 (11.5)
27+	3 (0.5)
Gender	
Female	282 (48.4)
Male	301 (51.6)
Education	
Ba	188 (32.2)
Bcom	80 (13.7)
Bsc	237 (40.7)
Bbm	78 (13.4)
College	
Maharaja	125 (21.4)
Yuvaraja	227 (38.9)
Maharani	231 (39.6)
Religion	
Hindu	544 (93.3)
Christian	5 (0.9)
Muslim	34 (5.8)

Table -2: Motivation for donating blood

Motivation	Blood Donation		Total (%)
	Done (%)	Not Done (%)	
Urgently Needed For A Person I Know	23(32.9)	168 (32.7)	191 (32.8)
Story Of Someone Saved By Blood Donation	3(4.3)	37 (7.2)	40 (6.9)
Associated With Some Organization	2(2.9)	10 (1.9)	12(2.1)
Feels Good	37(52.9)	226 (44.1)	263(45.1)
Bad Incidence In The Past	1(1.4)	17 (3.3)	18(3.1)
Beneficial Effect On Health	4(5.7)	29 (5.7)	33(5.7)
Others	0	5(1.0)	5(0.9)
Unanswered	0	21 (4.1)	21 (3.6)
Total	**70(12.0)**	**513 (88.0)**	**583 (100)**

Table -3: Reasons for not donating blood (n=583)

Reasons for not donating blood	Participants (%)
Afraid of needle prick	110 (18.9)
Afraid of blood	54 (9.3)
Afraid of feeling weak	67 (11.5)
Scared of Testing positive	23 (3.9)
Scared of Getting new disease	41 (7)
Unknown	288 (49.4)

Overall70 (12%) had donated blood and 65 responded to whom they donated. Among them 47.7% had donated to strangers, 33.8% to friends and 18.5% to relatives.Among 513 non donors, 21 did not respond for question on motivation for donating blood. 5.3% were voluntary non paid donors. 53% of donors were motivated by good will. Among males' prevalence of blood donation was 22% and among females it was only 1.5%. Majority (86%) of them were willing to donate blood, among them 80% were willing to donate to any person, 7% to their parents, 3% to their friends. Among 562 respondents 34% felt emergency situation motivates for blood donation and 47% felt good will as motivator. Table 2.

Students (88%) who had not donated blood were asked for the reason. 49% are not donating blood for unknown reasons, 19% are scared of needle prick and 12.5% are afraid of feeling weak after donating. 32% were not allowed by their parents to donate blood even if they want to, 14% did not know how it works. Almost half (48%) of the students think poor information will affect people's decision for not donating blood and 26% think fear will affect. Table 3.

Among donors, majority (70%) were less than 20 years and as age increased practice of blood donation decreased which was statistically significant with p value <0.001. Prevalence of blood donation in males (22%) was more than females (1.5%) and was statistically significant with p value <0.001. There was statistically significant difference in blood donation practice among different courses with p-value <0.001. Among donors, 57.1% were science students and no one from BBM donated blood. There was no significant difference in prevalence among different religions (Table 4).

Most (57%) of the students were of opinionthat motivating message or a congenial slogan should be used for encouraging donors.23% of them felt photos of donors or a famous person who is a donor is better for advertising campaign of blood donation. For 39% of them talking with someone who has already given blood will help them to decide on blood donation. Another 21% want information point to decide on blood donation.College students were willing to donate blood to any person, as they feel good of helping.Poor information was the reason for people not to donate blood. The most practical problem among college students was parents don't allow. A good message was recommended for advertising campaign. Talking to a donor will help them in deciding about blood donation.

Table -4: Association of socio demographic factors with blood donation practice

Socio demographic variables	Blood donation			Chi square	df	p value
	Done (n=70) (%)	Not done (n=513) (%)	Total (n=583)(%)			
Age						
<= 20	49 (70.0)	464 (90.4)	513 (88.0)	24.410	2	<0.001*
21 – 26	20 (28.6)	47 (9.2)	67 (11.5)			
27+	1 (1.4)	2 (0.4)	3 (0.5)			
Gender						
Female	4 (5.7)	278 (54.2)	282 (48.4)	57.961	1	<0.001*
Male	66 (94.3)	235 (45.8)	301 (51.6)			
Education						
BA	29 (41.4)	159 (31.0)	188 (32.2)	26.806	3	<0.001*
BCOM	1 (1.4)	79 (15.4)	80 (13.7)			
BSC	40 (57.1)	197 (38.4)	237 (40.7)			
BBM	0	78 (100)	78 (13.4)			
Religion						
Hindu	70 (100)	474 (92.4)	544 (93.3)	5.703	2	0.058
Christian	0	5 (1.0)	5 (0.9)			
Muslim	0	34 (6.6)	34 (5.8)			

*: Indicates significance.

DISCUSSION

Analysis showed as age increases prevalence of blood donationdecreases. With the age responsibility of family increases, they tend toforget social responsibility.Data about the gender profile of blood donors show that globally 30% of blood donations are given by women, although this ranges widely.[4]Males donate blood commonly compared to females, reason may be the physiological difference between the genders where females are frequently anaemic which will not permit them to donate blood. Females have major responsibility

like giving birth to child which will inevitably push them to receiving end rather than giving. So we have to target young adult males for motivating for blood donation.

A cross-sectional study was conducted among 410 health sciences students from different streams in a University campus of South India through a structured survey questionnaire in the year 2009.[8] The overall knowledge on blood donation was good, but majority (62%) of students never donated blood similar to this study. '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 but in the present study no such association was found.

Another study done on behavior disparities towards blood donation in Sikkim showed 12.7% of participants had ever donated blood and 87.3% had never donated similar to this study.[9] Among ever donors, gender wise men donors were found to be more and half were from 30-34 years' age group. As the per-capita income or level of education increases, so did the percent of blood donors.A study conducted on knowledge and attitude towards voluntary blood donation among students of Dhaka university found that 82% had positive attitude towards blood donation.[10] 16% of the respondents in this study had actually ever donated blood voluntarily and among the non-donors fear of physical harm was the common reason for not donating.

Students of Chulalongkorn University in Thai were studied to assess their knowledge of voluntary blood donation.[11] Although most participants (80%) knew about blood donation, only 11% (44 subjects) had ever donated blood voluntarily. Investigators found no significant correlation between demographic data (gender, age, educational level of subjects studied) and such knowledge or actual blood donation. Among the non-donor respondents, fear (305 cases) was the most common reason for not donating blood.General public of Pakistan were studied on determinants of blood donation behaviour and found that 25% were donors, out of which 78% were males and 22% were females.[12] Gender wise greater proportion of the blood donors were men (97%) than the woman (3%). 88% of all respondents were willing to donate blood.An interventional study on medical and dental students at Indore showed the proportion of male blood donors was 37% while 8% female students had donated.[13] Only 42% were willing to donate blood,the two main reasons for not donating blood was fear of becoming weak after donation andno support from family similar to this study.

A study showed that main motivating force is awareness of patient need complemented by awareness that the need may one day be personal.[14]Another study compared the beliefs, attitudes and motivations between donors and non-donors, results were that majority donors felt it was moral duty to donate.[15] For non-donors lack of information and different fears were discouraging factors similar to the present study. One more study done in Saudi Arabia also showed that out of 250 donors 94% were males and 6% were females, reason for this was inability to reach the donation centre and fear of becoming anemic.[16]Study on voluntary blood donors in Chennai also found that only 7% were females and 93% were males.[17]In all the studies conducted among students and general public there is gender discrepancy in blood donation. Many are willing to donate blood but are not doing it due to some fears or lack of support. Fear comes with the lacuna in the knowledge so creating awareness in the society regarding do's and don'ts of blood donation can improve donation.Most of the students felt that celebrity blood donors can be made as ambassadors for blood donation campaign. Blood banks must have aninformation pointwith counsellor who is also a donor so that he can educate and motivate.

Even in population with good knowledge, the proportion of blood donation is less indicating the need for behaviour change. Volunteer donors should be given a certificate every time he donates as a token of appreciation. Every year in a college or hospital sustained voluntary non-paid donor should be honoured on world blood donor's day celebrated on June 14th asthat will motivate others.Communication between donors and needy was lacking earlier, nowadays it is overcome by blood donor application and websites where any one can register their numbers or download the application.This application helps people who are in needto search the donors of required blood group near their places. As any treatment modality will have its own cons receiving blood from others also has adverse reactions due to immune reaction. So it is better to avoid such situations by treating anemia in children, adolescents and pregnant women and also by preventing genetic disorders like aplastic anemia, sickle cell anemia, thalassemia, thrombocytopenia etc.The increase in the awareness about blood donation should therefore be coupled with the prevention strategies of the major disease that consume much of the blood.

CONCLUSION

Prevalence of blood donation practice among young adult students was 12%. 2% had donated to the family member, 3.7% for friends and 5.3% for

strangers. As age increased practice of blood donation decreased and males were more motivated than females. Students perceiving science were better motivated than others as they had better knowledge. Majority felt repeated motivational messages and interaction with donors can motivate them.Requirement of safe blood is increasing and regular voluntary blood donations are vital for sustained blood transfusion services.If young are educated regarding importance of blood donation and its health benefits, they may become future donors and also motivators.Awareness program was conducted following the study.

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