



Voluntary Blood Donation: Perception and Practices among Adult Population of a Semi-Urban Area of Delhi

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ABSTRACT

Background: Safe blood can save lives. Increasing regular voluntary non-remunerated blood donation is an important aspect of meeting the safe blood requirements of the country.

Methods: This cross-sectional study was conducted among 200 adults in a semi-urban area of Delhi. A pretested questionnaire was used as the tool for the study.

Results: 90% of the participants were aware that blood donation is important for saving lives and most (78%) had a favourable attitude towards blood donation. However, in practice, less than 5% had ever donated blood. Educational level had a significant effect on the knowledge regarding blood donation.

Conclusion: Although the awareness about blood donation is quite high but very few people have actually donated blood voluntarily. Motivational interactive sessions at the community level are needed to allay the fears and misconceptions related to blood donation.

Key words: Voluntary blood donation, Perceptions, Practices

INTRODUCTION

Blood can save millions of lives. Blood and blood products' transfusion is required for many medical and surgical conditions like elective and emergency surgeries, trauma victims, pregnancy related complications like severe anemia and post partum haemorrhage, severe fluid loss and shock to name a few. Additionally, persons with disorders like sickle cell anemia, thalassemia and hemophilia require frequent blood transfusions.

The collection of blood from voluntary, non-remunerated donors from low risk populations is an important measure for ensuring the safety, availability, quality and accessibility of blood transfusion.¹

World Health Organisation has adopted a policy aimed at 100% voluntary blood donation procurement by the year 2020.¹ In India, this figure has

steadily risen from 54% in 2006-07 to 79% in 2015-16 but still there is shortage of almost 2 million units annually.² Since the shelf life of donated blood is short, there is a constant need to replenish the stock in the blood banks. This problem can be addressed if 2% more Indians donate blood.³

Most studies conducted to assess blood donation practices have found the level of voluntary donation among people to be very less.^{4,5}

The present study aimed at determining the perceptions and practices of adults in a semi-urban area of Delhi regarding blood donation and trying to identify the factors associated therewith. The objectives of the present study were; to study the awareness, attitude and level of blood donation practice of adults towards voluntary blood donation in a semi-urban area of Delhi; and to identify the myths and misconceptions related to voluntary blood donation.

MATERIALS AND METHODS

The present study was undertaken in Bijwasan, field practice area of the deptt. of Community Medicine, Army College of Medical Sciences, Delhi Cantt. It is a semi-urban area situated 20 km away from ACMS. A cross-sectional survey was carried out among a sample of 200 adults (18-59 years) from 160 households selected through simple random sampling method. The sample size was calculated using the formula $4PQ/L^2$ where P and Q were taken as 0.5 to get the maximum sample size with 7% permissible error and 15% non-response rate. Random number table was used for selection of households from the list available at RHTC. The study was an applied aspect of the ROME scheme of medical education in the Deptt. Of Community Medicine and the 6th semester students posted in the Department collected the data during their block 4 weeks clinical posting. The teams for data collection comprised of 3 students and were supervised by faculty from the department of Community Medicine.

All the adults between 18-59 years of age in the selected households, who provided informed consent to participate in the study were subjected to a pre-tested semi-structured interview schedule. All those participants responding correctly to the 'Minimum age for blood donation' and 'how frequently can blood be donated' were considered to have appropriate knowledge.

The data was entered in MS Excel and analysed using SPSS version 24. The results were presented as percentages and Chi-square test was used to assess the association. P-value of less than 0.05 was taken as the level of significance.

RESULTS

Table 1 shows that more than half of the participants were between the age group of 18-39 yrs and females(55%).Majority(68%) of the participants had

studied upto high school or above and only 2.5% were illiterate.41.5% of the participants were homemakers.

Table 2 -All participants had heard of blood donation and 90% were aware that it can be important to save lives.90% knew that blood can be donated in hospitals and blood banks.59% had heard about or seen a blood donation camp being organized.(Table 2).62% knew that HIV/AIDS can be transmitted through transfusion of unsafe blood. However, only 8% could name any other disease transmitted through unsafe blood like hepatitis, malaria, syphilis etc.

Table 1: Sociodemographic profile of study participants

Sociodemographic variable	Participant (%)
Age (yrs)	(n=200)
18-29	96(43)
30-39	49(24.5)
40-49	32(16)
50-59	23(11.5)
Sex	
Males	90(45)
Females	110(55)
Educational Status	(n=200)
Illiterate	5(2.5)
Primary	26(13)
Middle School	11(5.5)
High School	87(43.5)
Secondary School	32(16)
Graduate and above	29(24.5)
Marital Status	(n=200)
Ever Married	152(76)
Never Married	48(24)
Occupation	(n=200)
Student	43(21.5)
Homemaker	83(41.5)
Semi-Skilled/Skilled	26(13)
Shop Owner /Clerk	44(22)
Professional	17(16.5)

Table 2 .Awareness and Knowledge of blood donation

Awareness and Knowledge items	Correct response (%) (n=200)
Heard of blood donation	200(100)
Awareness of importance of blood donation in saving lives	180(90)
Awareness of blood donation in hosp and blood banks	180(90)
Heard or seen of blood donation camp	118(59)
Minimum age for blood donation(18 yrs)	170(85)
Maximum age for blood donation (65yrs)	108(54)
Minimum weight for blood donation(45Kg)	68(34)
Whether blood replenished in the body	136 (68)
Amount of blood donated at a time (0.5l)	45 (22.5)
Frequently of blood donation(every 3-4 mths)	148 (74)
Any disease that can be transmitted by unsafe blood	16(8)
Whether sick persons can donate blood(Y/N)	160 (80)
Whether person is examined for fitness before donation(Y/N)	64 (32)

Table 3. Attitude towards blood donation

Attitude items (n=200)	Yes (%)	No (%)
Blood donation saves lives	181 (90.5)	19(9.5)
Blood should be donated by healthy persons regularly	170(85)	30(15)
Would be willing to donate blood if needed	157(78.5)	43(21.5)
Should blood be bought	48(24)	152(76)

Table 4: Practices regarding blood donation

Characteristics	Yes (%)
Practice items (n=200)	
Ever donated blood	9(4.5)
Donated blood only once (also included in ever donated)	3 (1.5)
Circumstances leading to donation	
Voluntary	3 (1.5)
Replacement	5 (2.5)
Paid	1 (0.5)
Last donated	
< 1 yr ago	5 (2.5)
> 1 yr ago	4 (2)
Place of Donation	
Hospital	6 (3)
Camp	3(1.5)

Table 5 .Reason for never having donated blood*

Reason (n=191)	Number (%)
Fear of needle prick	129 (67.5)
Never felt the need	78 (40.8)
Will lead to weakness/having less blood	57 (29.8)
Hesitant to go/ not allowed by family	64(33.5)
Lengthy procedure	56 (29.3)

*multiple responses

Table 6: Association of knowledge with age, gender, no of years of schooling*

Characteristics	Correct knowledge (%)			P Value
	Yes (n=148)	No (n=52)	Total (n=200)	
Age				
>40 years	35(63.63)	20(36.37)	55(100)	0.039
<40 years	113(77.93)	32(22.06)	145(100)	
Total	148(74)	52(26)	200(100)	
Gender				
Male	68(75.6)	22(24.4)	90(100)	0.65
Female	80(72.72)	30(27.27)	110(100)	
Total	148(74)	52(26)	200(100)	
No of years of schooling				
< 8 years	26(61.90)	16(38.09)	42(100)	0.044
>8 years	122(77.21)	36(22.78)	158(100)	
Total	148(74)	52(26)	200(100)	

* Pearson's Chi-square test

Table 3 depicts attitude towards blood donation. Most of the participants showed a willingness towards blood donation .A majority of participants(90.5%) felt that blood donation saves lives and should be donated by healthy persons regularly (85%). 78.5% would be willing to donate blood if needed , while 61% would also encourage family/friends to do so.

Table 4 - Despite the high awareness level regarding blood donation, only 9 (4.5%) participants had ever donated blood, of them only 3 had donated only once, voluntarily and in a camp. Of those who had donated, more than half had been replacement donors. The source of knowledge for most of the people were mass media (75%), followed by friends/relatives (33%) and health professionals (13%).

Table 5 - On attempting to inquire into reasons for never having donated from non donors, 64.5% admitted to having fear of needle prick, while 39% never felt the need.23.5% were apprehensive that blood donation would lead to weakness/ having less blood(pallor).

Table 6 - Age less than 40 years and education status (schooling for more than 8 years) were found to have a significant association with 'correct knowledge' on blood donation. Gender did not influence knowledge.

DISCUSSION

The present study assessed the knowledge, attitude and practices of adults towards voluntary blood donation. There was good awareness among the participants on the importance of donating blood, this has been corroborated in other studies done in India.^{4,5}

Knowledge of transmission of HIV/AIDS through unsafe blood was known to 62 % participants. However, only 8% could name any other disease transmitted through unsafe blood like hepatitis, malaria, syphilis etc. The knowledge of transmission was found higher in a study done among health workers in Nigeria, where most participants (95.7%) were aware of risk of transmission of infection by transfusion.⁶ However, health workers are expected to have higher knowledge as compared to general population.

Education status was found to be significantly associated with knowledge of blood donation (p=0.04). Similar findings have been found among adults by researchers in Saudi Arabia and Ethiopia.^{7,8} Special efforts should be directed towards spreading knowledge among lesser educated or illiterate population so that they are involved in blood donation activities .However in the present study no significant difference (p=0.65)

in the awareness among males and females was found as also reported in rural population of Pakistan.⁹

Most participants (78.5%) had a positive attitude towards blood donation and were willing to donate blood if required. In a study on blood donation conducted among adult population in a rural community of Uttarakhand, revealed a similar attitude.⁵ Similar favourable attitude was also reported among medical students in a study done at Pondicherry.¹⁰

Even though awareness levels on importance of blood donation were high in the study participants, very few had actually donated blood in their lifetime. A lesser proportion (<1%) has been reported among medical students though their younger age may be the factor for very few to have donated blood.⁶ However, this was much less as compared to that reported in a rural hospital of Pakistan (32%) and also in urban areas of Ethiopia where 16-18% had donated blood at least once.^{9,8,11}

Major reasons mentioned by non-donors were fear of needle pricks, followed by never having felt the reason to donate blood. A study among medical students reported the reasons for not having donated blood as lack of opportunity, lack of family support, indifference and fear.⁶ Similarly the study in a rural hospital of Pakistan have reported "no one asked the person to donate blood" as the chief (85%) reason for non-donation.¹⁰ This clearly points out to lack of efforts/non effectiveness of current efforts towards behavior change and communication in this field.

CONCLUSION

The study illustrates that merely knowledge and awareness are not enough to motivate people for donating blood. Even though most of the people realised the importance of blood donation as a life saving measure, still the rate of voluntary blood donation is very less. More interactive sessions to motivate people and allay their fears of needle prick and loss of blood need to be undertaken at the community level so that the target for 100% voluntary blood donation can be achieved.

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