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Research Article

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A cross-sectional study among community on knowledge, attitude and practice about blood donation in Udaipur city of Rajasthan, India

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ABSTRACT

Background: This study has been carried out to find out the knowledge, attitude and practice about blood donation in community of Udaipur city.

Methods: This study was conducted in Udaipur city of Rajasthan on the community regarding to know about knowledge, attitude and practice about blood donation. For this sample of 755 respondents were taken during the period of 1st December 2015-15th January 2016 on the basis of statistical method of sample size determination.

Results: Majority of respondents were having awareness and knowledge about blood donation. Practice of donation was found to be more in males are more as compared to females. Females prefer more to donate blood for their relatives and family than others as compared to males. Frequency of donation blood was found to be more in male than female donors.

Conclusions: The community has become more aware of the facts about blood donation. More and more people have started donating blood. Thus provision of adequate privacy, awareness communication materials and advertisements to address the fear factor may strengthen the recruitment and retention of voluntary blood donors to donate blood on regular basis to achieve 100% of blood donation.

Keywords: Blood donation, Knowledge, Attitude, Practice, Community

INTRODUCTION

Human blood is an essential element of human life and there is no substitute of it. Since, there is a considerable shortage of blood, even in large metro cities, with the supply being less than 50% of the requirement. The only source of blood is by blood donation. However, recruitment of voluntary, non-remunerated blood donors pose major challenges to transfusion services throughout the world. Blood and blood products are a unique and precious resource because they can be obtained only from individual who donate blood or its component. About 92 million blood donations are being done annually throughout the world. Safe blood is a critical component in improving the health care and in preventing the spread

of infectious disease globally. Millions of lives are saved every year through blood transfusion, but yet the quality and the safety of blood transfusion is still a concern, particularly in developing countries.⁶

Thus, the need for blood is growing day by day as a result of advancement in the clinical medicine. In terms of need for blood transfusion, it is noted that in India, the death toll which is caused by road accident has increased due to unavailability of blood transfusion services near the accident site.⁷

Thus, every person in community should have knowledge, attitude and practice about blood donation and therefore this study has been done to assess their knowledge, attitude and practice regarding blood donation so that at the time of need one can donate blood in emergencies.

METHODS

This study has been carried out to find out the knowledge, attitude and practice about blood donation in community of Udaipur city.

Material and method

This study was conducted during 1st December 2015- 15th January2016 Udaipur city of Rajasthan on the community regarding to know about knowledge, attitude and practice about blood donation. For this sample of 755 respondents were taken on the basis of statistical method of sample size determination.

$$n = \left[\frac{\left(Z_{\alpha/2} + Z_{1-\beta} \right)^2 \times P(1-P)}{(MOE)^2} \right]$$

Here 95% confidence level and 80% power was taken with 5% as margin of error (MOE). P has been assumed to be 60%.

A well-structured and validated questionnaire was assessed by respondents in community for data collection.

RESULTS

In the present study total number of participants was 755 out of which 405(53.64%) were males and 350(46.36%) were females. Majority of the respondents were found to be of age 25-38 years and thus mean age of respondents was found to be 37.19 years and as shown in Table 1.

Table 1: Age wise distribution of respondents.

Age (years)	Male	Female	Total (%)
18-24	61	59	120 (15.89)
25-31	89	89	178 (23.58)
32-38	84	86	170 (22.52)
39-45	52	40	92 (12.19)
46-52	32	39	71 (9.40)
53-59	49	27	76 (10.06)
60 and above	38	10	48 (6.36)
Total	405 (53.64)	350 (46.36)	755 (100)

Mean age \pm SD = 37.19 \pm 1.79

All the respondents were above the minimum age limit of 18 years for donation of blood.

In the study, it was obtained that 75.36% of total respondents knew about the essential fact on minimum age for blood donation and 73.51% about minimum weight required for donation. But knowledge regarding

frequency of blood donation in year and required gap between donations was found to be 50.73% and 40.79% which is considered to be low. Since, good knowledge was found regarding the fact that a pregnant women and lactating mother cannot donate blood was found to be 89.67% and 92.52% respectively (Table 2).

Table 2: Knowledge among respondents regarding essentials for blood donation (N=755).

Questions	Male	Female	Total (%)	Chi square value	P value
Minimum age for donation	324	245	569 (75.36)	9.581	0.002 (S)
Minimum weight for donation	320	235	555 (73.51)	12.921	<0.00 1 (S)
Frequency of donation in year	243	140	383 (50.73)	29.251	<0.00 1 (S)
Duration between donation	203	105	308 (40.79)	30.651	<0.00 1 (S)
Donation by pregnant women	344	333	677 (89.67)	20.017	<0.00 1 (S)
Donation by lactating mother	365	334	699 (92.52)	6.942	0.008 (S)
Donation leads to any side effects	203	158	361 (47.81)	1.672	0.196 (NS)
Place of donation	162	70	232 (30.73)	34.348	<0.00 1 (S)

S: Significant, NS: Insignificant

Of the total respondents 47.81% were found to have knowledge that blood donation doesn't leads to any side effects and only 30.73% of them were knowing that where they have to donate blood (Table 2).

Significant difference was found in male and female regarding knowledge about blood donation except regarding fact that blood donation has no side effects. Thus it was found that males were having more knowledge than females regarding blood donation (Table 2).

In study, it was found that only 267 out of 755 i.e. 35.36% had donated blood. Among 405 males and 350 females only 162 males and 105 female had donated blood and this difference was found to be statistically significant (P=0.005) (Table 3).

Thus, here also it was found that males are more in practice of donating blood as compared to females.

Table 3: Sex wise practices regarding blood donation in respondents (N=755).

Practice	Male	Female	Total (%)	Chi square value	P value
Donated blood	162	105	267 (35.36)		
Never donated blood	243	245	488 (64.64)	7.782	0.005 (S)
Total	405	350	755 (100)		

S: Significant

Among those respondents who had donated blood 73.41% had donated blood for their relatives or for any family members and only 26.59% had done for others. Out of 162 male and 105 female donors 110 males (67.9%) and 86 females (81.9%) had donated for relatives or for the family. Thus, significant difference in association was found between males and female regarding practice of blood donation for relatives and family rather than for others (P=0.017) (Table 4).

Table 4: Blood donations according to recipients and its yearly frequency.

Blood donated to	Male	Female	Total (%)	Chi square value	P value
Relatives & Family	110	86	196 (73.41)	5.703	0.017 (S)
Others	52	19	71 (26.59)		
Total	162	105	267 (100)		
Yearly frequency of blood donation	Male	Female	Total (%)	T value	P value
1	84	74	158 (59.18)	3.976	
2	32	19	51 (19.10)		
3	24	8	32 (11.98)		<0.001 (S)
4	22	4	26 (9.74)		
Total	162	105	267 (100)		

S: Significant; Here, for male mean=1.901 & variance=1.2 and for female mean=1.447 & variance= 0.628.

Thus, females prefer more to donate blood for their relatives and family than others as compared to males.

Among the respondents, the average number of blood donation in year was found to be 1.7 ± 1.018 . Out of total respondents 59.18% had donated blood only one time in

that year and only 9.74% had donated blood 4 times in year (Table 4).

It was found to be 1.9 ± 1.09 in males and 1.4 ± 0.79 in females which leads to conclusion that there was significant difference between male and female donors regarding number of blood donation (P<0.001). Thus, frequency of donation blood was found to be more in male than female donors (Table 4).

In study it was found that out of total respondents 64.64% had never donated blood (Table 3), out of which 79.92% wish to donate blood whereas only 20.08% does not wish to donate blood in future also (Table 5).

Table 5: Attitude toward blood donation (N=488).

Attitude	Male	Female	Total (%)	Chi Square value	P value
Wish to donate	196	194	390 (79.92)		
Do not wish to donate	47	51	98 (20.08)	0.086	0.769 (NS)
Total	243	245	488 (100.0)		

NS: Insignificant

Table 6: Reasons for not donating blood (N=98).

Reasons	Male	Female	Total (%)	Chi square value	P value
Sufferin g from anaemia	11	17	28 (28.57)	0.745	0.388 (NS)
Leads to anaemia a weakness		8	14 (14.29)	0.015	0.901 (NS)
Under- weight	3	5	8 (8.16)	0.062	0.804 (NS)
Fear	10	11	21 (21.43)	0.045	0.833 (NS)
All above	9	4	13 (13.26)	1.823	0.177 (NS)
No specifie d reason	8	6	14 (14.29)	0.206	0.650 (NS)
Total	47	51	98 (100.0)		

NS: Insignificant

The reason found for not donating blood by the respondents who wishes to donate blood was that they

never asked to donate and they don't know where to donate blood.

And in 28 out of 98 respondents (28.57%), anemia was found to be the main reason for not wishing to donate blood in both males (23.4%) and females (33.33%). Other than anemia, fear of blood donation was also found to be another reason in 21.43% respondents which was 21.28% in males and 21.57% in females. Thus no significant difference of association was found between males and females regarding reason for not wishing to donate blood (Table 6).

DISCUSSION

In this study 75.36% of the respondents had knowledge on minimum age for blood donation. Shahshahani HJ, et al found that less than 50% of respondents knew the minimum age for blood donation in their study among adult population of Iran. The minimum weight for blood donation also received a good rate (73.51%) of correct answers by respondents.

A study conducted at Tehran among married women homemakers showed that 24.1% had ever donated blood. A study in Palestine revealed only 20% had ever donated blood. In this study it was found that 35.36% had donated blood.

The average number of times blood donated by respondents was found to be 1.7 and also majority of the respondents had donated blood to their relatives and family.

Out of respondents who had never donated blood 79.92% had positive attitude towards blood donation and those who did not wish to donate blood were having reasons like suffering from anemia (28.57%) followed by fear (21.43%) of donation whereas 14.29% of them were not having any specific reason for not donating blood. Boulware LE, et al reported fear and suspicion of hospital as the reason for non-donation among general population. ¹¹

The reasons for non-donation by willing respondents were that no one had ever asked them to donate blood and they also don't know where to donate blood. Zaller N, et al in the study of north western Chinese city found that the reason for non-donation were also similar to this study. ¹²

Thus provision of adequate privacy, awareness communication materials and advertisements to address the fear factor may strengthen the recruitment and retention of voluntary blood donors to donate blood on regular basis to achieve 100% of blood donation. ¹³

CONCLUSION

The community has become more aware of the facts about blood donation. More and more people have started donating blood. The community is to be made more aware of the knowledge about blood donation and to remove fears related to it through advertisements, social networking sites and other communication channels. The people should be motivated to donate blood and proper camps be arranged to meet the adequate demands for blood.

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Ethical approval: The study was approved by the Human

Research Ethical Committee

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