

Original article:

Awareness about blood donation among donors at a specialized tertiary level public hospital.

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Article info: Received: November 03, 2016, Accepted: November 30, 2016.

Abstract

Adequate and safe blood supply has remained a challenge in developing countries like ours. There is a high dependency on family replacement and remunerated blood donors in our environment which carries an attendant increased risk of transfusion transmissible infection. This descriptive type of cross sectional study was conducted at transfusion medicine department of National Institute of Neurosciences & Hospital in Dhaka city during the period January to December 2015 with the aim to assess the awareness about blood donation among donors which includes knowledge and practice of blood donation. A total purposively selected 150 donors were interviewed by using a structured questionnaire which focused on knowledge and practice related variables. The statistical analysis was done by using the SPSS software (Version-21). The associations between the demographic factors were analyzed by using the Chi square test and Fisher's Exact test. Among 150 donors, 124 (82.7%) were male and 26 (17.3%) were female donors, the mean age of the donors was 28.4 (\pm 7.2) years. 78 (52.0%) donors knew about the interval of blood donation and 84 (56.0%) knew about the age limit for the donation, but 86 (57.3%), 71 (47.3%) did not know the required Hb level to donate blood and volume of blood in each donation respectively. More than half (56.0%) had past history of blood donation and 103 (68.6%) of the donors showed positive effects like a feeling of satisfaction after blood donation. There were highly significant association found between blood donation and sex (p value.016). A majority (86.9%) of the donors were willing to be regular donors. The donors showed positive effects like a sense of satisfaction after the donation. Creating an opportunity for blood donation by conducting many blood donation camps may increase the voluntary blood donations.

Keywords: Blood donation, Awareness, Knowledge, Practice

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Introduction:

Blood transfusion is an important concern for the society, as it is life saving for patients with bleeding disorders, accidents, surgeries, inherited/acquired haematological diseases and malignancies. Donated blood can be lifesaving for individuals who have lost large volumes of blood from serious

accidents, obstetric and gynecological hemorrhages, or surgery and stem cell transplant patients as well as for individuals who have symptomatic anemia from medical or hematologic conditions or cancers. Therefore, blood is an important concern to the society. The use of these lifesaving products may be complicated by infectious and immunological diseases some of which could be life threatening. Blood banks are obligated to provide adequate and safe blood to the community.

Generally, donors are classified into the following categories: voluntary, family replacement, remunerated or paid donors, and autologous donor. The safest donors are found among people who donate their blood voluntarily purely out of altruism and are self-aware of their unsuitability to serve as blood donors where there might be a slightest risk of causing health damage for blood recipients.^[1,2] The risk of transfusion transmissible diseases is highest with the use of blood procured from remunerated donors. Voluntary, non-remunerated blood donors are the cornerstone of a safe adequate supply of blood and blood components.^[3] The task of recruiting voluntary blood donors remains one of the major challenges for any blood transfusion service.^[4] One of the objectives of the National Blood Policy is to encourage research and development in the field of Transfusion Medicine.

One of its strategies is to take the appropriate decision and/or to introduce policy initiatives on the basis of the factual information, the operational research on various aspects such as transfusion transmissible diseases, the Knowledge, Attitude and Practice (KAP) among donors, the clinical use of blood, etc.^[5]

Though awareness among donors about blood donation is an important issue, but very few study have done yet in Bangladesh about this issue.

This study on the awareness about blood donation among donors may prove to be useful in the successful implementation of the blood donation programme and seeks to explore the level of the knowledge and the practice of blood donation among donors at a specialized tertiary level public hospital and to find the association between the demographic factors.

Materials and methods:

This descriptive type of cross sectional study was conducted at transfusion medicine department of a specialized tertiary level public hospital named National Institute of Neurosciences & Hospital in Dhaka city during the period January to December 2015, with 150 sample population. Non-probability purposive sampling technique was used for data collection and data were collected through face to face interview administered questionnaire.

To assess the awareness about blood donation among donors the questionnaire focused on knowledge and practice of blood donation related variables. The associations between the demographic factors were analyzed by using the Chi square test with categorical data. After developing the questionnaire was pre tested for necessary modification and finalization.

Then the master tabulation sheet was prepared after proper checking, verifying and editing as per specific objectives and key variables. Analysis of data was finally done with Statistical Package for Social Science (SPSS) software (version 21) of computer on the basis of difference variables.

Prior permission was taken from the concerned authorities. Verbal consent was taken from the respondents. Confidentiality and anonymity of the respondents were maintained strictly.

Results:

Table 1: Distribution of the donors according to socio demographic characteristics.

Socio demographic characteristics	Frequency	Percentage
Age group (in years)		
≤ 22	39	26.0
23-27	36	24.0
28-32	41	27.3
≥ 33	34	22.6
Mean (± SD)		28.4 (± 7.2)
Sex		
Male	124	82.7
Female	26	17.3
Educational status		
Up to PSC	7	4.6
Up to SSC	16	10.7
Up to HSC	42	28.0
Graduation and above	85	56.7
Religion		
Islam	135	90.0
Hindu	12	8.0
Buddhist	3	2.0
Marital status		
Married	89	59.3
Unmarried	61	40.6

Table 2: Distribution of the donors according to knowledge about the blood donation.

Knowledge about blood donation among donors	Variables	n (%)
Age to start blood donation	18 years	84 (56.0)
	More than 20 years	13 (8.7)
	Don't know	53 (35.3)
Knowledge about blood donation intervals	Every 3 months	34 (22.7)
	Every 4 months	78 (52.0)
	Don't know	38 (25.3)
Knowledge about the transmission of disease through blood	Know	97 (64.5)
	Don't know	53 (35.3)
	11.5 gm/dl	31 (20.6)
Required Hb level to donate blood	12.5 gm/dl	33 (22.0)
	Don't know	86 (57.3)
	350 ml	11 (7.3)
Volume of donated blood in every blood donation	450 ml	68 (45.3)
	Don't know	71 (47.3)
	Know some reasons	91 (60.7)
Knowledge about the reasons to restrict blood donation	Don't know	59 (39.3)

Table 1 shows the distribution of socio demographic characteristics of the donors. The mean age was 28.4 (± 7.2) years with a range of 18 to 53 years. Among the 150 donors 124 (82.7%) were male and 26 (17.3%) were female donors. Among the donors 85 (56.7%) donors educational qualification was graduation and above, 135 (90.0%) donors were Muslim and 89 (59.3%) donors were married. [n=150]

Table 2: The knowledge about blood donation has been stated in Table 2, which shows that out of 150 respondents 84 (56.0%) donors knew that the blood donation could be started at 18 years of age and 78 (52.0%) knew that people could donate blood once in four months interval. 86 (57.3%) donors did not know the required haemoglobin level for the blood donation and 71 (47.3%) did not know the volume of donated blood in every blood donation, 59 (39.3%) donors did not know the reasons to restrict blood donation. [n=150]

Table 3: Distribution of the donors according to the practice of blood donation.

Practice of blood donation among donors	Variables	n (%)
Reasons for donating blood	To help friends / relatives	144 (96.0)
	Voluntarily	6 (4.0)
Having past history of blood donation	Have past history	84 (56.0)
	Don't have past history	66 (44.0)
Willing to become regular donor	Yes	131 (86.9)
	No	19 (13.1)
Impact of blood donation	Satisfaction	103 (68.6)
	Tired / Fatigue	16 (10.6)
	Fear	31 (20.6)

Table-3: The practice of the blood donors has been stated in Table 3, which shows that 144 (96.0%) respondents donated blood to help friends or relatives, 84 (56.0%) had past history of blood donation, 131 (86.9 %) were willing to become regular donors and 103 (68.6%) donors had a feeling of satisfaction after blood donation.

Table 4: Association between sex of the donors and having past history of blood donation.

Sex of the donors	Having past history of blood donation		p <.05
	Have past history	Does not have past history	
	n(%)	n(%)	
Male	75 (60.5)	49 (39.5)	
Female	9 (34.6)	17 (65.4)	

$$\chi^2 = 5.837, df=1, p=.016$$

Table 4 shows sex of the donors had highly significant association with the having past history of blood donation

Table 5: Association between educational status and having past history of blood donation.

Educational status	Having past history of blood donation		p <.05
	Have past history	Does not have past	
	n (%)	n (%)	
Up to HSC	24 (39.9)	41 (63.1)	
Graduation an above	60 (70.6)	25 (29.4)	

$$\text{Fisher's Exact test p value .000}$$

Table 5 shows educational status of the donors had highly significant association with the having past history of blood donation.

Discussion:

This descriptive type of cross sectional study was carried out with the aim to assess the awareness of blood donation among donors which includes knowledge and practice of blood donation. The study result revealed that the mean age of the donors was 28.4 (± 7.2) years with a range of 18 to 57 years, which was quite similar with the study conducted by Ferdous A et al.^[6] where the observed age range was 18 to 57 years. In this study female donors were found to be very few in number as compared to males, which was similar to the findings of a study which was done by Gillespie et al.^[7] The reasons for the less percentage of female donors could be a low donor turnover and temporary deferral conditions like low haemoglobin values, low weight, and fear of pain. In a study which was done by Hollingsworth, female donors constituted only 1% of the donor population.^[8] From the demographic data it was also observed that more than half (56.7%) blood donors educational qualification was graduation and above. Our study result showed that more than half (56.0%) donors had knowledge about the eligibility criteria of blood donation like age to start blood donation, interval between each donation, as in the study of Lischen et al.^[9]

There was lack of knowledge in donors about the volume of donated blood in each donation and required Hb level for blood donation, here observed that almost half (47.3%) did not know the volume of donated blood, similarly more than half (57.3%) did not know the required Hb level to donate blood. So, to create awareness, a clear simple and constant message must be delivered by using health education materials to the target groups. About the practice of blood donation it was observed almost all the donors (96.0) mentioned the reason for donating blood was to help their friends or relatives, which was inconsistent with the study findings conducted by Ferdous

A et al.^[6] where they shown 64.8% donors donated blood to help relatives. More than half (56.0%) had past history of blood donation and majority of donors (86.9%) were willing to become regular donor, which was quite similar with the study done by Olaiya et al.^[10] With regards to the impact of the blood donation, 68.6 % of the donors showed positive effects like a feeling of satisfaction after the donation, 31.2 % of the donors showed negative effects like tiredness/ fatigue, fear. This was almost similar to the findings of the study which was done by Sojka et al.^[11] This study found a highly significant association in Chi square test between blood donation and sex (p value.016). Males in our society are more likely to donate blood than females. This is quite understandable since women within the donor age range usually may have one factor or another interfering with their chances of being suitable to donate. Factors such as their frequent menstrual cycles, pregnancy, and lactation may prevent them from donation. This is in affirmation of the WHO report that there are more male donors in Nigeria.^[12] Again strongly significant association found between educational status of the donors and blood donation in Fisher's Exact test (p value.000).

Conclusion:

Based on the findings of the present study, it can be concluded that a majority of the donors were willing to be regular donors, which is a positive approach. The donors showed positive effects like a sense of satisfaction after the donation. In our study, most of the donors were aware about the blood donation and they had a good attitude towards it. However, creating opportunities for blood donations by conducting many blood donation camps may provide a solution for our blood demand. There is a need for active education program to encourage all, and sundry if adequate and safe blood will be guaranteed.

References:

1. A. M. Buyx, "Blood donation, payment, and non-cash incentives: classical questions drawing renewed interest," *Transfusion Medicine and Hemotherapy*, vol. 36, no. 5, pp. 329–339, 2009
2. T. Eastlund, "Monetary blood donation incentives and the risk of transfusion-transmitted infection," *Transfusion*, vol. 38, no. 9, pp. 874–882, 1998
3. Mansour AH. Blood donor recruitment. *ISBT Science Series*. 2009;4:11–13
4. Dorothy DN, Deborah AD, Nora VH, Edward LM. Blood donor satisfaction and intention of future donation. *Transfusion*. 2008;48:742–48
5. Bangladesh Blood Transfusion Sub-Committee (BTSC) 1997; Plan of action on safe blood transfusion. National AIDS Committee, Dhaka.
6. Ferdous A, Zubaida N, Amanul I.(2015).Frequency of TTI Among Blood Donors at Specialized Tertiary care Hospital in Bangladesh.Journal of National Institute of Neurosciences, Volume 1, Number 1.
7. Gillespie TW, Hillyer CD. Blood donors and factors impacting the blood donation decision. *Transfusion medicine Reviews*. 2002;16:115–17
8. Hollingsworth B, Wildman J. What population influences the decision to donate blood? *Transfusion medicine*. 2004;14:9–12.
9. Lischen HG, Marjorie K. Study on the knowledge, beliefs, perception, attitude and practices on voluntary non remunerator blood donation in Namibia
10. Olaiya MA, Alakija W, Ajala A, Olatunji R. Knowledge, attitudes, beliefs and Motivations towards blood donation among blood donors in Lagos, Nigeria. *Transfusion Medicine*. 2002;42:216–25
11. Sojka BN, Sojka P. The Blood Donation Experience; Perceived Physical, psychological and social impact of the blood donation on the donor. *Vox Sanguinis*. 2003;84:120–28
12. "World Blood Donor Day: from ritual to implementation," *Nigerian Compass Newspaper*, 2010.