



BLOOD DONATION; KNOWLEDGE, ATTITUDE AND BELIEFS OF THE FEMALE ATTENDANTS

1. MBBS, FCPS (Haematology)
Assistant Professor of Pathology
Department of Haematology &
Transfusion Medicine
The Children's Hospital & ICH,
Lahore.
2. MBBS, FCPS (Haematology)
Department of Haematology &
Transfusion Medicine
The Children's Hospital & ICH,
Lahore.
3. MBBS
Post Graduate Trainee,
Haematology
Department of Haematology &
Transfusion Medicine
The Children's Hospital & ICH,
Lahore.
4. MBBS
Post graduate Trainee, Haematology
Department of Haematology &
Transfusion Medicine
The Children's Hospital & ICH,
Lahore.

Correspondence Address:

Dr. Nazish Saqlain
Assistant Professor of Pathology
Department of Haematology &
Transfusion Medicine
The Children's Hospital & ICH, Lahore.
nazish68@yahoo.com

Article received on:

26/04/2017

Accepted for publication:

15/09/2017

Received after proof reading:

29/11/2017

INTRODUCTION

In the era of modern medical science there is no doubt about the use of blood transfusions in saving precious lives. The transfusion practices are well recognized since 1930s in the management of several illnesses.¹ The benefits are not without hazards. Blood and its products are considered as a major source for transmission of Hepatitis C, Hepatitis B, HIV and a number of other infections. This fact highlighted the importance of "Safe Blood". The first step in achieving this goal is careful donor selection and shifting the trend from replacement or paid donors towards voluntary donors.² The recruitment of voluntary donors and maintenance of donor registries has been a major issue in all the developing countries.

All over the world around 80 million units of blood are donated annually. Pakistan has been ranked

Nazish Saqlain¹, Nisar Ahmed², Aatika Ahmed³, Sidra Hareem⁴

ABSTRACT: The participation of women in blood donation process has been scarce equally in low & high resourced countries. Every year 3.5 million blood donations are collected in Pakistan with very little percentage of females donating blood. **Objective:** The objective of the study was to assess the knowledge, attitude and beliefs of female attendants accompanying the patients. **Study Design:** Cross-sectional study. **Setting:** The Children's Hospital & Institute of Child Health, Lahore, regarding blood donation. **Period:** 1st June to 31st December, 2015. **Material & Methods:** 306 females of age 16-50 years accompanying a patient in the hospital were randomly selected. After taking informed consent, a self-designed questionnaire validated by Kappa Statistics program was distributed to the participants. Data was analyzed by using SPSS 22. **Results:** The mean age of female attendants was 29.57 years. 31.7% had never received any education. Only 12.7% had donated blood before. 93.8% had the idea that a blood transfusion is a lifesaving procedure but only half of them knew the common blood groups. 87.3% knew that both males and females can donate blood but 75.5% thought that males are better donors than females. There was a lack of knowledge about certain important facts including transfusion transmissible infections, donation frequency, duration and volume of blood collected during a single session. Majority females were of the view that they are too fragile to donate blood and severe and prolonged anemia can develop after donating blood. **Conclusion:** There is a need to develop effective interventions for the education & motivation of potential female donors towards blood donation in order to increase the donor turnover rate.

Key words: Female, Blood Donation, Participation, Pakistan.

Article Citation: Saqlain N, Ahmed N, Ahmed A, Hareem S. Blood donation; Knowledge, attitude and beliefs of the female attendants. Professional Med J 2017;24(12):1806-1811. DOI:10.17957/TPMJ/17.4003

as the sixth most populated country where every year 3.5 million blood donations are collected. According to the 2013 statistics, 88.3% donations were from replacement or directed donors and only 10.6% from voluntary donors.³ Pakistan has a high blood transfusion need because of the maternal morbidity, and increased number of patients of thalassemia and congenital bleeding disorders. Among the population of age group 15–64 years the male to female ratio is 1.09:1. But this gender ratio is not represented among the blood donors all over the country.⁴

The participation of women in blood donation process has been scarce equally in low & high resourced countries. Many females think that they are not medically fit to donate blood or they will develop prolonged weakness due to anemia induced by donating blood. Many erroneous

beliefs do prevail in the society that men are healthier than women & that they are better donors.⁵

Even when talking about developed countries, a report done between 1994 and 2010 in Germany and Switzerland suggested the need to devise strategies to motivate women to give blood.⁶ A study done in Nigeria showed that among donors 97% were men and 3%, were women.⁷ A study conducted at Fauji Foundation Hospital, Rawalpindi, Pakistan, a total number of 1428 donors were studied, out of which 97.05% were males.⁸ A study done by Malik R et al has also shown similar results.⁹ A Nationwide survey conducted in Pakistan (2012) has reported 70% donors were males and highlighted the fact that detailed study is required to assess the factors leading to reluctance to donate blood among the females.¹⁰

This study is focused to assess the knowledge, attitude and beliefs of females towards blood donation, not only voluntary but also about replacement or directed donation. Only after determining the inhibiting factors motivational strategies can be devised, including effective educational programs in local language, involvement of NGOs and social workers. Since in Pakistan, females constitute almost 50% of the total population, their active participation in blood donation process is highly needed.

OBJECTIVE

The objective of this study was to assess the level of knowledge of female attendants accompanying the patients at The Children's Hospital and Institute of Child Health, Lahore, regarding blood donation and to find out positive and negative attitudes and beliefs.

MATERIALS AND METHODS

It was a cross-sectional, descriptive study, carried out at The Children's Hospital and Institute of Child Health, Lahore over the period of seven months from 1st June to 30th December, 2015. 306 females of age 16-50 years accompanying a patient in the hospital were randomly selected. After taking informed consent, a self-designed

questionnaire validated by Kappa Statistics program was distributed to the participants by 2 hematology residents who explained the questions and help illiterate individuals to fill in the proforma. The questionnaire included questions addressing 4 areas: 1. demographic data, 2. Knowledge, 3. attitudes and beliefs and 4. Future approach towards blood donation. The filled questionnaires were collected at the same time. Data was entered and analyzed by using SPSS 22. Quantitative data is presented in form of mean and standard deviation while qualitative data is presented in form of frequency and percentage.

ETHICAL CONSIDERATION

Informed consent was taken from all the participants before giving the proformas keeping their identity confidential. The study was approved by the Hospital ethical committee.

RESULTS

Demographic Data

Mean age of the female participants was found to be 29.57 years with the standard deviation of 8.167 years. Majority of them fell in the age group of 18-30 years. 92.8% were married. 71.2% were not employed and staying at home. Out of 306 participants only 39 (12.7%) had donated blood before.

Knowledge

93.5% females knew that blood transfusion can save a patient's life. 51.6% knew the common ABO and Rh blood groups but only 38.9% were aware of their own blood group. In a country like Pakistan where family links and ties are considered to be very strong, 54.2% females thought that unrelated persons can donate blood for others with no inferior effects on treatment. 87.3% had the fair idea that males and females both are eligible to donate blood if they fulfill the donor's requirement. 68.3% had the idea of transfusion transmittable infections, knowledge was better about Hepatitis B, C and HIV but poor information about the transmission of malaria and syphilis. There was a lack of knowledge about blood donation frequency, duration and volume of blood collected during a single session.

Attitudes and Beliefs

Majority of the participants (75.5%) thought men are better donors than women. They had misbeliefs that blood donation can lead to extreme weakness and anemia (68.3%), females are too fragile and weak (71.9%) and most of them are underweight to be blood donors (64.7%). 52.9% had the fear that they would not be able to carry out their daily activities efficiently after blood donation. Decision power rested on the male family members in 65.0% of the participants. Donating blood was according to the religious beliefs in 83.0% cases. 51.3% females had no idea about the safety of blood already stored in the blood banks. Only 22.9% thought that voluntary blood donation is the best source of blood.

Future Approach towards blood donation

58.5% of the participants were never invited or asked to donate blood voluntarily at blood donation camps. However, 38.6% showed willingness to become voluntary blood donors in the future and 51.3% of the females were ready to encourage other females to donate blood on voluntary basis.

	Number (n)	Percentage (%)
Age Groups		
18-30 years	186	60.8
31-50 years	120	39.2
Marital Status		
Married	284	92.8
Un-married	22	7.2
Age of youngest child		
Not applicable or No child	38	12.4
< 1 year	43	14.0
1-5 years	188	61.4
> 5 years	37	12.1
Educational Status		
Elementary	74	24.2
Higher secondary	62	20.3
Intermediate	6	2.0
Graduate	31	10.1
Post Graduate	36	11.8
Illiterate	97	31.7
Occupation		
None	218	71.2
Govt. Employee	65	21.2
Private Employee	11	3.6
Self Employed	12	3.9
Previous blood donations		
Yes	39	12.7
No	267	87.3

Table-I. The Demographic data of the participants

DISCUSSION

Blood is a unique gift from a healthy individual to a diseased one. To meet the continuous and increasing demand of healthy and safe blood, the spot light has long been shifted towards donors. That is why the World Blood Donor Day, 2015 was celebrated with the theme "Thank you for saving my life" in order to thank the donors for their precious donations and to encourage them to donate voluntarily and frequently.

A number of donor types have been explained in the literature among which the Voluntary Non-Remunerated Donors (VNRD) are considered to be the most appropriate.² WHO has motivated all its member countries to develop national blood transfusion services based on voluntary non-remunerated blood donation.¹¹ Pakistan as a participant to WHO resolutions has set the year 2020 as a target year to achieve 100% voluntary non remunerated blood donation. But the recruitment of VNRD and maintenance of their registries is a big challenge for the developing countries like Pakistan, where the half of the population that is females donate blood infrequently. The hurdles include lack of knowledge about the blood donation process, the financial constraints, the hassle involved, the family and cultural traditions and lack of interest of authorities.¹²

Previously many national and international studies have been done on the general population regarding their views about voluntary blood donation. A number of studies have shown that females participation in blood donation process is low especially in the developing world.^{6,9,10} Erhabor O et al conducted a study in Sokoto, Nigeria and found that among 14,965 donors only 0.64% were female.⁶ Among the European countries Italy and Greece have been reported to have comparatively less female donors.¹³ Very few studies have focused on the factors playing inhibitory role for the females to donate blood. A study done on Turkish women concluded that only after understanding such reasons leading to the misbeliefs of female potential donors, donation rate can be increased.¹⁴

Questions	Yes	No	No Response
Can blood transfusion save the life of a patient?	286(93.5%)	13 (4.2%)	7(2.3%)
Do you know the common blood groups?	158(51.6%)	112(36.6%)	36(11.7%)
Do you know your blood group?	119(38.9%)	185(60.4%)	2(0.6%)
Can only the family members of a recipient can donate blood?	115(37.6%)	166(54.2%)	25(8.1%)
Can both males and females donate blood?	267(87.3%)	24(7.8%)	15(4.9%)
Can a person become infected after receiving blood transfusion?	209(68.3%)	69(22.5%)	28(9.15%)
Which of the following infectious diseases can be transmitted through a blood transfusion?			
• HIV	81(26.5%)	190(62.1%)	35(11.4%)
• Hepatitis B	72(23.5%)	165(53.9%)	69(22.5%)
• Hepatitis C	68(22.2%)	171(55.9%)	67(21.9%)
• Syphilis	16(5.2%)	235(76.8%)	55(18.0%)
• Malaria	23(7.5%)	232(75.8%)	51(16.7%)
How frequently can an individual donate blood?			
• Weekly	51(16.7%)		
• Monthly	60 (19.6%)		
• 3 Monthly	49 (16.0%)		
• 6 Monthly	27 (8.8%)		
• Annually	28 (9.2%)		
• Don't Know	91 (29.7%)		
What volume of blood is collected during each donation?			
• < 500 ml	125 (40.8%)		
• 500-1000 ml	32 (10.5%)		
• Don't Know	130 (42.5%)		
• No response	19 (6.2%)		
What is the approximate duration of donation process?			
• < 20 minutes	89 (29.1%)		
• 20-60 minutes	38 (12.4%)		
• > 60 minutes	30 (9.8%)		
• Don't Know	129 (42.2%)		
• No response	20 (6.5%)		

Table-II. Knowledge about blood donation

Questions	Yes	No	No response
Are Male donors a better source of blood donation?	231 (75.5%)	59 (19.3%)	16 (5.2%)
Can blood donation cause extreme weakness and anemia?	209 (68.3%)	78 (25.5%)	19 (6.2%)
Are females weak and fragile to donate blood?	220 (71.9%)	74 (24.2%)	12 (3.9%)
Are majority of the females underweight to donate blood?	198 (64.7%)	67 (21.9%)	41 (13.4%)
Do you think that after donating blood you can perform your daily activities without any problem?	162 (52.9%)	106 (34.6%)	38 (12.4)
Do the male members in the family would take the decision whether you should donate blood or not?	199 (65.0%)	66 (21.6%)	41 (13.4%)
Is Blood donation according to your religious belief?	254 (83.0%)	28 (9.2%)	24 (7.8%)
Do you think that the blood already stored in the blood banks is safe to be transfused?	107 (35.0%)	42 (13.7%)	157 (51.3%)
What do you think is the best source of donors?	Frequency (Percentage)		
• Voluntary donors	70 (22.9%)		
• Replacement donors	6 (2.0%)		
• Directed donors	44 (14.4%)		
• Autologous blood donors	66 (21.6%)		
• Don't know	120 (39.2%)		

Table-III. Attitudes and Beliefs of female attendants towards blood donation

Question	Yes	No	No Response
4.1 Has anybody ever asked you to donate?	105 (34.3%)	179 (58.5%)	22 (7.2%)
4.2 Would you like to donate blood as a volunteer in future?	118 (38.6%)	121 (39.5%)	67 (21.9%)
4.3 Would you encourage other females to participate in voluntary blood donation camps as donor?	157 (51.3%)	87 (28.4%)	62 (20.3%)

Table-IV. Future Approach towards blood donation

Pakistan is the country with increasing population where almost 50% of the population comprises of females but the gender bias does prevail in the country in many aspects including the blood donation process. The results of the study revealed that the mean age of the female participants was 29.57 years and majority were in the age group of 18-30 years, which is a suitable age for blood donation. 31.7% had not received any education while 24.2% had only completed elementary school, pointing towards the fact that by increasing the literacy rate of the country particularly by improving the female education we can bring more of them to the blood donation camps. An educated woman is in a much better position to critically evaluate her decision whether to donate blood or not and to guide her children to become voluntary donors. None of the participants had been a voluntary donor.

The study participants had a fair idea about the importance of blood transfusion in saving a patient's life. 51.6% knew about the common ABO and Rh blood group systems but majority of them did not know their own blood group type. They had the information that males and females both can donate blood and it's not only the family members of the patient who are eligible donors. They were informed that a person can become infected with Hepatitis C, Hepatitis B or HIV after the transfusion of infected blood but very few knew about the transmission of malaria and syphilis through the same route. So the lack of basic information about blood donation process was found.

Many misbeliefs were found. Participants believed that men are better blood donors since being females they are fragile and more prone to the development of prolonged post-donation anemia. Similar thoughts were shared in the previous studies.^{9,12} Others feared that they would

not be able to carry their daily routine efficiently after blood donation. In majority of the cases the females were reluctant to donate blood without the permission of their male family members. However, looking at bright side 38.6% showed willingness to donate blood voluntarily in future. These participants can be the motivational speakers and role models in educational campaigns.

Another study from Pakistan have pointed out that women tend to donate less as they think their blood is not appropriate due to menstruation.¹² Glynn SA et al concluded that fear of the blood donation process including the needle pricks and syncopal attack are other reasons repulsing the ladies from donating blood.¹⁵ Majority of the participants were Muslims and gave the opinion that it is right in Islam to donate blood in order to help others. Iran has involved the religious scholars to motivate people to donate blood as a good deed, highlighting the fact that incorporation of such people in motivational programs can be really useful.^{14,16}

CONCLUSION

The need of the hour is to start the effective society based educational programs for females and especially mothers about the importance of blood donation, dissipating the necessary information regarding the issue. The relationship of Altruism with donation process need to be stressed. Local languages, religious beliefs, culture and local traditions have to be kept in mind. Only after getting a high turnover of healthy voluntary donors including both males and females, we will be in a better position to have a continuous and safe blood supply in the country.


Copyright© 15 Sep, 2017.

REFERENCES

1. Zafar N. **A survey of blood transfusion practices.** J Coll Physicians Surg Pak 2000; 10(3):90-2.

2. Asif N, Kokhar N, Ilahi F. **Seroprevalence of HBV, HCV and HIV infection among voluntary non remunerated and replacement donors in Northern Pakistan.** Pak J Med Sci 2004; 20(1):24-8
3. **WHO Global Database on Blood Safety (2013) World Health Organization.**
4. **Demographic Yearbook". UN Data. United Nations.** Retrieved 4 December 2015.
5. Bianco C, Brittenham G, Gilcher RO, et al. **Maintaining iron balance in women blood donors of childbearing age: summary of a workshop.** Transfusion. 2002; 42:798-805.
6. Volken T, Weidmann C, Bart T, Fischer Y, Klüter H, et al. **Individual Characteristics Associated with Blood Donation: A Cross-National Comparison of the German and Swiss Population between 1994 and 2010.** Transfus Med Hemother 2013; 40: 133-138.
7. Erhabor O, Isaac Z, Abdulrahman Y, Ndakotsu M, Ikhuenbor D.B, Aghedo F, et al. **Female Gender Participation in the Blood Donation Process in Resource Poor Settings: Case study of Sokoto in North Western Nigeria.** J Blood Disorders Transf 2013; 5:1.
8. Chaudhary I.A, Samiullah, Khan S.S, Masood R, Sardar M.A, Mallhi A.A. **Seroprevalence of Hepatitis B and C among the healthy blood donors at Fauji Foundation Hospital, Rawalpindi** Pak J Med Sci 2007; 23: 164-67.
9. Malik M.R, Majid S, Laghari M.S. **Determinants of blood donation behaviour of general public in Pakistan.** Pak J Med Health Sci Apr - Jun 2010; 4(2):137-42.
10. Waheed U, Azmat M, Zaheer H. A. **Knowledge, Attitude and Practices towards Blood Donation in Pakistan: A Nationwide Survey.** HematolTransfusInt J 2015, 1(4): 00018.
11. **World Health Organization (2009) The Melbourne Declaration on 100% Voluntary Non-remunerated Donation of Blood and Blood Components.** World Health Organization.
12. Mumtaz Z, Bowen S, Mumtaz R. **Meanings of blood, bleeding and blood donations in Pakistan: implications for national vs global safe blood supply policies.** Health Policy Plan 2012; 27: 147-55.
13. Bani M, Giussani B. **Gender differences in giving blood: a review of the literature.** Blood Transfus 2010; 8: 278-87.
14. Dilsad S, Tanriover O, Hidiroglu S, Gurbuz Y, Karavus M. **Knowledge, attitudes and beliefs of Turkish women towards blood donation.** J Pak Med Assoc 2014; Vol. 64, No. 8.
15. Glynn SA, Kleinman SH, Schreiber GB, Zuck T, Combs SM, Berthel J, et al. **Motivations to donate blood: demographic comparisons.** Transfusion 2002; 42: 216-25.
16. Maghsudlu M, Nasizadeh S. **Iranian blood donors' motivations and their influencing factors.** Transfus Med 2011; 21: 247-52.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Nazish Saqlain	Conception of idea, Proforma design, Resutls compilation writing of the manuscript	
2	Nisar Ahmed	Conception of idea reviewing of the resutls and final manuscript.	
3	Aatika Ahmed	Performa filling, writing of manuscript.	
4	Sidra Hareem	Performa filling, reviewing of the resutls and manuscript.	