

Safe Blood to Save Life: A Study to Assess the Knowledge, Attitude, and Practice Regarding Blood Donation among Undergraduate Medical Students

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ABSTRACT

Objective: To explore the Knowledge, Attitude and Practice regarding blood donation among undergraduate medical students in Rashid Latif Medical College, Lahore.

Study Design: Descriptive / cross sectional study

Place and Duration of Study: This study was conducted at the Rashid Latif Medical College, Lahore from July to September 2019.

Materials and Methods: A total of 347 students who were present on the day of the survey and expressed their consent for participation were enrolled in the study. A structured validated questionnaire was used as a study tool.

Results: A total of 347 undergraduate medical students responded to the questionnaire, 191 were in Group A and 156 were in Group B. In group A 29 (15%) donated blood, while in group B donors are only 5%. Majority of the students in both groups know their blood groups. Knowledge about the blood donations among medical students is inadequate.

Conclusion: Inadequate knowledge indicates a need to incorporate topics of transfusion medicine in undergraduate curricula. Opportunities for blood donations should be created regularly to increase the sense of social responsibility among medical students.

Key Words: Blood donation, Medical Students, Knowledge, Attitudes, Practice

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INTRODUCTION

Safe blood transfusion is one of the most essential needs in preventing people from various serious and life threatening medical conditions. It is the most important intervention for surgeries, trauma, blood disorders and chemotherapy.¹ There is always a need for safe blood to save life. Millions of lives can be saved by this intervention each year.² Although millions of blood units are collected each year but demands are still increasing.³ Globally from all types of blood donors, around 92 million units of blood donations are collected annually.

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According to World Health Organization (WHO), at least 1% of the nation's population should voluntarily donate blood in order to meet the basic requirement for blood and its products.⁴

In Pakistan, the requirement of blood bags for transfusion is more than 1.5 million per year.^{2,5} but unfortunately the rate of blood donation is less than one percent and it is insufficient to meet the requirements of such country where thalassemia and anemia are the main concerns. Blood which is donated by the friends and relatives accounts for 90%, while around 10% blood is donated by professional donors.² The percentage of voluntary donors is still very less in developing country like Pakistan. So there is a need to create awareness among young students which are energetic, receptive and motivated potential blood donors. They are the good source of voluntary blood donors.³ Medical students can be used as best model to lead this initiative.¹ These students with positive attitude and good practice may influence their peer groups and general public.⁴ Therefore, the objective of this study is to explore the Knowledge, Attitude and Practice among undergraduate medical students regarding blood donation in Rashid Latif medical college, Lahore.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted among undergraduate Medical Students at Rashid Latif Medical College, Lahore from July to September 2019. A total of 347 students who expressed their consent for participation, were enrolled in the study. Group A comprised of 191 students of third year and fourth year MBBS. Group B comprised of 156 students of first year and second year MBBS. The nature and purpose of study were explained to them. Anonymity of participants was maintained. A structured validated questionnaire was used as a study tool.⁷ Which was based on WHO guidelines on blood donation.⁷ It include four parts, the first part enquires about socio-demographic data. The second part consist of reasons for donation and non- donation. The third part deals with knowledge of blood donation, while the fourth part includes questions about attitude of the students towards blood donation. All students were interviewed to fill the Performa.

For assessment of the seven knowledge questions, one score was given for correct answer, and zero score was given for incorrect answer. The total scoring of knowledge ranged between 0-7. The respondents whose scores were more than 50% of the total scores (i.e., ≥ 4) were considered to have adequate knowledge. While for 09 questions about attitude was assessed by agree and disagree responses. For each agree one score was given and for disagree zero score was given. The students with a total score equals to 50 percentile (median) were labeled as having positive attitude. Data was entered into and analyzed using SPSS software version 22. Percentages were used for categorical data. While mean and standard deviation were used for analysis of variables and difference was measured through t-test. P-value < 0.05 was considered as significant. The study was approved by the ethical research committee of Rashid Latif Medical College.

RESULTS

A total of 347 undergraduate medical students responded to the questionnaire, 191 were in Group A and 156 were in Group B. All responders were single in their marital status. In group A 29 (15%) donated blood and 162(84.8%) never donated blood, while in group B donors are only 5%. Majority of the students in both group have knowledge about their blood groups. (Table No.1)

Out of 37 students who donated blood 75.8% donated once, 17.2% donated twice and only 6.8% donated more than 3 times. The main reason for donation is for the relative or friends 59.4% (Fig #1). While the main cause for non-donation is that they were never asked to

donate (28%). (Table No.2). Out of seven knowledge questions group a students answer 3 out of 7 (more than 50%) than Group B. Both groups have inadequate knowledge about blood donation. Group A students have positive attitude toward blood donation 70.4% of the total studied participants. Majority of the students will donate blood in emergency situations and when friend need it (96%).

Table No.1: General characteristics of study population

Variables	Group A (n=191)	Group B (n=156)	P value
Male	98(51.3%)	92(59%)	0.154
Female n(%)	93(48.7%)	64(41%)	
Age , mean \pm SD	23 \pm 1.26	20 \pm 1.20	<0.001
Donors, n(%)	29(15%)	8(5%)	0.003
Know about their blood group n(%)	171 (89.5%)	142(91%)	0.641

Table No. 2: Causes of Non- Donation

Questions	Students (n=310)%
Never thought about blood donation	30(9.6%)
Never asked to donate	86(28%)
Not enough time	12(3.9%)
Don't know where to donate	14(4.5%)
Fear of side effects	14(4.5%)
Fear of drawing blood	10(3.2%)
Fear of transmitted diseases	81(26%)
Fear of sight of blood	4(1.2%)
Health issues	17(5.5%)
No specific cause	17(5.5%)
Multiple reasons	36(11.6%)

Table No.3: Respondents with correct knowledge questions

Items	Group A (n=191)%	Group B (n=156)%	Total (n=347)	P-value
Blood volume donated in every donation	78(40.8%)	20(13%)	98(28%)	<0.001*
Time interval between two successive donations	61(31.9%)	33(21%)	94(27%)	0.025*
Suitable age for donation	71(37%)	51(32%)	122(35%)	0.385
Minimum weight for donation	79(41.3%)	64(41%)	143(41%)	0.950
Should blood be tested before donation?	181(95%)	146(93.5%)	327(94%)	0.640
Do all surgical procedures need blood donation?	177(92.6%)	74(47%)	251(72%)	<0.001*
Could infections be transmitted by blood?	173(90.5%)	77(49%)	250(72%)	<0.001*

Table No.4: Respondents with positive attitude

Items	Group A (n= 191)%	Group B (n=156)%	Total (n=347)%	P value
Blood donation is a good habit	182(95%)	152(97%)	334(96%)	0.295
There is no need to give incentive who donate blood	171(90%)	148(95%)	319(92%)	0.069
Blood donation is safe	98(51%)	75(48%)	173(50%)	0.549
I will tell if I have any medical issues before donation	177(92%)	72(46%)	249(72%)	<0.0001*
I will donate if friend needs blood	184(96%)	140(89%)	324(93%)	0.014*
I will donate if there is an emergency situation	183(96%)	131(83%)	314(90%)	<0.001*
I will donate if there is a campaign	173(90.5%)	132(85%)	305(88%)	0.090
I will encourage relatives and friend to donate blood	101(52.8%)	25(16%)	126(36%)	<0.001*
Blood donation does not lead to anemia	93(48.6%)	101(65%)	194(56%)	0.003*

DISCUSSION

Blood donation is the core component of health care facilities, in this study we have explored the knowledge, attitude and practice of blood donation among young students who are the healthy and enthusiastic donors. We also sought out causes for donations and non-donations. In the present study the prevalence of blood donors among the students are 10% which is in concordance with the studies reported in the past, Iraq (14.7%),⁷Thailand (11%)¹¹ and Nigeria (15%)¹⁰. The main cause of donation in our study is a friend or relative need followed by moral satisfaction. While other studies reported that the main reason for donation is moral satisfaction. In a country like Pakistan where family bounds are strong our youth donate blood whenever needed. In our study the cause for non-donation is that they were never asked to donate which is in line with the study reported in Iraq,⁷ from Faisalabad² and Karachi.³ second main cause is the fear of blood transmitted diseases reported by 26% of medical students. The reason for this is awareness about transmitted infections like hepatitis and HIV. In our study majority of the students were aware of their blood groups which is comparable from a study from Lahore.¹²

Knowledge about most of the blood donation related questions are inadequate which is in line with other studies.^{1,7} In our study students have inadequate knowledge about volume of donated blood, time interval, suitable age and weight to donate blood which is in line with the study reported from Iraq. But overall knowledge about the blood donation is observed in 63% of students, which is in line with study conducted in Central India (52.5%) and South India (62%).^{8,9} While it is high in Nigeria (85%).¹⁰ This may be due to sociodemographic differences.

Our students showed positive attitude towards blood donation which is in concordance with other studies. The positive thing that we observed in our study that students don't want any incentive for donation which is comparable to other study from Pakistan.²In contrast to our study, participants need incentives for

donation.¹³The positive attitude of youth towards blood donation is a significant finding in our study, a need is to motivate students. The gap between the demand and supply can be narrowed by giving them opportunities for donations. The shortcoming in this study was to include any comparative group from other non-medical students.

CONCLUSION

There is a need to conduct seminars to increase awareness and motivation towards voluntary blood donation among students. Inadequate knowledge indicates a need to incorporate topics of transfusion medicine in undergraduate curricula. Opportunities for blood donations should be created regularly by conducting blood donation camp, this will increase the Sense of social responsibility among medical students.

Author's Contribution:

Concept & Design of Study: Sofia Waheed Khan, Maheen Rana
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REFERENCES

- Melku M, Asrie F, Shiferaw E, Woldu B, Yihunew Y, Asmelash D, et al. Knowledge, attitude and practice regarding blood donation among graduating undergraduate health science students at the University of Gondar, Northwest Ethiopia. *Ethiopian J Health Sci* 2018;28(5).
- Tariq S, Jawed S. Knowledge and attitude of blood donation among female medical students in

- Faisalabad. JPMA. J Pak Med Assoc 2018;68(1): 65-70.
3. Ahmed Z, Zafar M, Khan AA, Anjum MU, Siddiqui MA. Knowledge, attitude and practices about blood donation among undergraduate medical students in Karachi. J Infectious Dis Therapy 2014.
 4. Verma P, Thakur A, Saklecha D, Kasar PK. A cross sectional study to assess knowledge, attitude and practice regarding voluntary blood donation among medical students of Jabalpur, central India. Int J Comm Med Publ Health 2018;5(3):963.
 5. World Health Organization. Blood safety. Blood transfusion in Pakistan.[Online][Cited 2017 January 01]. Available from: URL: <http://www.emro.who.int/pak/programmes/blood-safety.html>. 2004.
 6. Chauhan R, Kumar R, Thakur S. A study to assess the knowledge, attitude, and practices about blood donation among medical students of a medical college in North India. J Family Med Primary Care 2018;7(4):693.
 7. Al-Asadi JN, Al-Yassen AQ. Knowledge, attitude and practice of blood donation among university students in Basrah, Iraq: a comparison between medical and non-medical students. Asian J Med Sci 2018;9(6):62-7.
 8. Giri PA, Phalke DB. Knowledge and attitude about blood donation amongst undergraduate students of Pravara Institute of Medical Sciences Deemed University of Central India. Annals of Tropical Med Publ Health 2012;5(6):569.
 9. Sabu KM, Remya A, Binu VS, Vivek R. Knowledge, attitude and practice on blood donation among health science students in a university campus, South India. Online J Health and Allied Sci 2011;10(2).
 10. Salaudeen AG, Odeh E. Knowledge and behavior towards voluntary blood donation among students of a tertiary institution in Nigeria. Nigerian J Clin Prac 2011;14(3):303-7.
 11. Wiwanitkit V. Knowledge about blood donation among a sample of Thai university students. Voxsanguinis 2002;83(2):97-9.
 12. Mirza HU, Khan F, Naeem FJ, Ashraf B. Blood safety and donation knowledge, attitude and practice (KAP) among 1st year medical students at LMDC, Lahore. Pak J Med Health Sci 2015;9:992.
 13. Gader AG, Osman AM, Al Gahtani FH, Farghali MN, Ramadan AH, Al-Momen AK. Attitude to blood donation in Saudi Arabia. Asian J Transfusion Sci 2011;5(2):121.