



BLOOD DONATION; KNOWLEDGE, ATTITUDE AND PRACTICE OF MEDICAL STUDENTS

Dr. Muhammad Zahid Latif¹, Haroon Riaz², Dr. Syed Waseem Ahmad Mujtaba³, Rahila Nizami⁴

1. Associate Professor Community Medicine & Director
Department of Medical Education
Azra Naheed Medical College
Lahore.
2. Department of Biochemistry
Azra Naheed Medical College
Lahore.
3. Assistant Professor
Department of Medicine
Azra Naheed Medical College
Lahore.
4. University of Management &
Technology Lahore.

Correspondence Address:

Dr Muhammad Zahid Latif
Associate Professor Community
Medicine &
Director Department of Medical
Education
Azra Naheed Medical College Lahore.
mzahidlatif@yahoo.com

Article received on:
02/08/2016

Accepted for publication:
15/01/2017

Received after proof reading:
07/03/2017

ABSTRACT... Objectives: This study was conducted to assess the knowledge, attitude and practices of students regarding blood transfusion in a medical institute. **Settings:** Azra Naheed Medical College Raiwind road Lahore. **Study Design:** Descriptive, cross sectional study. **Study Period:** May and June, 2015. **Methods:** After the approval of the ethical institutional review committee, 168 students of 4th year MBBS and 6th semester DPT were included in this study. The data was collected on a structured questionnaire. This data was entered in the version 16 of SPSS and analyzed by the use of statistical tools. **Results:** Out of the total 168 participants, 90 (53.6 %) were the students of MBBS, whereas 78 (46.4 %) were the students of DPT. The age of the respondents ranges between 19 to 28 years. 81 (48.2 %) were male students whereas 87 (51.8 %) were females. The results represent that the medical students are having a good knowledge regarding blood donation but a clear majority of the respondents (63.7 %) have never donated blood. However a vast majority (78 %) of the participants responded to donate blood in near future. **Conclusion:** The blood donation and transfusion is a safe procedure, but it may affect the health of recipient if the necessary measures are not observed. This study reflects that medical students have good knowledge about blood donation and are willing to donate in near future. A campaign for awareness and motivation regarding voluntary and unpaid blood donation can help to achieve the target of WHO for safe blood transfusion.

Key words: Medical students, Blood donation, Blood transfusion, Knowledge, attitude, practice

Article Citation: Latif MZ, Riaz H, Mujtaba SWA, Nizami R. Blood donation; knowledge, attitude and practice of medical students. Professional Med J 2017;24(3):370-374.
DOI: 10.17957/TPMJ/17.3554

INTRODUCTION

Blood is the most important, precious and valuable gift that a healthy person can offer to a needy individual. It is vitally important for the human beings and plays a lifesaving role in the treatment of thousands of patients daily.¹ The advances of the medical services have improved the treatment of different disease specially the management of trauma and different surgical procedures. As a result the need for blood donation and transfusion services has been increased many time.

The transfusion of blood is considered as a mandatory requirement of health care system as it saves millions of lives and allow to manage complex procedures.² It is estimated that around 234 million major operations are performed every year globally³, with 63 million people undergoing surgery after trauma, 31 million more for treating

cancers and another 10 million for pregnancy related complications.⁴ Around 300,000 infant are born with thalassaemia and sickle cell disease each year and need blood transfusion on regular basis.⁵

In Pakistan, the total blood centers are 1830 with a major contribution from the private and NGO sector (85.8 %). The annual blood collection in 2008 was 2.74 million⁶ which is estimated to be more than 3.5 million if yearly growth is added. Pakistan is among the countries where blood donation is still dependent mainly on the relatives of the patients and paid donors. However it is the goal of world health organization for all the countries to obtain all blood supplies from voluntary and unpaid donors by 2020 and the same has been reflected in the national blood policy of 2014.⁷

An increase in the number of voluntary donors will enhance the blood safety and help to shift the responsibility for blood arrangement to the health care system. The shift of the paradigm need to improve the awareness of public for which the assessment of the existing knowledge, attitude and practices is a requirement. Keeping in mind the scenario this study was planned to assess the knowledge attitude and practices of medical students regarding blood transfusion.

METHODOLOGY

Study setting

This study was conducted among the MBBS & DPT students of Azra Naheed Medical College Lahore

Duration of the study

This study was conducted between the months of May to June 2015

Study design

Descriptive cross sectional study design

Population

The population comprise of the students of Azra Naheed Medical College Lahore

Type of sampling

Convenient sampling technique was used

Ethical Approval

The study was approved by the Institutional ethical review committee of Azra Naheed Medical College Lahore

Data collection tool

After the approval of institutional ethical review committee, a structured questionnaire was prepared. Questions were designed to gather the information regarding age, gender, background, and different questions to assess the knowledge, attitude and practice of students regarding blood donation. This questionnaire was pretested and necessary changes were made.

Data Collection process

All the students of 4th year MBBS and 6th semester

of DPT class present on the study day were included. The pre tested questionnaire having close ended questions was administered. The researcher explained the objective of the study and clarified different queries of the participants. The study participants filled this questionnaire.

Data analysis

The data was collected from the both classes and 12 incomplete questionnaires were excluded from the study. This data was entered in the version 16 of SPSS and analyzed by the use of statistical tools.

RESULTS

Out of the total 168 participants of the study, 90 (53.6 %) were the students of 4th year MBBS, whereas 78 (46.4 %) were the students of 6th semester of DPT. The age of the respondents ranges between 19 to 28 years with a mean of 21.8. 81 (48.2%) respondents were male where as 87 (51.8%) were female students. 130 (77.4 %) students were having the urban background and only 38 (22.6%) were having the rural family background. The gender distribution and background of the respondents is presented in Table-I.

Variable	Frequency	Percentage	
Gender	Male	81	48.2
	Female	87	51.8
Discipline	MBBS	90	53.6
	DPT	78	46.4
Background	Urban	130	77.4
	Rural	38	22.6

Table-I. Frequency distribution of gender, discipline and background

The questions were asked about the age limit for donating blood and the minimum gap between two donations. The results of these questions are presented in Table-II. Majority of the students, 108 (64%) consider 18 years age as the limit for the donation of blood. Similarly 48 (28.6%) consider 22 year, 11 (6.5%) consider 14 years and only one student (0.6%) consider 10 years of age as the limit for donating blood. The results show that majority of the students 110 (65.5%) represent three months period as a minimum gap between

two donations. 36 (21.4%) students consider four months gap, 13 (7.7%) consider two months gap and nine (5.4%) of the respondents consider that minimum gap between two donations should be one month.

Question		Frequency	Percentage
What should be the age limit for donating blood?	10 Years	1	0.6 %
	14 Years	11	6.5
	18 Years	108	64
	22 Years	48	28.6
What should be the minimum gap between two donations?	1 Month	9	5.4
	2 Month	13	7.7
	3 Month	110	65.5
	4 Month	36	21.4

Table-II. Frequency distribution about the age limit, minimum gap and quantity of blood for donation

The results of different questions to assess the knowledge, attitude and practices for blood donation are presented in Table-III. A clear majority, 136 (81%) of the total respondents represent that infectious diseases are transmitted by blood donation. Similarly 137 (81.5%) participants responded that donating blood is not harmful for the donor and 136 (81%) replied that blood donation is not a harmful procedure. 107 (63.7%) of the total respondents never donated blood and the need for transfusion was present in only 21 (12.5%) of the respondents. 87 (51.8 %) were ready to receive blood from bank in case of need whereas 120 (71.4%) were willing to donate blood to their relatives or anyone else in need. 126 (75%) responded that they have advocated for the donation and 131 (78%) were willing to donate blood in near future.

DISCUSSION

This cross sectional descriptive study was conducted at Azra Naheed Medical College Lahore to assess the knowledge, attitude and practices of medical students regarding blood donation. The donation of blood is tremendously needed in the health care facilities. It is primarily required for the replacement of blood loss after injuries, accidents or during surgical procedures. In countries like Pakistan the requirement of blood is generally dependent on the replacement by the family members or paid donors. Although the blood donation and transfusion is a safe procedure but it may affect the health of recipient if necessary measures are not observed. Due to this reason the World Health Organization has planned a goal for all the countries to obtain all blood supplies from voluntary and unpaid donors by the year of 2020 and the same is reflected in the national blood policy of Pakistan prepared in 2014.⁷ There is an interesting study that a large number population is reluctant to accept blood on religious basis^{8,9} while a study¹⁰ among population of King Abdul Aziz medical city describe that 40.1% of under-study population is not willing to donate blood. So the religious factor could play either a motivational or de motivational effect towards blood donation.

Medical students are the future of healthcare system in any country across the globe. They are also considered as the most assessable and potential blood donors. The results of this study as mentioned in table 2 and 3 revealed that the medical students are having a good

No.	Questions	Yes		No	
		Frequency	%age	Frequency	%age
1	Infectious diseases are transmitted due to blood donation?	136	81	32	19.9
2	Blood donation harmful for donor?	31	18.5	137	81.5
3	Blood donation is a painful procedure?	32	19	136	81
4	Have you ever visited a blood bank?	92	54.8	76	45.2
5	Ever donated blood?	61	36.3	107	63.7
6	Ever needed blood transfusion?	21	12.5	147	87.5
7	Will receive blood from blood bank in need?	87	51.85	81	48.2
8	Will donate blood to relatives or anyone in need?	120	71.4	48	28.6
9	Have you mentioned others to donate blood?	126	75	42	25
10	Are you willing to donate blood in near future?	131	78	37	22

Table-III. Frequency distribution about knowledge, attitude and practice regarding blood donation

knowledge regarding blood donation and these results corroborate the results of previous similar studies.^{11,12,13} These results reflect that the good level of knowledge among medical students can be utilized to maximize the practices for volunteer blood donation. However a clear majority of the respondents (63.7 %) as mentioned in Table 3 have never donated blood. Probably the reason for not donating blood is the lack of opportunity for donation. These results are similar to the finding of another study conducted in a medical college of Rajkot mentioning that 24 % of the respondents donated blood in the past.¹² The results represent that there is a need to involve the medical students in the blood donation activities by the policy makers and planners. Regular camping for blood grouping and blood donation should be managed in medical institutes.

The results mentioned in Table-III represent that a vast majority (78 %) of the participants responded to donate blood in near future. These results are contrary to the finding of another similar study in Karachi mentioning that only around 50 % of the students showed their willingness to donate blood.¹¹ These results reflect a healthier trend among the study population regarding blood donation.

It is important to mention that the safest and reliable way to improve the quality of blood is through voluntary blood donation. The readily available and potential group of donors residing adjacent to the health care facilities are the medical students. Majority of the time these students are in contact with the health care services as a part of their training. The proper involvement of medical students in the blood donation services through organized communication, motivation and participation can save the lives of many people. The participants of this study belong to medical profession and may have the opportunities to donate blood but could not practice it. Similarly they are willing to donate blood and help in saving the lives. Probably the reason is a gap in the transformation of knowledge for blood donation into practice as a blood donor.

CONCLUSION

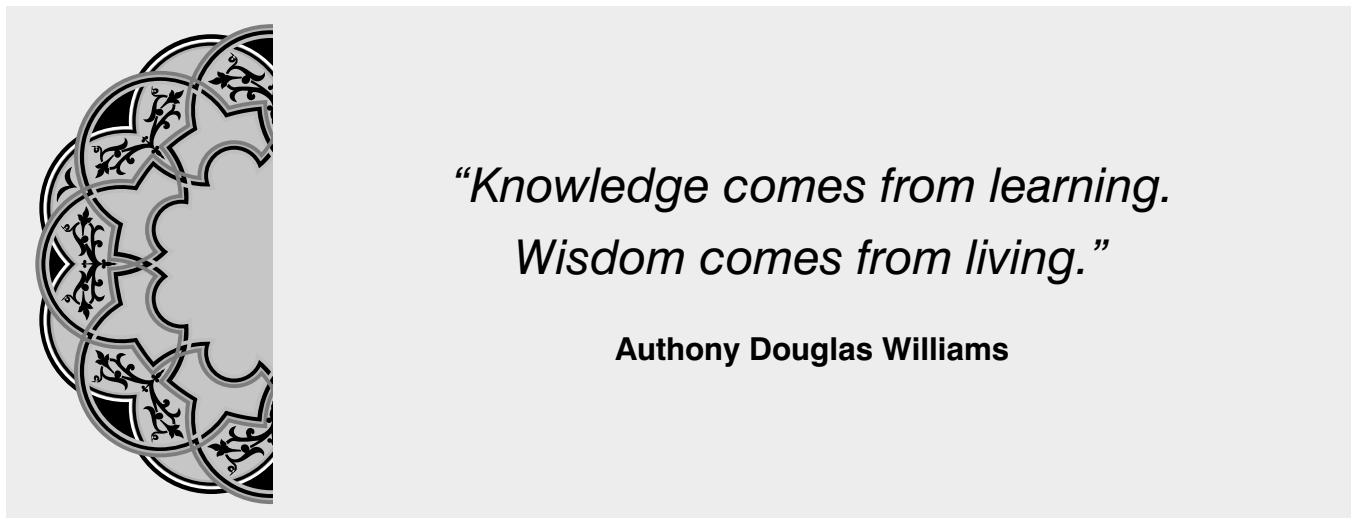
The donation of blood is tremendously needed in the health care facilities. It is primarily required for the replacement of blood loss after injuries, accidents or during surgical procedures. Although the blood donation and transfusion is a safe process, provided a standard procedure is adopted but it may affect the health of recipient if the necessary measures are not observed. This study reflects that medical students have good knowledge about blood donation and are willing to donate in near future. A campaign for awareness and motivation regarding voluntary and unpaid blood donation can help to achieve the target of WHO for safe blood transfusion.

Copyright© 15 Jan, 2017.

REFERENCES

1. Hada J. A **Research Report on Knowledge, Attitude and Practice on Blood Donation Among 18- 25 Years Bachelor Level People**. 2008;1-45.
2. Amatya M, Prajapati R, Yadav S. **Knowledge and practice of blood donation: a comparison between medical and non-medical Nepalese students**. Nepal Med Coll J. 2012;14(4):283-6.
3. Weiser TG, Regenbogen SE, Thompson KD, Haynes AB, Lipsitz SR, Berry WR, et al. **An estimation of the global volume of surgery: a modelling strategy based on available data**. Lancet. 2008;372(9633):139-44.
4. WHO and International Federation of Red Cross and Red Crescent Societies. **Towards 100 % Voluntary Blood Donation A Global Framework for Action**. World Health. 2010;123.
5. World Health Organization. **Thalassaemia and other haemoglobinopathies**. World Heal Organ. 2006;(May):1-8.
6. Rehman AU. **Adoption of WHO standard operating procedures for blood screening in hospitals of Islamabad, Pakistan**. African J Pharm Pharmacol [Internet]. 2011;5(22):2479-82. Available from: <http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L363133376>.
7. Blood S, Programme T. **National blood policy & strategic framework 2014-20**. 2014;
8. Alfouzan N. **Knowledge, attitudes, and motivations towards blood donation among King Abdulaziz Medical City Population**. International journal of family medicine. 2014 Nov 6; 2014.

9. Rosengart TK, Helm RE, DeBois WJ, Garcia N, Krieger KH, Isom OW. **Open heart operations without transfusion using a multimodality blood conservation strategy in 50 Jehovah’s Witness patients: implications for a” bloodless” surgical technique.** Journal of the American College of Surgeons. 1997 Jun; 184(6):618-29.
10. Mann MC, Votto J, Kambe J, McNamee MJ. **Management of the severely anemic patient who refuses transfusion: lessons learned during the care of a Jehovah’s Witness.** Annals of internal Medicine. 1992 Dec 15; 117(12):1042-8.
11. Zeeshan Ahmed, Mubashir Zafar, Adeel Ahmed Khan MUA and MAs. **Knowledge, Attitude and Practices about Blood Donation among Undergraduate Medical Students in Karachi.** J Infect Dis Ther [Internet]. 2014;02(2):2–5. Available from: <http://esciencecentral.org/journals/knowledge-attitude-and-practices-about-blood-donation-among-undergraduate-medical-students-in-karachi-2332-0877.1000134.php?aid=25253>.
12. Agravat A, Gharia A, Dhruva G, Mahesh K. **Research Article Knowledge, Attitude, and Practice of Voluntary Blood Donation Among Medical Students of PDU Medical College Rajkot* Agravat Amit , H ., Gharia Amit , A ., Dhruva Gauravi , A . and Mahesh Kakadia Department of Pathology , PDU Medical Co. Internatianl J Curr Res. 2014;6(5):6839–41.**
13. Bilal M, Haseeb A, Zahid I, Lashkerwala SS, Saeeduddin F, Arshad MH, et al. **Knowledge , Attitudes and Perceptions Among Non-Blood Donor Female Health Care Professionals.** 2016;8(4):221–6.



*“Knowledge comes from learning.
Wisdom comes from living.”*

Anthony Douglas Williams

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Muhammad Zahid Latif	Research design, questionnaire, data analysis and discussion	
2	Haroon Riaz	Introduction, literature review and discussion	
3	Dr. Syed Waseem Ahmad Mujtaba	Data collection analysis and results	
4	Rahila Nizami	Introduction, literature review and discussion	