

## Original Article

## Knowledge, Attitude And Practice Of Blood Donation Among Medical Students

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### Abstract

**Objective:** This study aimed to determine the knowledge, attitude and practice of blood donation among medical students Wah Medical college.

**Study Design:** A cross-sectional study was conducted.

**Place and duration of study:** The study was conducted in Wah Medical College from February 25 to May 2025

**Material and Methods:** A Cross-sectional study was carried out in Wah Medical College from February 25 to May 2025. All 600 undergraduate medical students of WMC were included in the study. A questionnaire was formulated after extensive literature search. The first part of the questionnaire comprised of demographic profile, and the rest of it is comprised of questions for assessing knowledge, attitude and practice of blood donation of the students. Collected data was analyzed using SPSS version 26.0.

**Results:** The response rate was 372 out of 600 (62%). 51.9% students are from 4th year MBBS. 75% of the respondents have never donated blood. The mean score of knowledge for blood donation was 10 +1.8 and 261(70%) of the individuals have poor knowledge about blood donation. However, 344 (92%) individuals want to encourage others to donate blood. 319(86%) wished to participate in the blood donation camp if held in college. A significant difference was found between the blood donation practice and the gender i.e. p value of 0.00. An Insignificant association was noted between knowledge of donation of blood and among male and female students; a significant connotation was noted between the knowledge of blood donation and the year of study i.e. p value of 0.005.

**Conclusion:** There was a great need of creating awareness about importance of blood donation among whole population. There is also a need to remove all the myths and misconceptions about donating blood

**Keywords:** Blood donation, medical student, voluntary, hemorrhage

### 1. Introduction

An intentional way of giving one's blood for saving lives of diseased that need either whole blood or its products is called blood donation. <sup>(1)</sup> According to a survey carried out in America approximately 12 million units of blood is collected every year and transfusion is performed every 3 sec meaning there by that it is the most frequent interventional activity in the hospitals. To meet this activity the continuous donation is necessary. <sup>(2)</sup> The World Health Organization (WHO) affirms that voluntary blood donation not only keeps blood donating person healthy but also builds social trusts and community well-being<sup>1</sup>. It will also reduce the chances of transmission of many infections that are transmitted through blood.<sup>(3)</sup> WHO emphasized that more than 10

million people die from injuries and during child birth that can be saved if adequate supply of blood through various measures is ensured. <sup>(4,5)</sup> This is one of the reasons why WHO urges countries that at least 1% of its population must voluntarily donate blood. <sup>(6)</sup> A population-based projection of demand and supply of blood in China found out that the need for blood and blood products has been amplified and will continue to rise in the coming years which may result in its deficiency. <sup>(4)</sup> In Pakistan 82% of the total blood donations are family or replacement donors.<sup>3</sup> Finding blood donors and persuading them on voluntary and unpaid blood donation is a big task. This lack of donation is actually due to the lack of

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Studies carried out in medical students of Lahore and staff and patients of a tertiary care hospital of Nigeria highlighted the same point of lack of knowledge. 84.9% of students in Lahore and 69.44% of the individuals in Nigeria have poor knowledge about voluntary blood donation.<sup>(7,8)</sup>

This study seeks to assess the knowledge, attitudes, and practices regarding blood donation among students to identify gaps that may hinder voluntary donation. The findings will provide a basis for developing targeted health education and awareness programs. Promoting informed and positive attitudes toward blood donation among students can help establish a consistent and healthy donor pool, thereby contributing to meeting the blood transfusion needs of the affiliated hospital.

**2. Materials & Methods**

A Cross-sectional study was carried out in Wah Medical College from February 25 to May 2025 after getting approval from the Ethical Review Board of the college under reference no. WMC/ERC/IRB/056. All the undergraduate medical students of WMC i.e. 600 were included in the study. A questionnaire was formulated after extensive literature search and it was pretested by entering 30 (5%) of sample in SPSS and obtaining Cronbach Alpha reliability obtained was 0.7. The first part of the questionnaire comprised of demographic profile i.e. age, gender, year of study of the participants second part comprised of questions for assessing knowledge, attitude and practice of blood donation of the students. The knowledge part of the questionnaire comprised of 9 questions of yes and no type. Correct answers to 7 and more questions was considered a good knowledge and less than 7 as poor knowledge.

Practice was assessed by asking question about blood donation ever in life and attitude was assessed questions like thoughts about giving blood again in life and motivating other about blood donation. A positive reply to these questions is considered good practice and positive attitude and vice versa. reply is considered positive. Collected data was analyzed using SPSS version 26.0. Frequencies, tables and charts were formed for gender, history of donating blood, year of study, attitude of blood donation and practice of blood donation. Mean score of knowledge was calculated and it was categorized as good and poor. Chi square test was applied to find significant difference between level of knowledge and gender, year of study. it will also be applied to find the significant difference between blood donation and gender.

**3. Results**

Out of 600 students 372 responded to the questionnaire or willingly took part in the study (response rate = 62%). The percentage of male and female students is shown in Figure 1

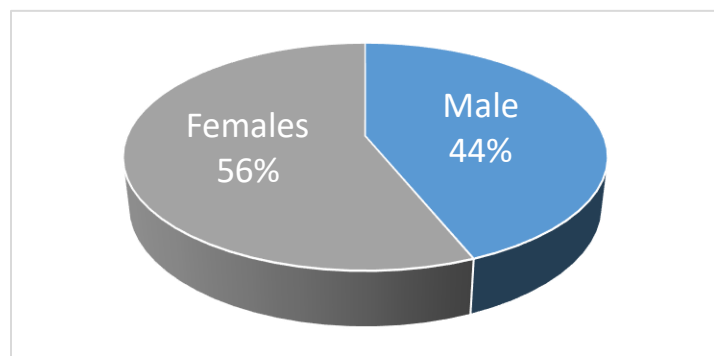


Figure no. 1: Percentage of Male and female students

Out of total participants, 193 (51.9%) students are from 4th year MBBS while 66(17.7%), 28( 7.5%), 40 (10.8%) and 45(12.1%) are from 1st, 2nd,3rd

and final years respectively. 75% of the respondents have never donated blood. 67% of those who have donated blood, gave it voluntarily to a blood bank or a hospital.

The mean score of knowledge for blood donation was 10 +1.8 and 261(70%) of the individuals have poor knowledge about blood donation. However, 344 (92%) individuals want to encourage others to donate blood. 356(95.7%) of the respondents believe that the Blood donations should not be restricted for family and friends and 366(98.4%) stood by the view that knowledge of blood donation should be spread in to the masses. If held in college 319(86%) students wished to participate in the blood donation camp. A significant difference was found between the blood donation practice among male and female students i.e. p value of 0.00. An Insignificant association was found between knowledge of blood donation and gender however; a significant association was noted between the knowledge of blood donation and the year of study (Table 1).

Table No 1: cross tabulation between knowledge of blood donation and gender, year of study

Gender	Knowledge about blood donation		p-value
	Good	Poor	
Female	59	150	0.442
Male	52	111	
Year of study			
1 <sup>st</sup> year	15	51	0.005
2 <sup>nd</sup> year	4	24	
3 <sup>rd</sup> year	10	30	
4 <sup>th</sup> year	59	134	

Final year	23	22	
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**4. Discussion**

Blood and blood products are very important in saving lives every day. In fact, it is recognized as one of the eight key lifesaving interventions. Every second someone somewhere in the world is in need of blood due to various reason e.g. accident, hemorrhage, infection, operation and carcinoma etc. The doctors specially must have the knowledge of safe blood donation because they not only can be the donors but also the advocates of the donation around the globe. Our study also shows poor knowledge about blood donation which is worrisome and this knowledge gap should be minimized.

In our study 70% of the participants have poor knowledge about blood donation almost similar to a study carried out in Lahore (84.9%)<sup>7</sup> A study carried out in 16 countries also found out that only 28.5% of the university students had satisfactory knowledge about the subject.<sup>(9)</sup>

This poor knowledge about blood donation is further furnished by the fact that 75% of the respondents have never donated blood in our study and in studies carried out by Arshad M etal65.5%. And Kagoya C 60% .<sup>(10,6)</sup> In another study carried out in Syria only 43.4% of the participants had previously donated blood .<sup>(11)</sup> This low percentage of knowledge and donation clearly shows that masses are not aware of this worthy act and knowledge and donation can only be increased by motivation and education.

It is although encouraging to know 67% of those who have donated blood gave it voluntarily to a blood bank or a hospital and 344 (92%) individuals want to encourage others to donate blood. 356(95.7%) of the respondents also believe that the blood donations should not be restricted for family and friends. A similar study in Gaza also found out that most of the donations are voluntary and donors are satisfied with the voluntary blood donations.<sup>(12)</sup> However, a study

carried out in Ethiopia found out that Two-thirds of the study participants were of the view that donation of blood should be restricted to family.<sup>(13)</sup>

In the study 98.4% of the participants want that the knowledge of blood donation should be spread to general population. We haven't asked about the mode of communication however a study took an in-depth view about this issue and most participant want that knowledge must be spread through text message (50.2%). Other suggested methods include internet, group training, phone calls and brochures.<sup>(14)</sup> In another study most of the individuals get to know about the blood donation through their educational institutions (74%), followed by television (36%), blood donation camps (31%), newspapers (28%), internet (21%), friends (19%), and parents (17%).<sup>(15)</sup> Study in participants in Saudia however got motivated when they had come across calls for donation in public media (50.9%).<sup>(16)</sup>

A positive attitude was noted among the participants i.e. 86% wished to participate in the blood donation camp if held in college. Similar to a study in which 90.3% doctors indicated that they were motivated to donate when someone they know is in need of blood.<sup>(17)</sup>

A study carried out among Pakistani Youth detected two major factor that came out loud for blood donations were altruism and sense of social responsibility”<sup>(18)</sup>

In our study a significant difference was found (p-value 0.00) in the practice of blood donation among male and females in which male donated more blood than females but insignificant difference in knowledge of blood donation and gender. A study carried out by Rizwan et.al. also noted an insignificant difference in practices of blood donation and female and male students (P = 0.426)19. However, a statistically significant relationship between knowledge and gender (p-value .019) with females having higher mean knowledge was found in a study carried out in Azad Kashmir.<sup>(19)</sup>

A significant association was noted between the knowledge of blood donation and the year of study in

our research. This shows that with passage of time in the college and exposure to the hospital more and more students are aware of the importance of the donation. Such types of results were also found out by a study in which a statistically significant association of the year of study with overall knowledge (p-value 0.01) and attitude (p-value 0.013) was noted.<sup>(7)</sup>

### Conclusion:

There was a great need of creating awareness about importance of blood donation among whole population. There is also a need to remove all the myths and misconceptions above blood donation.

### Limitations

Single centre study and in-depth interviews are the limitations Of this study, so the findings cannot be generalized.

### Disclosure /Conflict of interest:

Authors declare no conflict of interest.

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