

## Comparison of knowledge, attitude and practices of health care providers and people towards blood donations

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### ABSTRACT

**Objective:** To determine and compare the knowledge, attitude and practices towards blood donation of health care providers and people attending Fauji Foundation Hospital Rawalpindi and to find out the barriers towards blood donation.

**Study Design:** Descriptive Cross-sectional study

**Place and Duration:** Outpatient Department of Fauji Foundation Hospital Rawalpindi from the 1<sup>st</sup> January till 31<sup>st</sup> May 2014.

**Methodology:** Pre-tested questionnaire was used to determine and compare the level of knowledge, attitudes and practices towards blood donations.

**Results:** Out of total 200 respondents, 29% of the sample was donors and 71% were non donors. Among healthcare providers 34% were donors as compared to 24% of the patients who were donating blood. The correct minimum age of donation was known to 31% of the patients and 66.6% of the doctors. Both groups knew that blood transfusions are a mode of transmission of diseases (HCP 90%, patients 77%). In terms of attitude, only 13 people thought that only males could donate blood.

**Conclusion:** There is a marked difference in the level of knowledge and practices of healthcare providers and patients regarding blood donation with the patients falling behind.

**Keywords:** Blood donation, Knowledge, Attitude, Practices, Healthcare providers, Public

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### INTRODUCTION

Blood transfusions serve not only as a cure of a number of diseases but also save lives in a variety of clinical emergencies.

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As per WHO statistics on an annual basis approximately 107 million blood transfusions are carried out<sup>1</sup>. Yet we still need to overcome great obstacles to ensure the fulfillment of the demands and requirements of blood provision and distribution to match global needs.

In WHO 2010 report there was a 13% prevalence rate of blood donations in Pakistan<sup>2</sup>. In Pakistan, annually about 1.5 million pints of blood is collected, among this more than 65% comes from replacement donors, voluntary donors contributes 25% and 10% comes from the professional donors<sup>3</sup>. There is a difference of donation rates in developed (38.1 per 1000 population) and developing countries (2.3 per 1000 population) with developing countries lagging behind<sup>4</sup>.

Voluntary blood donors and paid donors play an important role in ensuring adequate amount of blood supply and blood components in case of emergencies<sup>5, 6</sup>. Blood for donation should be free from all hazardous diseases. There should be standardized methods and protocols for blood donation procedures which are not yet fully devised<sup>7</sup>. Proper blood banks and storage units are required to prevent wastage of blood and to eliminate hazards of contamination. Awareness can be created by educating the population regarding the importance of blood donation<sup>8, 9</sup>.

This study would help to determine the possible barriers towards blood donation. It will also highlight the misconceptions of people regarding blood donation visiting health care facility. This study will also advocate for the importance of awareness

programs, campaigns and advertisements in spreading knowledge about blood donation and its dire need in our country. The objective of this study is to determine and compare the knowledge, attitude and practices towards blood donation of health care providers and people attending Fauji Foundation Hospital Rawalpindi and to find out the possible barriers towards blood donation.

### METHODOLOGY

This descriptive cross sectional study was performed on people attending the Outpatient Department (OPD) and Health Care Providers (HCP) working at Fauji Foundation Hospital (FFH) Rawalpindi from 1<sup>st</sup> Jan- 31<sup>st</sup> May 2014. Formal permission was sought from the Ethical Review Committee of Foundation University Institute Islamabad. Non-random convenience sampling was done for the selection of respondents. This 200 sample was divided into two groups of 100 layman non health care providers and 100 health care providers. All 100 non health care respondents were those who were in the age of 17-50 years, both male and female, either patients or their attendants attending the outpatient departments (OPD) of Fauji Foundation Hospital and willing to participate were included in the study. All individuals not falling in this age bracket, seriously ill and not willing to participate were excluded from the study. One hundred (100) health care providers working in the setting, willing to participate in the study and available on the day of data collection were included in the study. Informed written consent was obtained from all respondents before data collection. The data was collected from respondents through a pre-tested structured questionnaire, both in Urdu and English. The questionnaire was designed by the principal researcher after doing extensive literature search. Later on the reliability of the tool was checked through. The cronbach's alpha coefficient for reliability came out to be 0.73 which confirmed the reliability of the tool. The tool was pilot tested first for its content and construct validity. It was divided into three sets of questions assessing knowledge, attitude and practices of respondents. The respondents included in pilot testing were not included in the final sample. Principal researcher and two house officers who were trained for data collection collected data from respondents.

**Data Analysis:** Data analysis was done using statistical package for social sciences (SPSS) version 17. For the qualitative variables percentages and frequencies are calculated and chi-square test of statistical significance is applied to look for association of different variables between healthcare providers and people. A significance level of 0.05 (alpha=0.05) is kept as statistically significant.

### RESULTS

The male to female respondent ratio was 1:3. Total donor population was 29% in this sample, out of which 34% were health care providers and 24% were layman non healthcare providers.

**Table-I: Knowledge and attitude of people towards blood donation (N=200)**

Knowledge and attitude towards blood donation	Patients n= 100	Healthcare Workers n= 100	Chi-square p-value
Minimum age of blood donation (17-21 )	31%	50%	0.051
Frequency of blood donation per year(4 times)	13%	41%	0.001
People who thought that donating blood is inconvenient for them	41%	27%	0.001
People who thought that donating blood causes permanent weakness	31%	13%	0.01
Correct knowledge regarding transmission of Diseases	77%	90%	0.001
Respondents who say that AIDS patients can donate blood	20%	8%	0.016
Awareness of own blood group	61%	96%	0.012

Only 31% of the patients and 50% of healthcare providers had correct knowledge i.e. 17-21 years. Majority of the patients were unaware of the correct age. (n=200, p = 0.051) (Table-I) Only 13% of patients and 41% of healthcare providers were aware of the maximum frequency of donation per year which is 4 times (p=0.001). Regarding inconvenience of donating blood, 41% of patients and 27% of healthcare providers said that it was inconvenient for them to donate blood (p=0.001).

Furthermore, view of the sample groups about permanent weakness after giving blood, 31% of patients and only 13% of healthcare providers were of the view that donating blood causes permanent weakness (p=0.001). As far as knowledge regarding transmission of diseases, donation by AIDS patients and blood group knowing, general public was lacking as compared to doctors and it was found statistically significant. Among patients only 5 of 24 donors were females (20.83%), whereas, it was equal among healthcare providers. This represents that when there is proper awareness among the population both genders are likely to donate more. (n=200, p=0.023)

Table-II shows the reasons for not donating blood. Among patients 50% said that there was no reason and 24% said they were never approached. Among health care providers 57% said that there was no reason and 22% said that they were never approached.

**Table-II: Reasons for not donating blood among patients and healthcare providers (N=200)**

IDENTITY	Patients (N=100)	Healthcare providers (N=100)	Total N=200(%)
Unfit to Donate	14%	11%	25(12.5%)
Was never approached to donate blood	24%	22%	46(23%)
Will only donate blood for friends/ family	3%	1%	4(2%)
Fear of needles	7%	7%	14(7%)
Fear of knowing my status	1%	2%	3(1.5%)
No facility to donate blood nearby	1%	0%	1(0.5%)
No reason	50%	57%	107(53.5%)

### DISCUSSION

In this study 46% healthcare providers group had adequate knowledge about blood donation in comparison to general population (39%). This shows the need for community awareness programs on this issue. These results are similar to the findings of a study done by Addisu et.al.<sup>10</sup>

In our study, 78.5% of respondents knew their blood group. This result is similar to a study done in Nigeria where 93.9% of the general population correctly knew their blood group<sup>11</sup>. The correct age requirement for blood donation was known to 40.5% in contrast to a study done in Chennai where 79.4% people knew minimum age requirement for blood donation<sup>12</sup>. The knowledge regarding the frequency of donation in our study was 27%, whereas in Benin City of Nigeria knowledge regarding frequency of donation (four times a year) was 21.5%<sup>11</sup>. Knowledge regarding the transmission of diseases from unscreened blood was 86.5% in this study and similar finding was reported in a Nigerian study where 95.7% had knowledge regarding this<sup>12</sup>. Awareness regarding blood donation by HIV patients was 85% in this study and study in Chennai showed that 99.4% had knowledge regarding HIV patients<sup>12,13</sup>.

In our study, donors were only 29% and 71% of the sample was non donors, this is in accordance to a study done in South West Ethiopia where only 26.4% of the respondents practiced blood donation<sup>14</sup>. 32.4% didn't donate for they were never been approached this result was in accordance to the results of Nigerian study (25.2%).<sup>11</sup> This study reports 40% of the people not donating due to fear of pain and similar findings were found in a study done in Chennai states that reported 55% of people not donating due to the same reason<sup>12</sup>. This study reports 22.4% of people donating for their relatives while 47.2% of respondents donating for the same reason<sup>12</sup>. Another study in Barbados showed 75% of blood donations are family or replacement donations<sup>15</sup>.

Lack of motivation, information and misconceptions, serve as key issues that need to be addressed while developing any donor recruitment programs and campaigns<sup>16, 17</sup>. In a study done in Central India 53.1% among healthcare providers were

donors<sup>18</sup>.

Our study shows male and female prevalence of donors that is 62.1% and 37.9% respectively. Males found to donate more blood as compared to females. Similarly, in a Nigerian study male donation was higher than females<sup>11</sup>. This study showed that 32% of respondents acquired information regarding blood donation through teachers while another study conducted in Uttarakhand 54% reported television as a source of information and 16% from teachers<sup>19</sup>.

Since it was a hospital based cross-sectional study, therefore generalizability of the results might be an issue because the study population might not be the true representative of the general population. Some population based studies with larger sample sizes should be conducted in future to address this issue.

### CONCLUSION

There is a marked difference in the level of knowledge and practices of healthcare providers and patients regarding blood donation with the patients falling behind.

### CONTRIBUTION OF AUTHORS

Sughra U: Conceived idea, Designed research methodology, Manuscript writing, Data collection and Analysis  
Khan WA: Data analysis, Critical review  
Imran M: Literature search, Manuscript writing

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