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Blood Donation and Misconceptions- A Nationwide Survey in Dental Hospitals of Pakistan

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Background:

Blood donation is a common practice in many countries of the world and it benefits many of the people suffering from conditions which require blood transfusions. The blood donated should be appropriately screened for certain infectious diseases such as HIV/AIDS, Hepatitis B, Syphilis and Gonorrhea through serological tests.

Materials and Methods:

This cross sectional study was conducted from January 2014 to August 2014, Data was collected from eight dental hospitals in four provinces of Pakistan. Attendants of the patients admitted in the surgical ward with age more than 16 years were included. Knowledge and practices of the participants were evaluated through a self-administered questionnaire .Ethical consent was obtained from the ethical committee or concerned authority of all eight hospitals.

Results:

Response rate was 84 %. In total 55% male and 45 % female participated with 15.5% of the total sample population was under the age of 20 years. The age group with the maximum number of participant was between 20 to 39 years of age. 26% and 22.5% of the males and female participants respectively had knowledge . About blood donation, lesser percentage of attendants, 7.2% of the males and 4.6% declared that they had donated blood in the past. Based on education levels, it was highest among graduates (3.5%) and less in primary educated (2.2%) and uneducated respondents was 0.7%. 18% of the males and 17% females asserted that they hold some kind of fear of blood donation.

Conclusion:

The population is not adequately knowledgeable regarding blood donation. There is a need for proper campaign to educate masses at national level within Pakistan to promote more people to become regular volunteers.

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INTRODUCTION

Blood donation is a process in which a person volunteers to have their blood withdrawn so that it can be transfused to someone in need. It is a common practice to give blood transfusions during surgical procedures or to people who have undergone massive trauma/blood loss [1]. It is also vital for people who have blood disorders like thalassemia, which is prevalent in many regions of the world and it is fair to say that blood transfusions are life-saving for such patients [1]. Components of blood like platelets, plasma and immunoglobulin are also obtained through centrifugation and given to patients with blood disorders and immune deficiency [2], [3], [4].

Due to the constant need, millions of units of blood are collected each day [5] and are transfused to millions of patients annually [6]. Majority of this blood in developing countries is collected from voluntary/non-remunerative donors; donors who give blood regularly. These are the safest among all types of blood donors with the least risk of transmitting transfusion induced infections [7]. The majority of donors in low income countries however are replacement donors; donors who give blood to a family member or a friend. Highest risk of transmitting transfusion induced infections is seen in paid donors and so the practice is generally not only discouraged but is also illegal in many countries.

It is mandatory as per World Health Organization (WHO) recommendations to screen donated blood for transfusion-transmissible infections like HIV 1 and HIV 2, Hepatitis B, Hepatitis C and syphilis through serological tests. This ensures safety of the recipient and excludes transfusion as a source of infection. [8]

The World Blood Donor Day celebrated on June, 14th every year since 2004 aims to raise awareness about the importance of blood donation and to increase the number of voluntary, non-remunerative donors in all the countries world-wide.[9]

The number of voluntary donors is very low in Pakistan (being a low income country) and whenever there is a calamity or an incident; blood banks run out of blood. This survey aimed to explore the reasons and trends of blood donation and to find out the prevalent misconceptions which keep people from donating blood.

MATERIALS AND METHODS

This cross sectional study was conducted at conveniently selected eight tertiary care hospitals in Pakistan. Four hospitals were public while, four were in private sector. Two hospitals were selected from each province of Pakistan (Punjab, Sindh, Khyber Pakhtunkhwa and Baluchistan).

The time period of the study was 8 months, starting from January 2014 to August 2014.

Inclusion criteria: Attendants of patients admitted in a surgical ward, more than 16 years of age. No gender restrictions were applied.

Questionnaire: Self-administered questionnaire was developed and targeted towards attendant's information regarding blood donation and their practices. A few questions were derived from International blood fear index questionnaire. The questionnaire was translated from English to the Urdu language (the national language of Pakistan), to maximize response by answering in either language. Participant who did not know how to read or write (non-educated) were assigned a non-medical facilitator to guide them through the procedure.

Ethical considerations: Oral and written consent was obtained from all the participants prior to the start of the study. Ethical approval was obtained from all the institutions/hospitals where data was collected.

The participants were briefed regarding the nature of the study and were provided information about blood donations after filling up the questionnaire by a specialist. They were also provided the opportunity to ask any questions regarding the issue.

The data was analyzed using Statistical Package for Social Software (SPSS) version 17.

RESULTS

Response rate was 84%. 800 out of 950 initially enlisted respondents participated in the study. Overall 55% male and 45 % female participated with 15.5% of the total population was below the age of 20 years. The age group with the maximum number of participant was between 20 to 39 years of age (47.5%).

Overall 26% and 22.5% of the males and female participants respectively had knowledge about blood donation however 21% and 16.8% of these

respondents were in the age group of 40-59 years and 30-49 years respectively. Lesser percentage of attendants, 7.2% of the males and 4.6% asserted that they had donated blood in the past, and it was highest among graduates (3.5%) and less in primary educated respondents (2.2%) and uneducated respondents was 0.7%

Greater percentage of the attendants thought that Hepatitis B can be acquired by donating blood males 10.5%, females 12.2%. whereas,7.6% of the males while 4.8% of the females believed that HIV can be contacted by donating blood.

On inquiring regarding fear, 18% of the males and 17% females admitted that they have some kind of fear of blood donation. The percentage of respondents, who knew regarding blood donation and feared donation, was highest in secondary level educated respondents as compared to other respondents based on education level. Significant p values are shown in the table (Table 1)

DISCUSSION:

Our study showed that 48.5% of the attendants had knowledge about blood donations. Out of 360 females, 50% of them knew about blood donation as compared to 208 males out of 440 (47%). These results are alarming as it showed that in this era of medical advancement, a large proportion of population have very limited information about blood donation. Rather, at least half of the population is unaware of the procedure which is one reason why there are very few voluntary donors in Pakistan.

In a study carried out at King Abdul-Aziz University, Jeddah, KSA in 2013, [10] 19% students were donors; with a mean age of around 22 years. The survey carried out in Pakistan however revealed that only 11.9% of the participants reported that they had donated blood at least once. The percentage was less than that found in the study that took place in KSA but it is important to note that the respondents in Pakistan have major contrast in social backgrounds, socioeconomic status and levels of education. Interestingly, only 24.5% of total respondents who knew about blood donation had actually donated blood before.

Another significant fact that we came across was that the least number of donors came from the 20-39 age group (3.4%). Studies carried out in Netherlands [11] and Bangladesh)[12] showed comparable results, with the young donor population being 7% and 16% respectively.

This scant percentage of donor population shows lack of knowledge about the importance of blood donation. As already discussed majority are replacement donors and they donot feel the need to donate blood in the first place. They only donate blood when a family member or a friend is in need. According to the above mentioned research carried out in KSA, students claimed they had never been asked to donate blood and so never did. This shows there is a need for campaigning to be done at national and international level by government and/or NGOs to encourage people to donate blood voluntarily [10].

Another reason why people refrain from donating blood is fear. This study demonstrated that 35% of the respondents had some form of fear associated with donation of blood. Fear seemed to show a trend, being the highest among among the graduates and post graduates and lowest amongst uneducated and primary educated.. The results are contradicting the fact that the higher the education, the greater the awareness and hence should be less fear. People usually fear fainting, getting weak or anemic after giving blood. In a study carried out in 2001 regarding the frequency of vasovagal syncope reactions, it was revealed around 178 out of 194,000 blood donors had experienced it (0.1%) and as a result some had also suffered trauma [13]. Another study suggested syncope reaction percentage of 1.43% [14]. Fear of fainting is common in general population even though the chances of it happening are comparatively very low.

Some people report to have fear of needles due to which they prefer not to donate blood. However another misconception which was encountered by the respondents was the concern of acquiring HIV and Hepatitis B infections. Overall 12.4% and 22.7% thought HIV and Hepatitis B respectively can be acquired through blood donation. Similar was the case seen in the study carried out in KSA [10] with 26% respondents having the same fear. These studies clearly show lack of knowledge among the general population due to which such misconceptions are quite widespread.

Table 1: Demographics of Respondents (N=800) are shown .

Demographics		Number of respondents	Knowledge about blood donation	Have you ever donated blood (Yes included)	Experienced Fear of donating blood	Paid blood donation is legitimate	Can get HIV from donating blood	Can get HEP B from donating blood
Gender	MALE	440	208	58	144	36	61	84
	FEMALE	360	180*	37*	136	40	39*	98
AGE	<20 years	124	36	2	23	16	13	16
	20-39	380	135	13	116	36*	43	96
	40-59	240	168	44	120	21	29	52
	60-79	38	33	25	16	2	12	15
	80 and above	18	16	11	5	1	3	3
EDUCATION LEVEL	Not educated	76	10	6	8	7	5	8
OF THE RESPONDENTS	Primary education	285	46	18	32	31	36	28
	Secondary education	255	168	22	132	34	44	80
	Graduate	118	104*	28*	80	2*	11	52
	Post graduate	66	60	21	28	2	4	14

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According to a survey carried out in Pakistan in 2009 [15], an important factor why people from rural areas do not encourage blood donation or even transfusion, is the fact that blood is a symbol and source of one's lineage. Giving or taking blood is considered a stigma in such people even if it would mean life or death. This shows that this is another social aspect to why people do not donate blood.

Blood drives are carried out throughout Pakistan each year in colleges, universities and various other institutions but not enough campaigning is done to remove the prevalent misconceptions, which keep people away from volunteering to donate blood. The government should launch programs that should include the digital and social media to target and involve the youth who are more enthusiastic when it comes to various causes. As discussed earlier they are also the safest group of blood donors and so should be targeted as possible registered voluntary blood donors.

CONCLUSION:

A lot of work needs to be done to raise awareness among the common population to increase the number of voluntary blood donors. This can be accomplished by involving the youth by carrying out regular blood drives in colleges and universities with the aim to not only increase the number of voluntary blood donors but also to remove prevalent misconceptions which generally discourage people from donating blood. Electronic and social media can be used to do the same and might just be the impetus needed to encourage more people for this good cause. Government organizations should also be established with the aim to increase awareness in rural and urban areas. Incentives like free blood screening can be advertised to encourage more people.

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