

# Awareness and Practice of Blood Donation among the General Population of Karachi

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## ABSTRACT

**Background:** In 1628, the leading physician of his day, William Harvey, first demonstrated that blood circulates round the body. Sir Christopher Wren, better known as an architect, was the first man to inject fluids into the blood of animals 29 years later. The first record of blood donation was by the British Red Cross who volunteered in 1921 and in effect created the first voluntary blood service.

**Aim:** To find out the perceptions and knowledge of blood donation among general population of Karachi. 2) To find out their practices either voluntarily or for some other reason and if don't practice then what is the reason behind it and to find out the myths in society for blood donation.

**Study design:** A cross-sectional descriptive study based on questionnaire analysis

**Study Population:** General population of age group 18-65yrs of Karachi during 2012

**Data Analysis:** Collected data was entered into SPSS version 19. Frequencies were tabulated for the demographical variables, which were related to responses of the respondents.

**Results:** 450 respondents were asked to give their responses. Total of 367 were included in the study while 83 forms were rejected on the basis of BMI i.e., underweight, 10.9% people think blood donation introduce negative impact on health, 78.5% people think blood donation does not introduce negative impact on health. 10.6% people don't know about negative impact of blood donation on health.

**Conclusion:** Education in Pakistan has not been conducive for the awareness and practices of blood transfusion among general population. Some fraction of population still have misconception that blood donation produces health hazards

**Keywords:** Blood donation, awareness, Karachi.

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## INTRODUCTION

The Basic aim on selecting this topic is to know the perceptions and believes regarding blood donation of general population in Karachi. Pakistan is the country whose population is about 173,593,000 There is need of blood in certain circumstances i.e., in blood disorders, surgical procedures, accidents, law and order situation in the country and in natural disasters. In Pakistan, the annual need of blood is 3.5-4 Million bottles of blood per year but unfortunately only 1.2-1.5 Million bottles of blood are available. 80% population donates blood in exchange while only 10-20% population donates voluntarily. All over from Pakistan, 80% transfusion comes from Karachi and Lahore. Blood is a specialized body fluid that delivers necessary substances such as oxygen and nutrients to the cells and transports metabolic waste products away from those same cells.

Blood has always help mysterious fascination for all and is considered to be the living force of the body. Millions of lives are safe each year through

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blood transfusions only or when blood transfusion is a significant part of intervention. According to the journal of American Medical Association, it is noted that just one point of blood can save three lives.

Safe blood refers to a blood that is free from every sort of viruses, bacteria, drugs, alcohol and other disease. It means safe blood is a healthy blood so there is a responsibility on donor that is he/she has any disease that may affect the recipient by blood then the donor must forbid the donation of blood. Good health is the first step for safe blood. Screening of blood for different diseases like HIV, Hepatitis B, Hepatitis C is second step for safe blood. It should be kept in mind that machines available for screening are not 100% successful in capturing the bacteria. Apart from this many new species of viruses and bacteria are being discovered for which there are no screening techniques available. Not only this, but safe blood requires that storage of blood, issuing of blood, transportation of blood and transfusion of blood to a recipient should be done in a possible safest way

Any cast, religion or gender does not stop you from donating blood. If you are in between the range of 18-65 years and having 50kg weight or more and you are not suffering from any fatal disease or addiction then you are able to donate blood. It is essential for a blood donor that he/she have eaten something in previous 3-4 hours. You can donate blood after every 3-4 months. Pregnant women can donate blood after 6-8 weeks of delivery. It is prerequisite for a blood donor he/she was never interested in hepatitis B or C infections. But if the hepatitis is present of type A and E, and you have a proof of it then blood can be donated after 12 months of the diseased cured. If you do not have proof of hepatitis type A or E then this hepatitis will be considered as a fatal and blood should not be donated. Aids patients are not applicable for donating blood. Patients of heart, liver, lungs, TB, cancer or any depression, they cannot donate blood. If you have cold or any other infection then you should avoid blood donation for time being. It should be kept in mind that you must not take blood from blood sellers, drug abusers or criminals from jail as their blood is considered to be non safe.

Blood is considered to be a life saving drug. Millions of people depend upon the availability of blood. Apart from this blood can be required in emergency situations. If there is a fashion of blood donation in society then you can get blood in any critical situation. But if the culture of donating blood is not present then you may not be able to get blood. So it is necessary that you propose the trend of donating blood and persuade your friends and relative that they should donate blood 3-4 times in a year voluntarily.

Blood donation is completely a safe procedure. Neither it is painful nor you are anaesthetized in this procedure. No blood deficiency occurs in your body by blood donation. Blood donation is not related to any physical or mental weakness, but many people feel vertigo after donating blood, which is corrected after a few minutes. In many people blood pressure falls that's why donors are advised to lie down on a couch for 15 minutes. In many people skin appears blue at the site of needle injection but it disappears in a few days. If a person faints after blood donation then it is better that he may not donate blood next time.

The objectives of the study were to find out the perceptions and knowledge of blood donation among the general population of Karachi, to find out their practices either voluntarily or for some other reason and if they don't practice then what is the reason behind it and to find out the myth society for blood donation.

**Rationale of the study:** Considering prevailing recent law and order situation in Pakistan, the demand of blood has increased in addition to regular needs. We hope that this study would make us able to suggest a plan for preparedness for donation of blood and a program to fight the myths in the mind of the people.

## METHODOLOGY

This is a cross-sectional descriptive study based on questionnaire analysis during a period of 4 months. It is a multicentered study conducted in Federal B Area, North-Nazimabad, Gulshan and Saddar. Study population was general population of age group 18-65 yrs of Karachi during 2012. The sample size is 367 (male: 214, female: 153). Non-probability, purposive sampling was used to carry out this study. The study tool used in our project was a pre-designed and pre-tested questionnaire. It was in English. It was translated when needed. The question was close ended. We conducted a short period of interview in which we translate/explain the questionnaire to the respondents. All patients between 18 and 65 years of age were included while patients having BMI below 18.5 were excluded.

**Data Analysis:** Collected data was entered into a SPSS version 19. Frequencies were tabulated for the demographical variables, which were related to responses of the respondents. Cross Tabulations were also done.

**Ethical Consideration:** Verbal as well as written approval was provided by the department of community health sciences to conduct this research. All the information related to the research was provided to the participants. We took verbal consent from all participants.

## RESULTS

Four hundred and fifty respondents were asked to give their responses. Total of 367 were included in the study while 83 forms were rejected on the basis of BMI i.e., underweight.

### **Opinion about blood donation introduced negative impact on health:**

- 10.9% people think blood donation introduces negative impact on health.
- 78.5% people think blood donation does not introduce negative impact on health.
- 10.6% people don't know about negative impact of blood donation on health.

### **Opinion about interval between two donations:**

- 8.5% people think that the duration between two donations should be 2 months.

- 26.7% people think that duration between two donations should be 3 months.
- 41.7% people think that duration between two donations should be 4 months.
- 17.7% people think that duration between two donation should be 1 year.
- 5.4% people have no idea about the duration between two donations.

**Opinion about children can donate blood:**

- 4.9% people think children can donate blood.
- 86.1% people think children cannot donate blood.
- 9.0% people don't know.

**Opinion about female can donate blood:**

- 68.1% people think females can donate blood.
- 24.3% people think females cannot donate blood.

**Opinion about religious restrictions about blood donation:**

- 9.8% people think that there is religious restriction regarding blood donation.
- 77.4% people think that there is no religious restriction regarding blood donation.
- 12.8% people don't know about religious restriction regarding blood donation.

**Opinion about blood donation may introduce health hazards**

- 20.4% people think blood donation may introduce health hazards.
- 62.7% people think blood donation may not introduce health hazards.
- 16.9% people don't know about the health hazards by blood donation.

**Opinion : can you donate blood when you are suffering from flu, cold or fever?**

- 16.3% people think that they can donate blood when they are suffering from flu, cold or fever.
- 67.8% people think they cannot donate blood when they are suffering from flu, cold or fever.

**Opinion about persons can donate blood with hepatitis/aids**

- 4.1% people think that you can donate blood when you are suffering from hepatitis/AIDS.
- 90.7% people think you cannot donate blood when you are suffering from Hepatitis/AIDS.

**Opinion about blood donation can cause cancer:**

- 12% people think blood donation can cause cancer.
- 76.6% people think blood donation cannot cause cancer.
- 11.4% people don't know that the blood donation can cause cancer.

**Opinion about donated blood can also be used for treatment purpose:**

- 55.6% people think that donated blood can also be used for treatment purpose.
- 16.9% people think that donated blood cannot be used for treatment purpose.
- 27.5% don't know.

**Opinion: have you ever thought of blood donation?**

- 62.1% people thought to donate blood.
- 31.6% people don't even thought to donate blood.
- 3.6% people don't know.

**Opinion: have you ever donated blood in your life?**

- 42% people have donated blood.
- 58% people never donated blood

**Opinion about reason for blood donation**

- 18.2% people donated blood for exchange.
- 27.3% people donated blood for surgery reserve.
- 9.7% people donated blood for therapeutic purpose.
- 1.3% people donated blood for money.
- 43.5% people donated blood voluntarily.

**Opinion about the reason for not donating blood:**

- 14.1% people not donated blood because of the fear of pain.
- 8.9% people not donated blood because they have fear of spread of disease.
- 15.5% people not donated blood because they were not satisfied with blood donation agencies/banks.
- 56.3% people not donated blood without any reason.

**Opinion: does your health stop you from donation?**

- 21.8% people not donated blood because their health stop them from donation.
- 78.2% people's health topping them from donating blood.

**Opinion about importance of blood donation:**

- 7.4% people think blood donation is least important.
- 41.1% people think blood donation is important.
- 51.1% people think blood donation is extremely important.

**Opinion: how much time does a donation takes?**

- 28.9% people think that duration of blood donation should be 20mins.
- 16.9% people think that duration of donation should be 30mins.
- 28.3% people don't know about duration of blood donation.

**Opinion about WHO should donate blood:**

- 68.7% people suggest that healthy persons who look pinkish and can perform their daily task without any difficulty should donate blood.
- 18% people suggest that all the people should donate blood despite of any physical status.
- 2.2% people don't have idea who should donate blood.

Table 1: BMI of person

	Frequency	Percent	Valid Percent	Cumulative%
Valid under weight	83	18.4	18.4	18.4
normal weight	210	46.7	46.7	65.1
over weight	157	34.9	34.9	100.0
Total	450	100.0	100.0	

Table 2: Gender of person \* BMI of person Cross tabulation count

	BMI of person		Total
	normal weight	over weight	
sex of person male	120	94	214
female	90	63	153
Total	210	157	367

Table 3: Education of person

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid illiterate	18	4.9	4.9	4.9
upto matric	51	13.9	13.9	18.8
upto intermediate	109	29.7	29.7	48.5
upto graduate	135	36.8	36.8	85.3
post graduate	54	14.7	14.7	100.0
Total	367	100.0	100.0	

Table 4: Do you think blood donation produce negative impact on your health?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	40	10.9	10.9	10.9
No	288	78.5	78.5	89.4
Don't know	39	10.6	10.6	100.0
Total	367	100.0	100.0	

Table5: Do you think you can donate blood when you are suffering from flu, cold, fever (common illnesses) ?

	Frequency	Percent	Valid Percent	Cumulative%
Valid Yes	60	16.3	16.3	16.3
No	249	67.8	67.8	84.2
Don't know	58	15.8	15.8	100.0
Total	367	100.0	100.0	

Table 6: Have you ever thought of donating blood ?

	Frequency	Percent	Valid Percent	Cumulative %
Valid Yes	228	62.1	62.1	62.1
No	116	31.6	31.6	93.7
Don't know	23	6.3	6.3	100.0
Total	367	100.0	100.0	

Table 7: What were the reason for donation?

	Frequency	Percent	Valid Percent	Cumulative%
Valid for exchange	28	7.6	18.1	18.1
for surgery reserve	42	11.4	27.1	45.2
for therapeutic purpose	15	4.1	9.7	54.8

	for money	2	.5	1.3	56.1
	Voluntarily	68	18.5	43.9	100.0
	Total	155	42.2	100.0	
Missing	System	212	57.8		

Table 9: Does your health stops you from donation ?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	80	21.8	21.8	21.8
No	287	78.2	78.2	100.0
Total	367	100.0	100.0	

Table 10: On a scale of 1-10 , please indicate how important it is for people to donate blood ( 1=not at all important , 10= extremely important )

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid least important	27	7.4	7.4	7.4
Important	151	41.1	41.1	48.5
extremely important	189	51.5	51.5	100.0
Total	367	100.0	100.0	

## DISCUSSION

As indicated by the review led in the Division of Physiology, School of Medication, Lord Saud College Healing center, Riyadh, Saudi Arabia. The point of this review was to decide the demeanor, conviction and information about blood gift and transfusion in Saudi populace. They presumed that diverse feelings of trepidation, doubt in healing facility and absence of data may fill in as a vital issue to be tended to when creating contributors enlistment projects or battles to clear misguided judgments about blood gift. As indicated by another review that was directed among armed force work force to distinguish the confusions, accepts and fears about blood gift among armed force faculty .This review uncovered the misinterpretations with respect to blood gift.

Another review was done on the perspectives of non-givers on blood gift in UK. Five subjects rise up out of the investigation. There subjects, to be specific prosocial sees, helping conduct and mindfulness which had comparative importance for both contributors and non-givers. We concentrate here on the two subjects important just for the non-contributors, to be specific first tension and second commonsense challenges. As indicated by another review directed in the branch of Exploratory Prescription, Medicinal Personnel, Sight and sound Wellbeing Correspondence Lab of Milano Bicocca Monza, Italy. The target of this review is to discover the inspiration in Italian entire blood givers and the part of responsibility. The outcome demonstrate that individual basic leadership is a key segment of the

decision to wind up plainly a blood contributor and that lone a few benefactors are specifically affected by other individuals. Thusly, it might be inferred that benefactors themselves are profoundly successful promoters of blood gift. As indicated by another review led in Exploration focal point of Iranian blood transfusion association, Yazd, Iran on Why don't ladies volunteer to give blood? The point of this review was to evaluate obstructions of gift of blood by ladies and the level of information, state of mind and work on with respect to blood gift. In Iran, the female : male proportion for blood gift is 1 : 9, though in western nations this proportion is about even (Thomson et al., 1998). Past reviews demonstrate that for deciding selecting procedures, ladies require exceptional consideration (Boulware et al., 2002; Hupfer et al., 2005). Our past review in Yazd demonstrated that ladies had lesser information than men (Shahshahani et al., 2004). In the present review additionally most ladies were ignorant of criteria for blood gift. Evaluation of convictions demonstrated that 26.5% of ladies trusted that blood focuses offer gave blood to patients and 19.3% trusted that blood gift could prompt HIV or hepatitis contamination. Iranian ladies give a great deal not as much as ladies in different nations. In Iran, the rate of ladies givers differs in the vicinity of 18.9% and 1.6%. Just 5% of blood contributors in Yazd are ladies. In an Indian review on blood givers, 10.7% were ladies. In France, 49% of givers are ladies (Universal Organization of Red Cross and Red Bow Social orders, 2005) though in Joined States ladies constitute 45.5% of benefactors (Newman et al.,2003). Just 15% of ladies

had given blood once before, though 60% of men had history of past blood gift in our past review in Yazd (Shahshahani et al., 2004). In one review in the Assembled States half of ladies had past history of blood gift as contrasted and 79% men (Boulware et al., 2002).

Mindfulness and practices are all inclusive marvel they might be certainty based or may not be. Be that as it may, regardless they give learning and improve and solid method for living to the general population of group .

In this review, we have 153 ladies in which the vast majority of them are housewife and are graduate, have never given blood in past. The most critical of not giving blood is to be iron deficient, fear, absence of time and trouble in getting to blood donation center and other had false convictions.

We recognize that the greater part of the number of inhabitants in around 78.5% feel that blood gift does not present negative effect on wellbeing but rather still a little populace that is 10% have conviction that blood gift produces negative effect on wellbeing. A man who have given blood won't give blood in next 4 months because of shortcoming and dormancy and its opportunity to recuperate from impact that is deliver in light of gift, however as indicated by new logical reviews it come to realize that each individual ought to give blood after each 56 days for its wellbeing and to convey appropriate physical exercises paying little respect to any segregation of age, sex, ethnicity and so on . As there is a populace who have great wellbeing yet there is no explanation behind gift.

## RECOMMENDATION

All misconceptions regarding blood transfusion should be removed.

- Blood banks should assure donor for availability of clean environment and then donated blood will not be professionally misused.
- A person with any of major disease like hepatitis, blood cancer, AIDS and the person have donated 56 days back will not donate blood. A collector should brief them and take full history before donation of blood.
- Resources should be provided to motivate the people that blood donation is not harmful .

- Stress should be given towards voluntarily blood donation by mass communication and blood campaign should be around the community.
- Stress should be drawn on female blood donation in the society as there is less participation of women in blood donation.

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