



## Knowledge of Long Term Health Benefits of Blood Donation

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### ABSTRACT:

**Introduction:** *Blood donation can be remunerated or non-remunerated. In Pakistan, the concept of voluntary blood donors is almost non-existent due to the absence of blood donor motivation and retention strategies. Aim of this study is to find the knowledge and beliefs of the people, most importantly the effect of blood donation on their health. So it will help the healthcare workers in future to promote voluntary non-remunerated blood donations by propagating the beneficial effects on the health, rather than assuming it just an altruistic work.*

**Objective:** *To determine the knowledge and beliefs of the people, most importantly the effect of blood donation on their health.*

**Methods:** *This is a cross-sectional study with sample size of 384 .The data was collected by interviewing the participants.The study period comprised of 3 months. Included individuals aged above 18 years. It excludes individuals who have medical related professions.*

**Results:** *384 individuals participated among them 47.6% were male and 52.4 % female. The mean age was  $31 \pm 13$  yrs of those individuals who ever donated the blood while those who never given was  $27 \pm 11$  yrs. This difference is significant at  $p < 0.01$  (0.02). The knowledge about screening of blood is present in 52.6% individuals while 47.7% do not have. This finding is significant at  $p < 0.05$  (.034).*

**Conclusions:** *This study helped to explore the knowledge, attitude, practices, and beliefs of blood donation. We conclude that a high percentage of the population has low or no knowledge regarding blood donation including the beneficial effects of it on their own health.*

**Keywords:** Non-remunerated; Voluntary; Blood donation.Screening

### INTRODUCTION:

Blood transfusion has been used and documented as life saving.Blood and blood products, helps save millions of lives every year, and there is no genuine substitution. According to an

estimate,over 108 million units of blood are donated all over the world every year. More than half of these are collected in developed countries, which make up only 18% of the world's population. Blood donation rate in high-income countries is 36.8 donations per 1000 population;

11.7 donations in middle-income and 3.9 donations in low-income countries(1). According to statistics, Pakistan has a very low blood donation ratio that is even below one percent of its total population as the country annually lacks shortage of around 1,400,000 blood units against the demand of around 3,200,000 units to save lives of thousands of the people. This can be due to lack of people's willingness to give blood and also due to misbeliefs of people about blood and blood donation(2). Blood donation can be remunerated or non-remunerated i.e. one who donates for payment and one who don't(3). In Pakistan over 90% of donation is made by the friends and relatives of patients. However, despite efforts to control the practice, around 10%–20% of the blood supply is still donated by professional donors, and the concept of voluntary blood donation is almost non-existent due to the absence of blood donor motivation and retention strategies(4). In order to fulfill the requirements, adequate supply of safe blood can only be assured through regular donation by voluntary unpaid blood donors (5).

Although there are numerous studies present that tried to identify the knowledge, attitudes and beliefs towards blood donation. Till date, there is no study done that would have tried to evaluate the beliefs of the population about the potential benefits of the blood donation on one's own health. Empiric observations have suggested that blood donors may represent a healthy subset of the population, reflected by low mortality, as well as a low risk of cardiovascular disease(6), stroke(7), cancers(6)(8) and transfusion transmittable viral infections(6). This study is likely to help healthcare workers to plan

and promote the strategies to increase blood donation rates in Pakistan.

## METHODOLOGY:

This is a prospective cross-sectional study with sample size of 384. The study was conducted in the Karachi which is a densely populated city of Pakistan. The data was collected by interviewing the participants according to the designed questionnaire, who were selected randomly. All participants were given a briefing regarding objectives of the study and were ensured regarding the confidentiality of the information. The study period comprised of 3 months. Individuals aged above 18 years were included in the study. People who had medical or medical related profession were excluded off the study at the first approach towards them. The data were subjected to SPSS version 17.0 for the calculation of mean, frequency, chi square test and independent T test for the significance of data.

## RESULTS

The study comprises of 378 individuals among them 47.6% are male and 52.4 % female. Most of them (52.9%) were undergraduates while a small (3.7%) no. were postgraduates. The graduates were (23.5 %) rests were either just primary pass or illiterate.

The marital status plays a significant role as far as the knowledge of donating blood is concern, it was observed that unmarried people given significantly more blood as compared to unmarried at  $p < 0.01$ . Knowledge about screening of the blood for donation is significantly more in males as compare to females ( $p = 0.034$ ). Table

Table 1: Knowledge of blood donation in the sample population.

Variables	(%)	(%)	Chi Square Test
Gender	M 47.6	F 52.4	.001**
Marital Status	Married 37.6	Un-Married 62.4	.002**
Screening	52.6	47.4	.034*

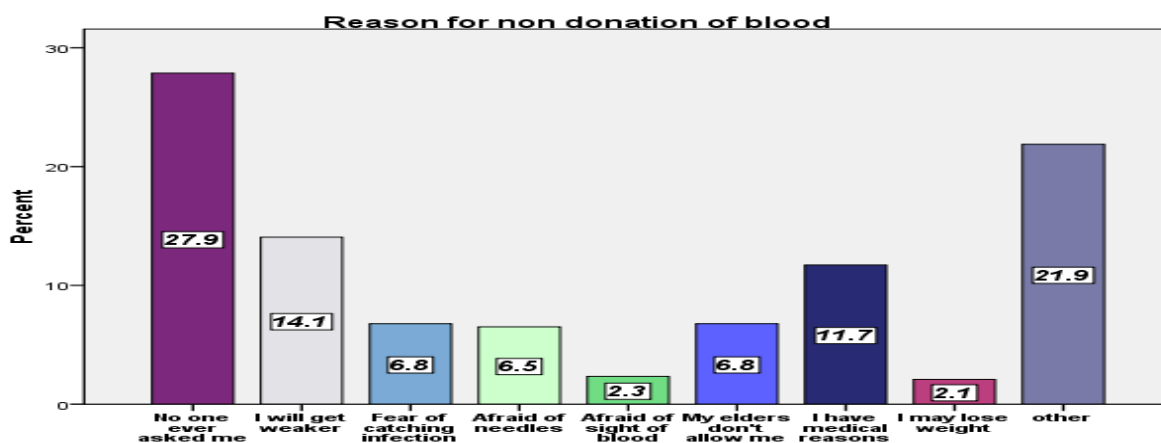
Age has significant effect on knowledge of blood donation. The mean age was 31 ±13 years of those individuals who ever donated the blood while those who never given was 27 ± 11 years. This difference is significant at p< 0.01 (0.02).

Table 2: Mean age of population who has donated the blood

Donation of Blood	Mean Age (Yrs)	S.D. ± Yrs	F-Value	Sig
Yes	31.11	13.12	5.02	0.026*
No	27.17	11.04		

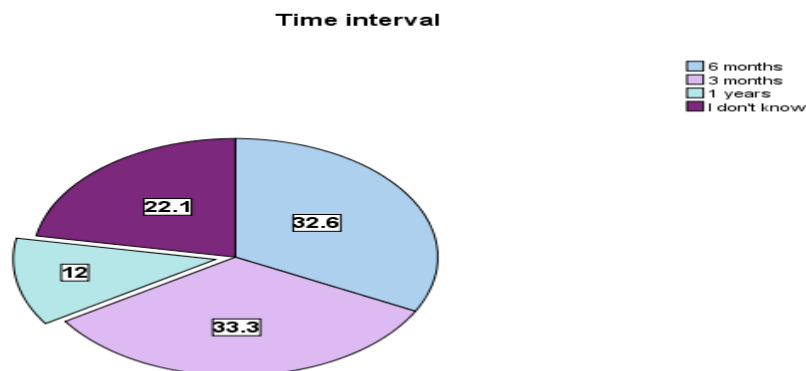
Among the sample population 79.9% believe that donation of blood is good, 11.4% said that it is bad for health and 8.7% do not know about its effects. The various reasons for not donating blood are presented in bar chart and telling us that 27.9 % of the people said that no one ask them to donate blood.

Graph 1: Various reasons of non-donation of blood.



Regarding time interval for the donation 33.3% said it is 3 months (graph 2).

Graph 2: The knowledge about time interval for giving blood.



## DISCUSSION

The findings of this study revealed some interesting facts regarding the knowledge and perception towards blood donation on one's own health. If used effectively, such results can eventually help in efforts to attract and retain more donors.

This study shows that the participants who were older had more knowledge of screening and had donated more than younger participants. The mean age was found to be  $31 \pm 13$  years of those individuals who have had ever donated the blood, while those who never donated was  $27 \pm 11$  years.

Regarding blood donation, there is a gender difference, which does not seem to have received much attention in the literature. Gender has not only genetic and physiological implications, but also psychological, cultural and social ones. This dimension is, therefore, understood as the totality of the personality traits, habits, feelings, values, behaviors and activities that society differentially attributes to

the two sexes. (9) There are various studies done that showed gender difference in blood donation along with their perceptions about donation (10). Our results showed, In Pakistan females seems to be more enthusiastic towards blood donation.

The knowledge about screening of blood is present in 52.6% individuals while 47.7% do not have. This finding is significant at  $p < 0.05$ . Individuals were assessed about the whether they were aware about the possible transmission of transfusion related infections, awareness of sterilization and the importance of blood type matching before getting a transfusion.

The recommended time interval between two consecutive donations is at least 3 months for men and 4 months for women. (11), however the study showed that a significant percentage of population has lack or misconception about the right interval and only 128 (33.3%) had the right knowledge.

Among the sample population of this study 79.9% believe that donation of blood is good for



their health, 11.4% said that it is bad for health and 8.7% do not know about its effects. Though the participants stated donation good for the health, but one inquiring, they had no or very limited knowledge. Decreasing the perception that the blood donation is harmful and educating the benefits can lead to an increase in the pool of blood donors.

## CONCLUSION

It is concluded that the population lacks the knowledge of potential benefits of donating blood as it prevents many illnesses. Though a high percentage was considering it good for their health, but on asking it specifically, the majority either had misconception or little knowledge about it. Correcting them is believes which hinders the people from donating blood, and propagating the benefits of it will facilitate motivation of voluntary non-remunerated blood donations and eventually help increase the donation rates.

## RECOMMENDATIONS

Encourage the people for voluntary non-remunerated blood donation by guiding them the health related benefits they would get along with the altruistic activity they do for others.

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