

# An Insight into the Knowledge, Attitude and Practice towards Blood Donation among the Residents of Hyderabad Sindh

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## ABSTRACT

**Background and Aim:** In developing countries with a high prevalence of bleeding disorders, safe and adequate blood supply has persisted as a major challenge. Blood transfusion and donation in Pakistan are based on replacement donor's primitive practice whereas voluntary donors worldwide replaced replacement donors. The present study objective was to evaluate the blood donor's knowledge, attitude, and practice towards blood donation to measure their understanding of blood donation.

**Materials and Methods:** This descriptive cross-sectional study was conducted from November 2020 till June 2021 at the Diagnostic and Research Laboratory, LUMHS Hyderabad. A pre-tested, self-administered survey form was utilized to investigate a total of 350 respondents. Out of the total, 160 were healthcare workers, 90 were medical students, and 100 were general public. Data was analyzed using SPSS version 20.

**Results:** Of the total 350 respondents, the prevalence of blood donors and non-donors were 114 (32.6%) and 236 (67.4%) respectively. Out of 114 blood donors, 87 (76.3%) were male and 27 (23.7%) were female donors. The overall mean age was 37±6.45 years. The prevalence of knowledge, attitude, and practice among health workers was 56%, 64%, and 41% whereas students had 77%, 56%, and 22%, and the general public had 19%, 48%, and 78% respectively. The main reasons for not donating blood were fear of needles or sight of blood, weight loss/gain, lead to anemia, decreased immunity, and no one asked to donate with respective prevalence 11%, 17%, 39%, 21%, and 41%. About 56% of donors donated blood for the first time followed by 37% more than once.

**Conclusion:** The knowledge, attitude, and practice survey concluded that a rational design, voluntary blood donation campaign, targeted strategies, and awareness program could be planned to utilize and increase blood donors on a community level.

**Keywords:** Blood donation, Donors, Knowledge, Attitude, Practice

## INTRODUCTION

In developing countries with a high prevalence of bleeding disorders, safe and adequate blood supply has persisted as a major challenge. Blood transfusion and donation in Pakistan are based on replacement donor's primitive practice whereas voluntary donors worldwide replaced replacement donors. Thus, identifying motivational factors affecting blood donation and recruitment of safe and low-risk donors is necessary [1, 2]. Blood is one of the vital components of human life [3], and every society must consider the necessity of blood donation or transfusion [4, 5]. Both developing and developed countries are currently facing the challenges of finding consistent donors [6, 7]. About 35% of the population donate blood per year as per World Health Organization statistics [8]. Blood donors are a significant safeguard for the availability, safety, accessibility, and quality of blood. As per WHO guidelines, all the nations should be autonomous in blood donation strategies and every donor should be charitable, non-remunerated, and unidentified. The total number of blood centers present in Pakistan is 1830 [9, 10], where 3.5 million per annum blood collection is estimated [11]. Pakistan is lagging behind in terms of voluntary blood donation practice nowadays. WHO data-based collected estimated that 16.7% population donated blood per 1,000 population where 89% were family relatives and 11% were voluntary blood donors [12].

A system should be organized for voluntary blood donation in order to facilitate mobilization and appropriate strategies for low-risk group's donor's identification within the community. The young population has been identified as a key low-risk donor group in countries with similar population pyramids to Pakistan. Additionally, the Transfusion Transmitted Infections (TTIs) prevalence among donor population and blood transfusion services within countries reported that young generations are active and become voluntary due to their education, accessibility, and regular blood donor potential. The current study focused on Knowledge Attitudes and Practices (KAP) of blood donation among Sindh resident population and factors potentially affecting their behavior toward donation. The knowledge, attitude, and practice survey revealed information regarding potential donors' incentives and fallacies, as well as their aptitude, transfusion-related behavior, and awareness. The ultimate goal of the current study was to endorse blood donation over a Public Awareness Campaign (PAC) based on Knowledge, Attitudes, and Practices.

## MATERIAL AND METHODS

This descriptive cross-sectional study was conducted from November 2020 till June 2021 at the Diagnostic and Research Laboratory, LUMHS Hyderabad. A pre-tested, self-administered survey form was utilized to investigate a total of 350 respondents. Out of the total, 160 were

healthcare workers, 90 were medical students, and 100 were general public. The questionnaire consisted of different questions designed to assess KAP regarding donation while considering the social and traditional milieu. The questionnaire was divided into four sections, each section comprising different questions and multiple-choice answers; (a) Demographic features; (b) knowledge; (c) attitudes; and (d) practices. The questionnaire was kept anonymous. The descriptive analysis was carried out with the help of the SPSS software v. 24. The questionnaire had different questions in each section i.e. Knowledge questions were different from Attitudes questions, which were analyzed differently than Practice questions.

**RESULTS**

Of the total 350 respondents, the prevalence of blood donors and non-donors were 114 (32.6%) and 236 (67.4%) respectively. Out of 114 blood donors, 87 (76.3%) were male and 27 (23.7%) were female donors. The overall mean age was 37±6.45 years. The prevalence of knowledge, attitude, and practice among health workers was 56%, 64%, and 41% whereas students had 77%, 56%, and 22%, and the general public had 19%, 48%, and 78% respectively. The main reasons for not donating blood were fear of needles or sight of blood, weight loss/gain, lead to anemia, decreased immunity, and no one asked to donate with respective prevalence 11%, 17%, 39%, 21%, and 41%. About 56% of donors donated blood for the first time followed by 37% more than once. Out of 350, about 32.6% donors donated their blood as shown in Figure-1. The gender distribution of 114 blood donors are illustrated in Figure-2. The prevalence of knowledge, behavior, and attitude are shown in Table-1, 2 and 3. The respondent characteristics are shown in Figure-3.

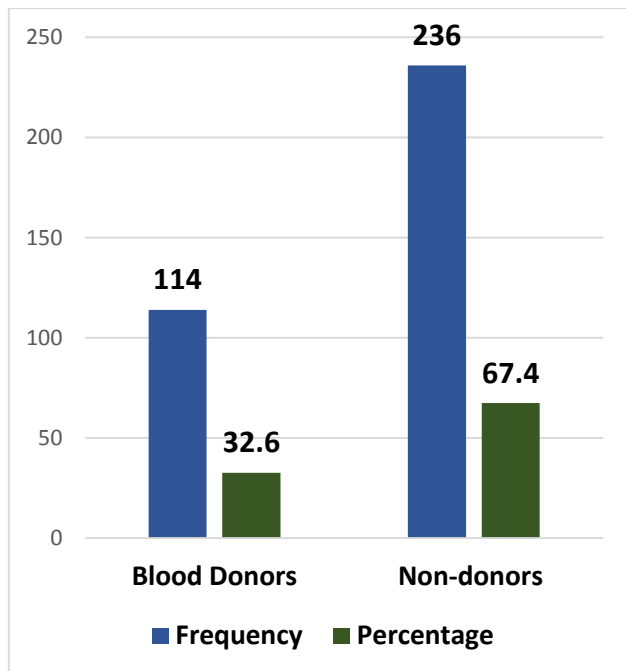


Figure-1 prevalence of blood donors and non-donors among 350 participants

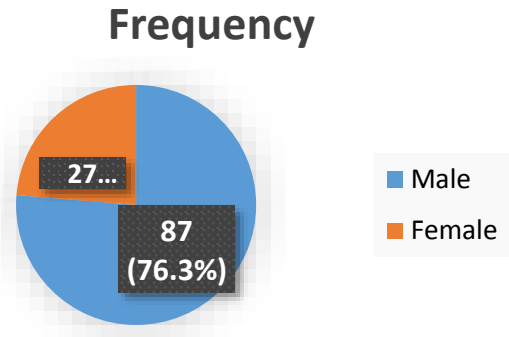


Figure-2 Gender distribution (n=114)

Table-1 Participants attitude and reasons for not donating

Attitude	Frequency N	Percentage %
Reasons for not donating bloods		
Fear of needle/ sight of blood	39	11
Weight loss/gain	61	17
Leads to Anemia	137	39
Decrease Immunity	74	21
No One asked for blood	144	41

Table-2 the knowledge of blood donation among participants

Knowledge	Good (%)	Poor (%)
Blood Group	67	33
Suitable Age	71	29
Blood Screening	43	57
Donation Interval	46	54
Transfusion Reaction	69	31
Transfusion Transmissible Infections	38	62

Table-3 Prevalence of participants practice

Practice	Frequency	Percentage %
First Time	147	42
More than Once	95	27
Regular	60	17
Deferred before	49	14

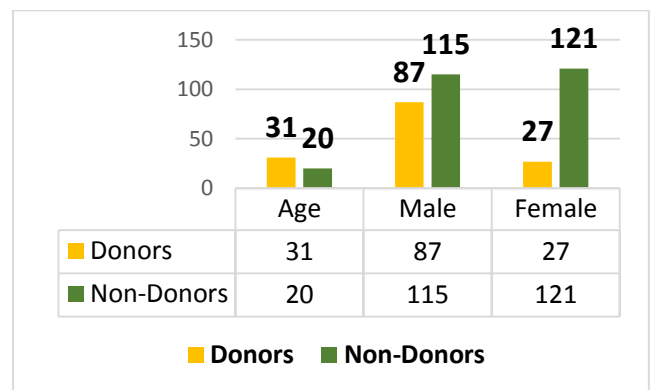


Figure-3 Respondents characteristics

**DISCUSSION**

So far, there is very little published data available in Pakistan regarding blood donation and voluntary donors. A

KAP related comprehensive study in Pakistan has publicized a miscellaneous conventional mythologies and abnormal public perceptions about donation [13]. Of the total donors, females make up roughly half but are vastly underestimated in collection of blood donations. Additional investigation on doctors and paramedics found that doctors and paramedic contribution to voluntary blood donation was 3.4% and 0% respectively [14, 15]. Being a life-saving practice, blood donors need proper counseling in health care facilities reducing donor loss, aids in consent, and risky donors' identification [15, 16].

Knowing people's knowledge and attitudes toward this technique may help family doctors interact with this group. The adequate blood storage provision in Pakistan poses a challenge to healthcare providers. This challenge is exacerbated by a number of factors, including population size increases and limited medical facilities. The current study was carried out on health professionals, students, and the general populations throughout Hyderabad, Sindh to evaluate the numerous aspects that contribute to knowledge, attitude, and practice of blood donation.

Our findings indicate that blood donors had knowledge about donation within the acceptable level. As a whole, all the contributors were familiar with the individual blood groups. Furthermore, it has been demonstrated that they had knowledge about when and who can donate blood and blood requirement stages, as evidenced by 67% and 33%, respectively. On the other hand, 56% demonstrated inadequate knowledge and believed that infectious disease could be caused through donation. It is also worth noting that about 33% were not aware of their blood group, indicating a lack of knowledge despite having basic blood knowledge.

Despite sharing the similar demographic details, professional students other than health demonstrated a lack of knowledge, as evidenced by another study conducted where students of various major universities were investigated and demonstrated a lack of knowledge. [18,19].

A sizable participants expressed a stout desire to go through blood donation even for unknown recipient showing that self-sacrifice is a foremost feature in donation, matching another study findings where 84% blood donated by students volunteered [20, 21] Other factors, according to participants, would be decent instigators for them. Astonishingly, receiving financial compensation was not a part. Obtaining approved certificates was the most motivating factor (47.8%). The impression of monetary compensation was rejected by 85.6% of all participants. Another study conducted found that (75%) of respondents opposed monetary compensation. [22].

Fear is the prime cause found regarding donation negative attitude [23-25] However, in our study; only 11% donors were feared of needle/blood insight. Donors, on the other hand, believed that the main reason no donors did not donate was fear (37%) as reported by several studies [26, 27].

## CONCLUSION

The knowledge, attitude, and practice survey concluded that a rational design, voluntary blood donation campaign, targeted strategies, and awareness program could be

planned to utilize and increase blood donors on a community level.

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