



A Study of the Knowledge, Attitude and Practices Regarding Blood Donation in the Relatives of Paediatric Patients in a Tertiary Care Centre

KEYWORDS

Blood Donation, Awareness, Tertiary Care Centre

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ABSTRACT *Blood is the most donated tissue in medical practice and a veritable tool in life-saving situations. Despite extensive efforts worldwide, the availability of blood still remains short. In India there is a need of about 8 million units of blood per year and only one third are obtained from voluntary donors. This study was undertaken to check the awareness of blood donation among the relatives of patients attending our wards. It was conducted among 57 participants on the basis of a questionnaire. 74% participants knew about Blood donation but only 21% had donated blood. General awareness about blood donation was high. Participants did not know specific details about the subject. There was a positive attitude to blood donation. Previously prevalent myths are no longer significant.*

Conclusions: Despite a positive mindset towards blood donation, efforts still need to be undertaken to progress further towards the ultimate goal of eradicating shortage of blood.

Introduction:

Blood is the most donated tissue in medical practice and a veritable tool in many life-saving situations. Despite the many breakthroughs of medical science today, there is still no ideal substitute. Blood is only manufactured by human beings. Human donation is the only way of acquiring blood to meet emergency requirements in cases of road traffic accidents, complications of pregnancy and childbirth, various anemic disorders and surgical emergencies. Blood donation is the act of giving one's blood so it can be transfused into another for therapy. Globally, 80 million units of blood are donated each year (1).

Despite extensive efforts worldwide, the availability of blood still remains short to meet the increased demand for it. World Health Organization advocates that 3-5% of the population should donate blood every year, which would be the ideal rate for maintaining a country's stock of blood and blood products at acceptable level (2).

The collection of blood should only be from voluntary donors, that is one of the four components of WHO's integral strategy to promote global safety and minimize risk associated with transfusion (3). Unfortunately, 83% of the global population in developing countries has access to only 40% of voluntary supply of blood (4). In India there is a need of about 8 million units of blood every year, only one third of which are obtained from voluntary donors (5).

To prevent transmission of blood-borne infections, the first step is encouraging voluntary, non-remunerated and regular blood donors who will donate blood at least once or three times a year (1, 2). Little wonder many nations across the world are continually evaluating their blood donor strategies in the light of the current demand for blood and its products and the reduction of the available eligible donors due to the stringent criteria in place to ensure blood safety (4).

This cross-sectional analytical study was undertaken to check the awareness of blood donation among the relatives of pa-

tients attending our wards. We encounter several cases of Thalessemia, Sickle-cell Anemia and other blood disorders in our OPD. Similarly, blood is also required in patients of road-traffic accidents, during deliveries and other surgical emergencies in our hospital. We constantly face a shortage of blood on an emergency basis, despite having a blood bank. A factor playing a role could be the lack of awareness of the people regarding the importance of voluntary blood donation.

This study also included counseling of each participant individually and encouragement to voluntarily donate blood.

Objectives:

1. To study the depth of knowledge of blood donation in the relatives of Paediatric patients
2. To assess the attitude of the people towards blood donation
3. To study the practices of blood donation followed by the general community.
4. To counsel the participants and improve their understanding of the process of blood donation
5. To correct the myths associated with blood donation in the minds of people in the community.

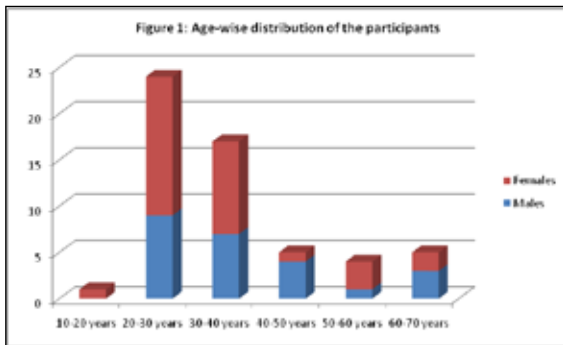
Materials and Methods:

The cross-sectional analytical study was conducted among 58 participants. These participants included the relatives of patients in the Paediatric wards. A semi-structured self-administered questionnaire was used to collect information from each participant on socio-demographic characteristics, knowledge, attitude and factors affecting voluntary blood donation. A written informed consent was taken from each person. Illiterate participants were orally questioned and answers were recorded.

Observation and Results:

57 participants (32 females, 25 males) were included in this study. Relatives of children admitted in the general Paediatric wards and our Thalessemia Unit were included.

(Figure 1 about here)



47% females were housewives and 19% were farmers. 16% males were farmers while 12% belonged to the categories of labourers, painters and job-holders each.

Religion bears a significant role in the beliefs of people regarding blood donation. 73.68% participants were Hindus, 17.5% were Buddhists & 3.5% were Muslims.

The level of education plays an emphatic role in shaping the knowledge and attitude of patients regarding this subject. 10.5% persons had finished their matric education. 5.2% persons had attended college and graduated. 35% persons were illiterate.

The questionnaire provided, tested the extent of the knowledge, attitude and practices of blood donation that the participants knew about.

(Table 1 about here)

| Section A: Knowledge of Blood Donation | | | | Section B: Attitude towards blood donation | | | |
|---|----------|-------|----------|---|---------|-------|---------|
| Do you know about blood donation? | | | | Do you think Blood donation is the greatest donation? | | | |
| | | Males | Fe-males | | | Males | Females |
| Yes | (75%) | 21 | 22 | Yes | (93%) | 23 | 30 |
| No | (21%) | 4 | 8 | No | (4%) | 1 | 1 |
| Don't Know | (3.5%) | 0 | 2 | Don't Know | (4%) | 0 | 1 |
| Need for Blood Donation: | | | | Have you ever donated blood? | | | |
| Accidents | (14%) | 3 | 5 | Yes | (21%) | 10 | 2 |
| Deliveries | (10.5%) | 2 | 4 | No | (79%) | 15 | 30 |
| Blood Disorders | (10.5%) | 2 | 4 | Will you voluntarily donate blood? | | | |
| All | (51%) | 11 | 18 | Yes | (89%) | 24 | 26 |
| Don't Know | (19.3%) | 6 | 5 | No | (11%) | 1 | 6 |
| Who can donate blood? | | | | Will you donate blood to an unknown person? | | | |
| >18 years | (56%) | 15 | 17 | Yes | (82%) | 22 | 25 |
| >40 years | (1.75%) | 0 | 1 | No | (18%) | 3 | 7 |
| Anyone | (10.5%) | 2 | 4 | Will you ask for a monetary compensation for the expenses during blood donation? | | | |
| Don't Know | (31.75%) | 8 | 10 | Yes | (8.7%) | 1 | 4 |
| Can women donate blood? | | | | No | (86%) | 23 | 26 |
| Yes | (72%) | 19 | 22 | Don't Know | (1.75%) | 0 | 1 |
| No | (14%) | 4 | 4 | Will you tell your family and friends that you donate blood? | | | |
| Don't Know | (14%) | 2 | 5 | Yes | (77%) | 19 | 25 |
| Volume of Blood collected during Blood Donation: | | | | No | (23%) | 6 | 7 |
| 150 ml | (7%) | 3 | 1 | Will you encourage others to donate blood? | | | |
| 250 ml | (14%) | 6 | 2 | Yes | (96%) | 24 | 31 |
| 350 ml | (8.7%) | 2 | 3 | No | (4%) | 1 | 1 |
| 450 ml | (1.75%) | 1 | 0 | Will you truthfully inform your doctor about your health status before donating blood? | | | |
| Don't Know | (66.66%) | 13 | 25 | Yes | (100%) | 25 | 32 |
| Frequency of Blood Donation: | | | | No | (0%) | 0 | 0 |
| Once in a Month | (3.5%) | 0 | 2 | Section C: Myths about Blood Donation: | | | |
| Once in 3 Months | (30%) | 7 | 10 | Prolonged weakness after Blood Donation: | | | |
| Once in 6 Months | (17.5%) | 6 | 4 | Yes | (47.3%) | 7 | 20 |
| Once in a Year | (14%) | 7 | 1 | No | (47.3%) | 16 | 11 |
| Don't Know | (33.33%) | 3 | 16 | Don't Know | (5.4%) | 2 | 1 |
| Do you know about blood groups? | | | | Weight loss after Blood Donation: | | | |
| Yes, and I know my own blood group | (36.7%) | 7 | 14 | Yes | (19.3%) | 4 | 7 |
| Yes, but I don't know my own blood group | (9%) | 0 | 5 | | | | |
| No | (54.3%) | 17 | 14 | | | | |

| | | | |
|---|-------------|----|----|
| Can the Donor get an infection during Donation? | No (68.4%) | 20 | 19 |
| Yes (14%) | 2 | 6 | |
| No (72%) | 20 | 21 | |
| Don't Know (14%) | 3 | 5 | |
| Is there a change of religion or caste after receiving donated blood? | Yes (0%) | 0 | 0 |
| No (93%) | 25 | 28 | |
| Don't Know (7%) | 0 | 4 | |
| Can the Recipient get an infection from donated blood? | Yes (19.3%) | 6 | 5 |
| No (59.6%) | 17 | 17 | |
| Don't Know (21%) | 2 | 10 | |
| Is Testing conducted on donated blood? | Yes (40.3%) | 10 | 13 |
| No (0%) | 0 | 0 | |
| Don't Know (59.6%) | 15 | 19 | |

While 74% participants had heard about blood donation (sources -friends, camps, media and hospital visits), 21% participants had not heard about this subject before. 3.5% participants were not able to say whether they knew or did not know about this subject.

93% of the participants thought blood donation was the greatest donation.

45.7% participants knew about the concept of blood grouping and the effects of blood group mismatch. When asked about their own blood groups, 36.7% recounted their blood groups while 9% could not do so. 54.3% participants had not heard about the concept of blood groups. 3 of such participants were previous blood donors, indicating the lack of proper counseling in camps and hospitals in rural areas before blood donation.

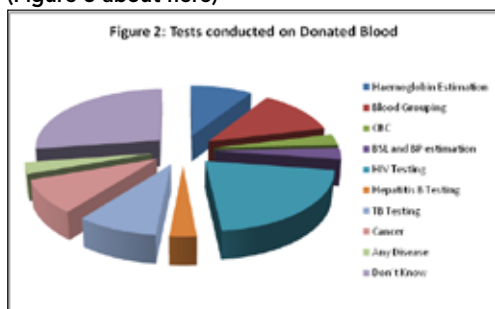
When asked about the events when blood donation would be required, 51% respondents said that accidents, blood disorders and deliveries were common events.

Knowing the minimum age above which blood can be donated is important. 56.14% participants knew that one should donate blood only beyond 18 years of age. 86% knew that ill persons shouldn't donate blood. 72% said that women can donate blood, while 14% did not know whether they could.

66.66% participants did not know the exact volume of blood taken during one sitting of blood donation, while only 30% participants knew that blood should be donated once in 3 month.

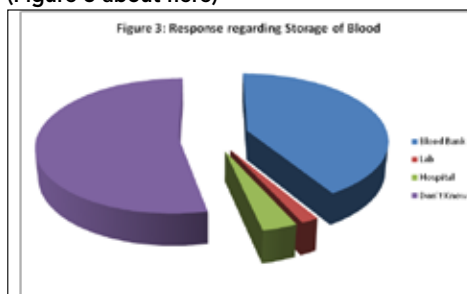
When asked about any infections or illness that could affect the donor or the recipient, 72% participants said that donors did not get infected. Participants did not have a clear idea about spread of infections in recipients through blood. Although 59.6% said that donated blood could not cause any disease or infection in the recipient, few could support it with a reason.

59.6% did not know whether blood is tested or not. (Figure 3 about here)



54.3% did not know where blood is stored.

(Figure 3 about here)



Only 21% of our participants had donated blood before. The remaining 79% gave various reasons, the commonest (50.8%) being lack of need to donate blood.

Table 2: Reasons for not donating blood

| | Males (number) | Females (number) |
|--------------------------------------|----------------|------------------|
| I am weak | 1 | 8 |
| I did not ever need to | 10 | 19 |
| I did not know about it | 0 | 3 |
| I did not want to | 1 | 1 |
| I have a blood disorder | 1 | 0 |
| I have a child with a blood disorder | 1 | 2 |
| My Haemoglobin is less | 0 | 1 |
| I have Diabetes and BP | 0 | 1 |

89% said they would donate blood voluntarily and 82% said that they would donate blood an unknown person in an emergency.

61.6% of our participants know that no monetary benefit is given in return for blood donation. 86% persons said that they would not ask for any monetary compensation for the expenses they incurred. The reason given was that this was a donation therefore wrong to ask for money.

All participants said that they would tell their doctor everything about their health status before donating blood.

Although an equal number of participants agreed and disagreed with the statement, we found that more female participants (74%) thought there would be prolonged weakness. Male participants (59.2%) on the other hand said that it wouldn't be present. 68.4% participants knew that there is no weight loss after a blood donation, as opposed to common belief. 93% respondents knew that there isn't a change of religion of recipient due to the transfused blood.

77% said they would tell their family that they had donated blood and 96% participants would encourage others to donate blood.

When asked about the presence of a blood bank in Sassoon, only 49% knew that there was a blood bank.

Discussion:

This study was aimed at gauging the extent of awareness amongst our patients and counseling those who were not aware. We tried to include all age groups of relatives, from young mothers to the elderly.

We found that respondents had good knowledge about blood donation, but it wasn't translated into the practice of donating blood in 79% of our participants. The reason given was lack of need. This indicated that although 82% participants said that they would donate blood to an unknown person, they did not actually practice that. This finding agrees with the study in Mmbatho where only 17.5% of the high school students had ever donated blood (6).

This study revealed that the number of males (83.3%) donating blood was much more than that of females (16.67%). This was in agreement with the study by Olaiya where female donors compared to males were abysmally low (1%) (7). This shows that despite increased knowledge regarding blood donation among females, it is not being practiced as commonly. Out of the 9 respondents who gave prolonged weakness as a reason for not donating blood, 8 were females (88.89%). Out of the 29 persons who said there was never a need to donate blood, 19 were females (65.5%). 3 respondents, who said they did not know about blood donation camps in their area, were females. All these factors are significant in the low number of female donors.

Comparable observations were also found among the students of Chulalongkon University, Thailand, out of the 80% participants knew about blood donation only 11% had donated blood voluntarily (8). In the study among the students of the University of Dhaka, Bangladesh, 80% of the participants showed a positive attitude towards blood donation; however, only 16% of the respondents had actually donated blood voluntarily (9). This suggests that knowledge about blood donation does not necessarily lead to actual blood donation.

Blood donations among the respondents in this study were mostly for beneficial reasons as the recipients were mostly friends and relatives. The voluntarily donated blood was scarce (2.8%). This agrees with the findings of Olaiya that voluntarily donated blood was donated during Religious week and Club activities (7). This suggests the need to explore the activities of tertiary institutions to promote voluntary donation.

Reasons given by respondents for not donating blood include lack of opportunity(50.8), weakness(15.7), lack of

knowledge(5.2%), a thalassaemic child(5.2%), lack of desire(3.5%), a blood disorder(1.75), less haemoglobin(1.75%). A study conducted in Tanzania showed that the main reason for less number of voluntary blood donations was fear of HIV transmission (10). In a study conducted among Australian college students, reluctance was mostly due to fear, contracting possible illness afterward and inconveniences of giving blood (11). Fear of HIV transmission was not a major deterrent in our study. In fact, 72% respondents affirmatively indicated that the donor does not get infected during the donation process. A Mexican study found that non-donation was mainly due to the fear of getting dizzy after blood donation.

Our study has shown that adequate information about blood donation and the knowledge that it is life-saving motivates people to donate blood voluntarily. In Lagos, 41% of the respondents preferred a certificate as an incentive, 13.6% preferred money and 2.5% would donate for nothing⁷. A study in Baltimore found that donors would be encouraged to donate if specific incentives were offered, especially future blood credits (12). Another study in Texas concluded similar results (13). A study in Tanzania noted a positive attitude towards voluntary blood donation but the majority of the people will do so only for an incentive (10). In Nigeria, the National blood transfusion service is making an effort to retain its voluntary donors by giving incentives such as free blood tests (blood group, hemoglobin genotype, HIV/ hepatitis) to donors, allowing the immediate family of volunteers to use blood without replacement and giving gift items such as certificates, T-shirts, hematinics, refreshments and badges. When assessing donor incentives and enablers, the study found that, in general, people are focused primarily on motivational tools, rather than rewards (14,15).

Comparatively, in our study 89% of the respondents showed willingness to donate blood voluntarily. 86% respondents said that they would not ask for monetary or any other compensation. The participants who had donated blood in donation camps said that they had been provided incentives (food, cards, clothes, etc.). This was not a factor in their voluntarily donating blood again.

Conclusion:

General awareness regarding blood donation is high but hasn't translated into voluntary blood donation. Younger and more qualified respondents were more knowledgeable about blood donation than the elderly and less qualified person. Knowledge regarding the volume of blood collected, frequency of collection and the storage of blood is poor. More awareness camps and drives need to be undertaken to improve this aspect.

Previously prevalent myths are no longer as significant. This shows that current efforts have been partially successful.

There is a positive mindset regarding blood donation today, but efforts still need to be undertaken to progress further towards the ultimate goal of eradicating shortage of blood.

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