

Knowledge, Attitude and Practices of Voluntary Blood Donation among Medical Students in a Teaching Institution, South India

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ABSTRACT

BACKGROUND

Blood donation can save many lives as blood can't be substituted by any other thing else. The need of blood donation is an emerging necessity in the present health care system. It is important to ensure the safety as well as quality of blood transfusion to save lives and prevent the spread of infectious diseases globally. Hence, there is a need for well-co-ordinated blood transfusion service, proper screening tests for transmittable diseases and collection of blood from voluntary and non-remunerable blood donors. As medical students can communicate with the public regarding the necessity and importance of blood donation, proper education should be given to them regarding the same. The present study aimed to evaluate the knowledge, attitude, and practices associated with voluntary blood donation among medical students.

METHODS

A cross-sectional study was conducted among 153 undergraduate medical students after getting their informed consent. A self-administered structured questionnaire was used to collect data on knowledge, attitude and practice regarding voluntary blood donation.

RESULTS

The overall prevalence of knowledge, attitude and practice regarding voluntary blood donation among this population was 91.5%, 86.3% and 61.6% respectively. This study showed that though there is good knowledge and attitude about voluntary blood donation among medical students, practice of the same was comparatively low.

CONCLUSIONS

Conducting awareness program on the need of blood donation can enhance the practice of the same among medical students.

KEYWORDS

Voluntary, Donors, Blood Donation

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BACKGROUND

Human blood forms an important component that helps to sustain human life and no substitutes have been discovered yet.¹ WHO defines blood as the most valuable medicine which can be replaced only by blood. It is a unique gift obtained from the nature that is needed for the survival and maintenance of life.² Blood transfusion forms an important part of health delivery system to save a life. Hence, the need of blood donation is an emerging necessity in the present health care system.³ It is important that the safety as well a quality of blood transfusion must be ensured to improve the health delivery system to save lives as well as to prevent the spread of infectious diseases globally. This includes the involvement of a well-co-ordinated blood transfusion service, proper screening tests for transmittable diseases as well as collection from voluntary and non-remunerable blood donors.⁴

The demand for blood and its components is much more than its supply and the need for safe blood need to be addressed as the availability of blood from voluntary, non-remunerated donor has being considered as the safest source of blood.⁵ WHO estimated that around 38% of reported voluntary donors belong to the age group of less than 25 years.⁶ As young students are healthy, dynamic and active, they have to be motivated to donate blood voluntarily as well as without receiving any remuneration. Certain misconceptions can hamper the blood donation, which could be corrected by proper donor education. Hence, there is a need for motivation, effective donor education and recruitment strategy.⁷ Medical students should have adequate knowledge about blood donation, as they are the younger population who can effectively communicate the public regarding the necessity and importance of the same. They can motivate and influence the persons whom they interact with. The present study aimed to look for the knowledge, attitude and practices associated with voluntary blood donation among medical students.

METHODS

A cross sectional study was conducted among the undergraduate students of Amala Institute of Medical Sciences, Amala Nagar, Thrissur during the period February to March 2020. A total of 153 students were enrolled in the study after getting their informed consent. A self-administered structured questionnaire was used to collect data on knowledge, attitude and practice regarding voluntary blood donation.

Statistical Analysis

The data were analysed using SPSS version 23. Data were tabulated as frequencies and percentages for categorical data.

RESULTS

A total of 153 students in the age group 18-20 years were included in the study. The mean age of the study group was 20.91 ± 1.74 years. Among the study group, 44.7% were male and 55.3% were females. 25.8%, 39.7% and 34.4% of the students belonged to first year, second year and final year of their medical study. Students were asked regarding the knowledge, attitude and practice of voluntary blood donation by means of a structured questionnaire and the responses in percentage were given in table 1.

Questions were given to assess the knowledge of criteria of blood donors and the procedure of blood donation. The entire study population heard about blood donation before the study and was aware about the blood group types. Though, 94.7% of the students were aware of the fact that healthy individuals can donate blood once in three months, only 72.4% of the study group had knowledge about the amount of blood that can be donated in one setting. 99.3% of the study population was aware of the criteria for becoming a blood donor, but the average time needed for blood donation were known only in 75% of the study population. 96.7% of the study group was aware about the transmission of diseases through blood and 94.1% had the knowledge about the importance of blood tests prior to blood donation.

Questions	Yes	No
Heard of blood donation before the study	100%	-
Knowledge about the blood group types	100%	-
Knowledge about the average amount of blood than can be donated by donor	72.4%	27.6%
Knowledge about the criteria of selecting a blood donor	99.3%	0.7%
Knowledge about the average time needed for blood donation	75%	25%
Can blood donors be able to donate once in 3 months?	94.7%	5.3%
Should blood be tested before blood donation?	94.1%	5.9%
Could infections be transmitted by blood donation?	96.7%	3.3%
Blood donation is a good habit	98.7%	2.3%
There is no need to give incentives to those who donate blood	45.4%	54.6%
Blood donation is safe	85.5%	14.5%
I will donate blood if there is a need	97.4%	2.6%
I will donate blood if there is a campaign	82.9%	17.1%
Do you encourage relatives to donate blood I will donate blood if there is a need?	97.4%	2.6%
I understand that blood donation doesn't lead to anaemia and I will donate blood if there is a need.	96.7%	3.3%
Have you ever donated blood?	61.6%	38.4%
Have you attended any awareness program related to the importance of blood donations?	62.3%	37.7%
Do you think that there is a need for blood donation awareness program among medical students?	86.8%	13.2%
Do you think that blood donation should be a voluntary service to the society?	98%	2%

Table 1. Percentage of Students Response to Questionnaire on Voluntary Blood Donation

98.7% of the study group was having the attitude that blood donation is a good habit and only 85.5% think that donating blood is safe. 45.4% were having the idea that blood donation should be non-remunerable, whereas 54.6% of the students were having the opinion of giving incentives to blood donors. 97.4% and 82.9% of the study population were willing to donate blood if there is a need and in campaign respectively. 97.4% of the students were having the attitude of encouraging others to donate blood.

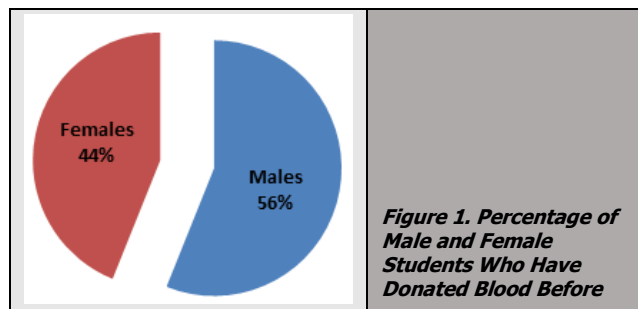


Figure 1. Percentage of Male and Female Students Who Have Donated Blood Before

Only 38.4% of the entire study population had donated their blood before. Out of the students who have donated their blood, 56.1% were boys and 43.9% were girls and is given in the figure 1. 9.1%, 37.9% and 42.4% of students who have donated blood previously, belonged to first year, second year and final year respectively and is represented in the figure 2. Major cause of donation of blood was for moral satisfaction followed by eagerness in experiencing the procedure of blood donation. 61.6% of the study group had not donated their blood before. The main reasons for their non-donation of blood included the lack of opportunity to donate blood (47.7%), fear of drawing blood (23.2%), concern about sterility of equipment (15.9%) and health issues (13.2%) and are represented in figure 3.

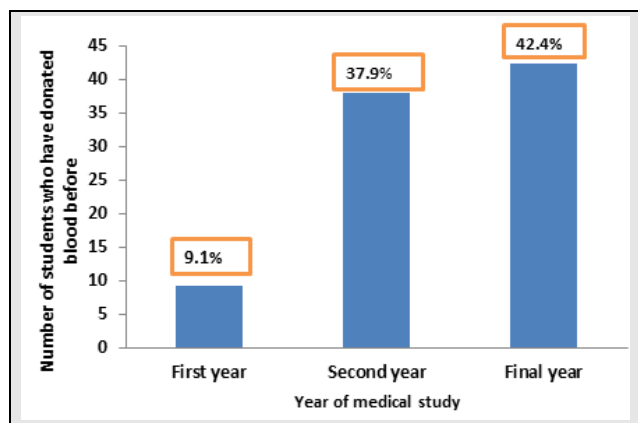


Figure 2. Number of Students Who Have Donated Blood before and Their Year of Medical Study

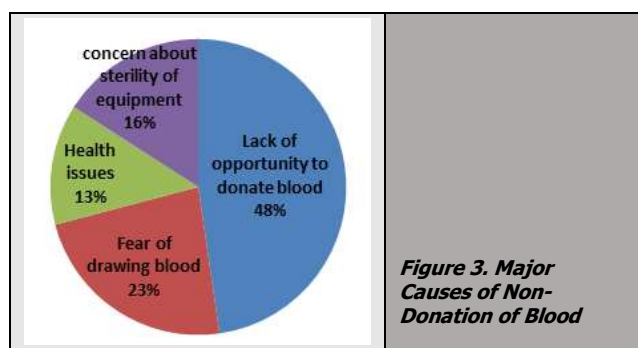


Figure 3. Major Causes of Non-Donation of Blood

62.3% of the study group attended awareness programs regarding blood donation. Out of the students who have attended the awareness program, 25.2%, 41.7% and 33% belonged to first year, second year and final year students respectively and is given in figure 4. 86.8% of the study population was having the opinion that awareness programs about blood donation should be conducted among

medical students to enhance their knowledge, attitude and practice towards it. 98% of the study population reported that blood donation should be a voluntary service to the society.

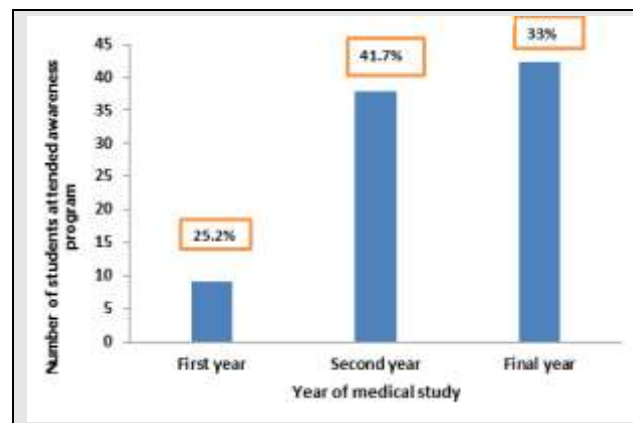


Figure 4. Number of Students Who Have Attended Blood Donation Awareness Program and Their Year of Medical Study

DISCUSSION

This study showed that there is good knowledge about voluntary blood donation among medical students. More than 90% of the study population was aware of the selection criteria for blood donors, how frequently one can donate blood, blood transmittable diseases and the need for doing blood tests prior to blood donation. But less than 76% had knowledge about the procedure of blood donation like the amount of blood that can be donated in one setting and the time needed for blood donation etc. Proper knowledge about the procedure of blood donation is important as the misconceptions regarding the same could act as a hindrance factor for voluntary donation of blood. This is in accordance with the study done by Deepak et al⁸ among Indian medical students.

98.7% of the study group was having the attitude that blood donation is a good habit and 97.4% of the study population was willing to donate blood if there is a need. This was similar to studies done by Elias et al,⁹ which showed that 89.3% of the students were willing to voluntarily donate blood to anyone. The present study showed that only 45.4% were having the idea that blood donation should be non-remunerable, whereas 81.4% did not expect reward for blood donation in the study done by Elias et al.⁹ The attitude towards voluntary and non-remunerable blood donation could be improved by proper awareness regarding the theme 'blood can save a life'.

61.6% of the study population had not donated blood before. Similar results were noted by studies done by Sabu et al,⁶ Giri et al,¹⁰ where they noticed that 62% and 52.5% of the participants had never donated blood before. The reasons for non-donation included the lack of opportunity to donate blood (47.7%), fear of drawing blood (23.2%), concern about sterility of equipment (15.9%) and health issues (13.2%). This is in accordance with the studies done by Gilaniet al,¹¹ Devi et al,¹² Bhartwaz et al¹³ which

accounted the lack of opportunity as the major reason for non-donation of blood. Creating proper awareness about blood donation among medical students can increase the good habit of blood donation. Compared to the good knowledge and attitude about blood donation, the practice of the same seemed to be less in this population. This is in accordance to previous studies done by Melku et al,¹⁴ Javadzadeh et al¹⁵ done in Ethiopia and Iran respectively. This could be due to the lack of proper information regarding the procedure as well as the misconceptions like becoming anaemic after blood donation, blood transmittable diseases etc.

The present study showed that final year and second year students were practicing voluntary blood donation compared with first year medical students. This could be due to the proper knowledge and good attitude of students towards the same. Out of the students who have attended the awareness program, 41.7% and 33% belong to second year and final year students respectively, which could have a positive influence on the blood donation. The practice of blood donation in males and females were 56.1% and 43.9% respectively. But the studies done by Mwaba et al,¹⁶ Ahmed et al¹⁷ and Hosain et al¹⁸ showed opposite results. Their study showed that though there was good knowledge and attitude towards blood donation, which was seen in senior undergraduate students, junior students were more involved in practicing the same which could be related to the increasing academic related stress among the senior students.

The overall prevalence of knowledge, attitude and practice regarding voluntary blood donation among this population were 91.5%, 86.3% and 61.6% respectively. 86.8% of study population was having the opinion that awareness programs about blood donation should be conducted among medical students to enhance their knowledge, attitude and practice towards it. So proper awareness programs on blood donation should be conducted as a part of medical curriculum to enhance the practice of voluntary, non-remunerable blood donation which can save many lives.

CONCLUSIONS

Medical students had good knowledge and attitude towards blood donation. But the practice of the same was comparatively low in this population due to lack of opportunity to donate blood, fear of drawing blood, concern about sterility of equipment etc, which can be cleared by conducting proper awareness campaign in the campuses in order to decrease the gap between the demand and supply of blood.

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