

SHORT ARTICLE

Knowledge Attitude & Practices towards Voluntary Blood Donation among Medical Students in BarabankiDeepak Chopra¹, Nidhi Jauhari²¹ Assistant Professor, Department of Community Medicine, IIMSR, Lucknow, ²Consultant, PNK, Lucknow

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Abstract

Introduction: Blood Donation can save million lives. Voluntary blood donations are the cornerstone of a safe and adequate supply of blood and blood products. The safest blood donors are voluntary, non-remunerated blood donors from low-risk populations. **Objectives:** The present study was undertaken with an aim to understand the factors like knowledge, attitude and practices associated with voluntary blood donation among the medical students in a medical college. **Materials & Methods:** This is a cross sectional study with a sample size of 278. A pre-tested semi structured questionnaire was used to assess the level of knowledge, attitude and practices regarding blood donation in the study subjects. The data was analyzed by applying suitable statistical methods. **Results:** The knowledge about the recommended age and interval of blood donation was 90 % & 48.9% respectively. Nearly 23% of students had ever donated blood and the majority of subjects (56.5%) did not have an opportunity to donate blood. 75.54 % of students were willing to donate blood at the time of study. **Conclusion:** Creating the opportunities regarding the blood donation may lead to the achievement of goal of 100% non-remunerated voluntary blood donation.

Key Words

Voluntary blood donation; opportunity; knowledge; attitude; practices

Introduction

Blood Donation can save million lives. Blood cannot be manufactured – it can only come from generous donors. WHO estimates that blood donation by 1% of the population is generally the minimum needed to meet a nation's most basic requirements for blood.(1) In India more than 38,000 blood donations are needed every day and a total of 30 million blood components are transfused each year. Voluntary blood donations are the cornerstone of a safe and adequate supply of blood and blood products. The safest blood donors are voluntary, non-remunerated blood donors from low-risk populations.(2) The collection of blood should only be from voluntary donors (low risk population), that is one of the four components of WHO's integral strategy to promote

global safety and minimize risk associated with transfusion.(1) The professional donor system was banned in the country with effect from January 1, 1998 as per the Honorable Supreme Court Judgment. Despite this notion, family/replacement donors still provide more than 45% of the blood collected in India. Such donors are supposed to be associated with a significantly higher prevalence of transfusion-transmissible infections (TTIs) including HIV, hepatitis B, hepatitis C, syphilis and malaria, For a safe blood service in our country, where comprehensive laboratory tests are neither possible nor pragmatic, it is best to switch over to 100% voluntary donations, as it is now established that only voluntary non-remunerated regular donation is the safest.(2) Government of India has adopted the National Blood Policy (NBP) in April 2002, which aims

to develop a nation-wide system to ensure an adequate and safe blood supply. Voluntary blood donation can be increased with an effective donor education, motivation and recruitment strategy.(3) The misconceptions that by donating blood, a person becomes weak or person may have HIV/ other STI, impede voluntary blood donation.

Since no literature is available in our state, the present study was undertaken to understand the factors like knowledge, attitude and practices associated with voluntary blood donation among medical students. The study may provide useful inputs to the national program on voluntary blood donation.

Aims & Objectives

To study the knowledge attitude and practices associated with voluntary blood donation among medical students

Material and Methods

It is a cross sectional study conducted among the students of a medical college (HIMS, Barabanki) during the period of March, 2013 to July 2013. A sample size of 278 was estimated based on the prevalence of adequate knowledge as 60% with 6% admissible error. All the students in the institute were enrolled in the study but 278 consented to be the part of the study. Those subjects who were not willing to participate/ consent were excluded from the study. A pre-tested semi structured questionnaire was used to assess the level of knowledge, attitude and practices regarding blood donation in the subjects. The variables included were awareness & knowledge, frequency, cause and willingness for blood donation. Descriptive statistics was used to assess the level of knowledge, attitude and practice of blood donations. Chi square test was applied to examine the association between sex and blood donation status. A p-value of <0.05 was taken as statistically significant. Proper ethical and institutional approval was taken from the college.

Results

A total of 278 students were interviewed with a mean age of 21.3 years ranging between 18 years to 25 years. Female participants (57%) were more in comparison to males (43%). Students' knowledge level about blood donation is shown in [Table I](#). The recommended age of blood donation (18-60 years) was responded correctly by 90 % of subjects

but when the interval of blood donation was asked only 48.9% students gave the correct answer. [Table II](#) shows that majority of subjects (83.8%) perceive that there is no harm/ effect on the donor by blood donation whereas 5.4% students think that after blood donation the donor becomes weak/ obese. Out of total students, only 64 (23.0 %) students have ever donated the blood and out of which 35.9% students donated the blood more than twice. Replacement blood donation (65.6%) was the major factor for donating blood among the donor subjects. None of the subjects availed monetary benefits for blood donation. The majority of subjects (56.5%) did not have an opportunity to donate blood while the age factor was the reason for not donating blood among 20.09% of study subjects. Religious restrictions and fear of needle /contracting disease was the reason in 0.94 % and 6.07% of subjects respectively. 75.54 % of students were willing to donate blood at the time of study. Remunerated (Paid) blood donation was acceptable to 32% of respondents in our study. 62 % of respondents have heard about the blood donation from Mass media. It can be seen in [Table III](#) that 72 % male and 28% female students had donated blood. The difference is statistically significant (p value- 0.00). With respect to willingness for donating the blood, 75 % of all students were found willing to donate the blood with 44 % being male students and 55.7 % being female students. Among those who were unwilling to donate the blood, percentage of female students was high (60.3%).

Discussion

We found that only 23 % of students had ever donated blood, similar findings were also found in the study conducted by Devi SH *et al* (4), Hossain GM *et al* (5), Jose AP *et al* (6) & Nwogoh B *et al* (7) where only 14 per cent, 16 per cent, 18 percent & 22 percent of the respondents had actually ever donated blood respectively.(4,5,6, **Error! Reference source not found.**) The present study observed that 90 % of study subjects were aware of the recommended age of blood donation (18-60 years) and 48.9% were aware of the interval of blood donation. The findings were similar to the study done by Uma S *et al* (6) where 51.2% donors knew about the interval of the donation and 79.4% donors knew about the age limit for the donation, (8). The findings were also consistent with the study of Lischen *et al*, (9). The majority of subjects (56.5%) in

our study did not have an opportunity to donate blood which was consistent with other studies done by Devi *et al* (4), Bhartwaz *et al* (10) & Gilani *et al* (11) while the study by Uma S *et al* (8) showed that 57% donors felt that creating an opportunity for the donation was an important factor for motivating the blood donation. We observed the replacement blood donation (65.6%) was the major factor for blood donation among the donor study subjects. The findings coincide with the study of Uma S *et al*, (8). Majority of subjects (83.8%) in our study perceived that there is no harm/ effect on the donor by blood donation whereas 5.4% students think that after blood donation the donor becomes weak/ obese which is similar to the finding of Uma S *et al* (8) who found that 74 % of donors have perception that blood donation would not harm their body.(8) Now as per the ruling of Hon'ble Supreme Court replacement donation should be completely replaced by voluntary non-remunerated blood. But our study shows that despite the high level of knowledge about the age of donation, interval and effects on health, the actual voluntary blood donation is low and the primary reason for this comes out to be lack of opportunity. The study by Gilani I *et al* also found that even the increased level of awareness on the subject does not result in actual act of donating blood, (11). For tackling this situation there is an urgent need of creating enough opportunities for blood donation so that the knowledge and positive attitude gets converted in to the practice of voluntary blood donation. The study by Nwogoh B *et al* also revealed a positive attitude of the respondents towards blood donation, but a serious contradiction in the practice of voluntary blood donation, (7). Our study also observed that 75.54 % of students were willing to donate blood which is comparable to the study done by Devi SH *et al* Uma S *et al* Jose AP *et al* Kowsalya V *et al* but was much higher than earlier study done by Shenga N (2008) who found that in general population only 46% respondents were willing to donate the blood (4,8,6,12,13). This disparity with the compared may be due to the fact that medical students are closer to scientific knowledge and are more aware about blood donation as compared to general population. Thus creating the opportunity for blood donation is an important aspect in voluntary blood donation and may be a great step in achieving 100% voluntary blood donation. Our study also found that nearly 80% of respondents have heard about blood

donation from Mass media or Academics. Thus it can be concluded that mass media /academics have greatly enhanced the knowledge of blood donation, therefore it can also be used as a channel to publicize the opportunities created for blood donation. One interesting but discouraging finding that has emerged from this study is that 32% of subjects favored paid blood donation. The finding although lower than the Jose AP *et al* study which showed that 66% respondents felt that donors must be rewarded monetarily, is in contrast to the findings by Hossain GM *et al* who found that a high number of respondents (93%) had a negative attitude towards paid blood donation, (6,5). This may impeded the objective of 100% voluntary non-remunerated blood. Further studies need to be focused on this issue. The factors leading to higher male participation (72 % male students) among those donated could be that males are more associated with outdoor activities, decision making or getting more opportunity. Similar findings were observed by Nwogoh B who found a significant association between blood donation and sex and males were more likely to donate blood than females, (7).

Conclusion

It is important to spread the awareness of voluntary blood donation but it is equally important to create opportunities regarding blood donation. Awareness/ knowledge can only change behavior if the facilities for adopting such practices are readily available. Opportunities can be created by organizing blood donation camps at places accessible to a large number of target people like colleges, universities preceded by workshops, seminars, conferences etc. Availability of "Blood Donor Diary" at every blood bank containing the details of prospective blood donors could also go a long way. Non- monetary incentives for blood donation like Appreciation certificates may lead to the achievement of goal of 100% non-remunerated voluntary blood donation.

Recommendation

The present study highlights the importance of creating opportunities for blood donation. Thus it is recommended that apart from spreading awareness about voluntary blood donation, it is equally important to create opportunities for voluntary blood donation

Limitation of the study

The study was conducted in medical students of a private sector college, more factors can come up if a detailed study can be taken in govt. sector colleges as well.

Relevance of the study

Present study shows the importance of creating opportunities for voluntary blood donation and can help the authorities in formulating the required policies.

Authors Contribution

DC & NJ: Study Design, Data collection & compilation, drafting of manuscript. PS: Statistical analysis and finalization of manuscript with intellectual content.

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Tables

TABLE 1 KNOWLEDGE OF STUDY SUBJECTS ON BLOOD DONATION (N=278)

Variable	No. (%)
Age of Blood donation	250 (90.0)
Interval of Blood donation	136 (48.9)

TABLE 2 ATTITUDE & PRACTICES OF SUBJECTS ON BLOOD DONATION

Variable	No. (%)
Perception about Consequences of Blood Donation (n=278)	
Donor becomes weak/ obese	15 (5.4)
No effect on Donor	233 (83.8)
Any other	30 (10.8)

Ever Donated Blood (n=278)	64 (23.02)
Donated greater than two times (n=64)	23(35.94)
Factors leading to Blood Donation (n=64)	
Noble Cause as voluntary	11 (17.19)
As replacement for any relative / Friend/ known person requiring blood	42 (65.62)
Monetary Benefits	00 (0.00)
Inspired by knowledge in Academics	09 (14.06)
Any Other (including social pressure)	02 (3.2)
Reasons for NEVER donating blood (n=214)	
Fear (Needle/ Contracting disease)	13 (6.07)
No opportunity	121 (56.54)
Objection from family/ others	19 (8.88)
Health related issues	16 (7.48)
Age Factor	43 (20.09)
Religious Restrictions	02 (0.94)
Willingness to donate blood (n=278)	210 (75.54)
Attitude towards paid blood donation (n=278)	
Acceptable	89 (32.02)
Not acceptable	189(67.98)
By what means you have heard about Blood Donation(n=278)	
Mass Media	173 (62.23)
Friends / Relatives	47 (16.91)
Academics	49 (17.63)
Any Other	09 (3.24)

TABLE 3 RELATION BETWEEN SEX & BLOOD DONATION

Ever donated blood (%)		Male (%)	Female (%)
Yes	64 (23)	46 (72)	18 (28)
No	214(77)	74 (34.6)	140(65.4)
	278(100)	120 (43.16)	158 (56.84)
Chi Square statistic= 27.9 p value =0.00			
Willingness to donate blood (%)		Male (%)	Female (%)
Yes	210 (75.5)	93 (44.3)	117 (55.7)
No	68 (24.5)	27 (39.7)	41(60.3)
	278(100)	120(43.16)	158(56.84)
Chi Square statistic =0.439, p value= 0.508			