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ORIGINAL PAPER

Profile and knowledge of blood donors: a study in a blood bank of a tertiary care centre

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ABSTRACT

Introduction*: Blood is the only oxygen carrier in the body and is critical in saving human lives. The attitude, beliefs, and level of knowledge associated with blood donation will determine whether probable donors will donate blood or not.* ***Methodology****: This descriptive study with cross sectional study design will be conducted among the blood donors attending the blood bank of Tezpur Medical College and Hospital in the age group from 18 to 60 years in the department of Blood bank under Pathology with due consent.* ***Results****: The response rate is 76%. The age group (20-29) years has maximum response in terms of blood donation, i.e., 11(28.9%). Male outnumbered the female with a ratio of 2.16:1. In terms of body weight among the donors in the range of (50-59) kg has the maximum positive response, i.,e., 13(34.2%). In this study, the student group comprising 15(39.5%) were the highest to respond for blood donation for the cause.* ***Conclusion:*** *Volunteering behavior is based on culture and determined by various factors like religion, age, sex, attitude and occupation.*

Keywords*: Blood donation, voluntary donors, replacement donors, student*

INTRODUCTION

Blood is the only oxygen transporter in the body and is crucial in saving lives. Even years of extensive research failed in this field of blood donation to find a true substitute for blood and blood components may not be available for many years.[1] Therefore, blood donation by humans will continue to be the major source for blood and blood components.[2]

A tertiary care centre rely on the patient's relative for to donate the blood sample due to not having enough voluntary blood donations to help the needy patients.[2] Maximum blood donation in tertiary care centre is on replacement basis. Blood banks pressurize the doctors, the nurses and the relatives of the patient and urge them to send replacement donors to maintain their stock. Thus the relatives of the patients are compelled in to finding donors. Many of a time professional blood donors are brought to donate blood in a way of replacement donors. This is a very risky situation as professional donors constitute a group with high-risk behavior leading to greater chances of transfusion-transmitted diseases.[3]

Like in any developing country in India too, there is a dependency on family replacement and remunerated donors. Though the World Health Organization advocates that member states should establish national blood transfusion services that will operate on the basis of voluntary, non-remunerable basis[4], family/replacement donors still provide more than 45% of the blood collected in tertiary care centre's blood banks.[5]

This study was thus undertaken among blood donors attending the Blood bank of Tezpur Medical College and Hospital to find out their socio-demographic profile, knowledge and practice regarding blood donation.

MATERIAL AND METHODS

This descriptive study with cross sectional study design was undertaken among the blood donors attending the blood bank of Tezpur Medical College and Hospital from December 2016 to December 2017. A total of 50 blood donors who came to donate blood during this study period in the age group from

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18 to 60 years in the department of Blood bank (Under Pathology) were randomly picked up. The final sample size thus came out to be 50.

An exit interview of the blood donors after donating blood was taken using a predesigned and pretested structured questionnaire. The study variables included age, sex, occupation and body weight. Informed consent was taken. The data thus obtained was analyzed using MS Excel.

RESULT

A total of 50 blood donors were interviewed upon which only 38 consented to respond the questionnaire with a response rate (RR) of 76%. **Table 1** shows the distribution of the study population according to their socio-demographic profile.

Table 1 Distribution of the Blood Donors according to their Socio-Demographic Characteristics

Variables	Number	Percentages
Age in Years		
<20	2	5.3
20 - 29	11	28.9
30 – 39	10	26.3
40 – 49	0	0
50 – 59	5	13.2
≥60	10	26.3
Gender		
Male	26	68.4
Female	12	31.6
Weight (in kg)		
50 - 59	13	34.2
60 – 69	11	28.9
70 – 79	10	26.3
≥80	4	10.5
Occupation		
Student	15	39.5
Housewife	6	15.8
Service	4	10.5
Business	7	18.4
Farmer/Laborer	6	15.8
Donor Type		
Voluntary Blood Donor	19	50.0
Patient's Attendant	19	50.0

The age group of 20-29 years has a maximum representation, i.e., 11(28.9%) in terms of blood donation with a minimum representation from the young age group of 20 years and below, i.e., 2(5.3%) as shown in **Figure 1.**

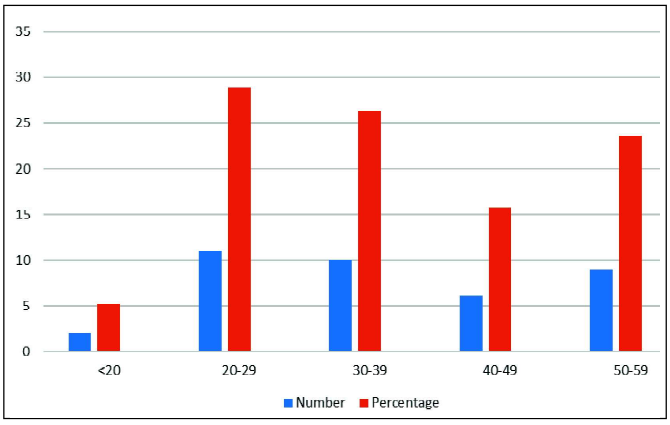

Figure 1 Age variable among blood donors

Male outnumbered the female with a ratio of 2.16:1.

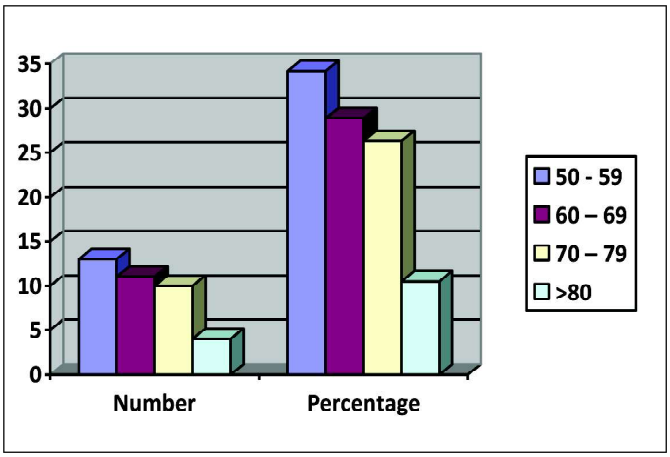

Figure 2 Distribution of variable of body weight among blood donors

In terms of body weight among the blood donors in the range of 50-59 kg has the maximum positive response, i.,e. 13(34.2%) and the group of 80 kg and above have the minimum representation as shown in **Figure 2**. In this study, the student group has 15(39.5%) outnumbered the other occupation in terms of blood donation for the cause with a minimum representation from service holder group 4(10.5%).

DISCUSSION

In the current study 11(28.9%) representations from the study population belonged to 20-29 years of age group. A study conducted by Uma et al[6] in Chennai found increased numbers of young donors who were in the age group of 18-25 years (61%). In contrast, Sampath et al[7] showed that 48.4% of the donors were in the age group of 26-50 years which tallied out findings.

The number of female donors in our study was 12(31.6%), low as compared to males with a ratio of 2.16:1. This is corroborated by similar findings in the Chennai study as well

as a study carried out by Agarwal et al.[8] There may be various reasons for the low percentage of female donors like poor nutrition, low weight, and fear of pain. In a study which was done by Hollingsworth[9], female donors constituted only 1% of the donor population.

In terms of body weight among the donors in the range of 50-59 kg have the maximum positive response, i.,e., 13(34.2%). This positive response may be because of sound health they enjoying within this group of body weight.

The student group comprises 15(39.5%) which was highest in the study population. The observation that knowledge score increased with education levels ($p<0.05$) seems to be logical since education would also increase awareness about all possible information related to blood donation. There is also a higher probability of having been exposed to a voluntary blood donation camp in one's educational institute since these camps are common in educational institutes. The involvement of student group in blood donation with highest 39.5% among all group in this study is in agreement with study[10] carried out in Tanzania where voluntary blood donation correlated with secondary school attendance.

CONCLUSION

The demand for blood products is ever lasting and increasing. Concurrently, blood donor enrolment becomes more and more difficult and scanty. Therefore, in this occasion volunteer blood donation should be encouraged, especially the young generation, as they can be a healthy and continuous donor. Volunteering behavior is based on culture and demographic variables and determined by various factors like age, sex, body weight and occupation, etc. Volunteer donors feel it as a responsibility to help others, regardless of personal connection. Our study found that all the respondents in the category of cultivators were willing to donate blood again if required in future. This positive feeling should be encouraged with proper knowledge regarding blood safety to meet the demand of blood requirement.

Conflict of interest: No conflict of interest associated with this work.

Ethical issues: Ethical clearance was taken from the institutional ethics committee.

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