

Original Research Article

Knowledge, awareness and attitude about blood donation among medical students

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	International Archives of Integrated Medicine, Vol. 5, Issue 11, November, 2018.	
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	Available online at http://iaimjournal.com/	
	ISSN: 2394-0026 (P)	ISSN: 2394-0034 (O)
	Received on: 05-08-2018	Accepted on: 12-08-2018
	Source of support: Nil	Conflict of interest: None declared.
How to cite this article: Farida Begum, Kontham Praveen. Knowledge, awareness and attitude about blood donation among medical students. IAIM, 2018; 5(11): 50-55.		

Abstract

Introduction: Donated blood can be lifesaving for persons who have lost large amounts of blood because of serious accidents, new medical and surgical procedures, civil conflicts, and military wars as well as for patients who have become severely anemic because of serious hematological diseases or treatments such as cancer therapy. Therefore, availability of blood is an important concern to the society. Encouraging and engaging youth in these kinds of voluntary activities will increase the supply of blood. The aim of the study was to compare the reasons for blood donation and knowledge about blood donation among medical students.

Materials and methods: This study was done at Government Medical College, Nizamabad, Telangana state between April 2017 and March 2018. Only MBBS students who were willing to be a part of study were included- total students participated were 350. A predesigned, pretested, self administered questionnaire was devised to collect data. Data were collected after obtaining informed consent. Ethical clearance from the institute was obtained before the study.

Results: A total of 350 students were considered for this study. Total male participants were 216 which constituted 61.7% and total female participants were 134 which constituted 38.3%. Age group included in this study was 18 years to 24 years. Majority of the students participated in this study were in the 3rd and 4th year of MBBS. Out of the 350 students, only 69 students were new to blood donation/ never donated blood in their life time due to various reasons, 46 participants donated only once, 77 participants donated twice, 75 participants donated thrice, 48 participants donated four times, 21 participants donated blood 5 times and only 14 participants donated blood more than 5 times.

Conclusion: A considerable percentage of students have low awareness of and negative attitude towards blood donation. The low awareness and negative attitude towards blood donation can be

considered as important factors contributing to the lack of interest and poor participation in blood donation among this population.

Key words

Blood donation, Knowledge, Adverse reaction, Repeat donor, Safe donor.

Introduction

Adequate and safe blood supply has still remained a big challenge in small and developing countries. Safe blood is critical for proper medical care. Access to safe blood is an important factor in preventing the spread of infectious diseases at a global level. There is almost always an urgent need for blood to save a life; therefore, it is imperative that hospitals always have immediate access to a certain amount of blood and its related products. The first step for attaining it is to perform comprehensive studies about awareness of the population toward blood donation to gauge the present situation, beliefs, and both positive and negative attitudes of the population toward blood donation [1]. In India, 50%–60% population falls between 18 and 65 years of age, still we have blood crisis because of day to day number of patients' increases more than blood donors. Moreover, recruitment of voluntary non-remunerated blood donors poses major challenges to transfusion services throughout the world [2]. Even after combined efforts from the Government and International Agencies such as Red Cross Society and WHO, the supply of safe blood is still in short of global demand [3]. There is a need to encourage, inspire, and motivate students to donate blood voluntarily and become a non-remunerated donor. Voluntary blood donors who donate blood once, twice or thrice a year are considered to be the safest [4, 5] as they have no reason to give false information about lifestyle factors which might place them at risk of transmitting infectious diseases [6]. Students consist of a large healthy and active group of voluntary blood donors to meet the demand of safe blood. Because of background knowledge, medical science students have a positive attitude toward voluntary blood donation and can be a

core group to educate many friends and relatives about the need for blood transfusion.

Aim of the study

The aim of the study was to compare the reasons for blood donation and knowledge about blood donation among medical students.

Materials and methods

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Results

A total of 350 students were considered for this study. Total male participants were 216 which constituted 61.7% and total female participants were 134 which constituted 38.3% (**Chart - 1**). Age group included in this study was 18 years to 24 years. Majority of the students participated in this study were in the 3rd and 4th year of MBBS. Out of the 350 students, only 69 students were new to blood donation/ never donated blood in their life time due to various reasons, 46 participants donated only once, 77 participants donated twice, 75 participants donated thrice, 48 participants donated four times, 21 participants donated blood 5 times and only 14 participants donated blood more than 5 times (**Chart - 2**).

In this study, among the 69 non-donor participants we evaluated the reason behind for not donating blood a list of valid reasons came

into the scenario which were tabulated in **Table - 1**. Most common reason for not donating blood was fear of needle followed by fear of infection due to lack of blood donation process and the

least common reason was their donated blood may be used for commercial use with a higher price and not for the needy patient.

Chart - 1: Gender wise participants.

GENDER WISE PARTICIPANTS

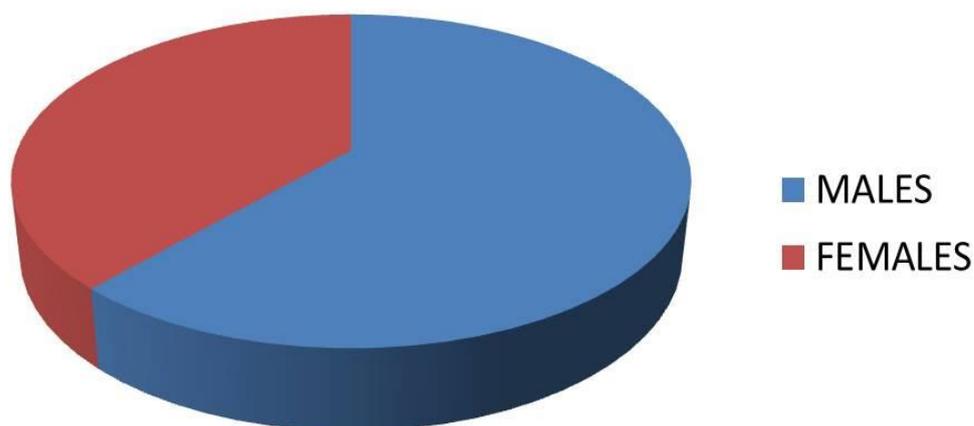
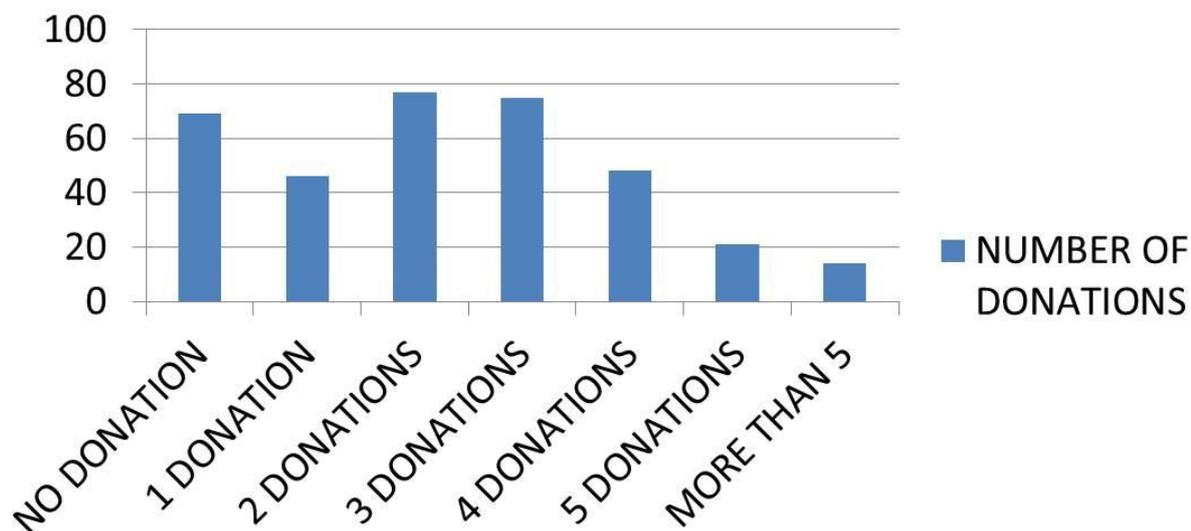


Chart - 2: Number of donations.

NUMBER OF DONATIONS



In this study, the participants were asked about the various reasons for becoming a regular donor and what motivated them to donation frequently and regularly-most common answer was self satisfaction by helping the needy. Out of the 46 donors who donated blood once in their lifetime were asked what was reason for not donating

after first donation and the main reason pointed out was fear or needle by some and giddiness by few more (overall bad experience).

These 115 donors (46 one time donors and 69 donors who did not donate blood before) were properly counseled and given entire information

about the blood donation process and procedure like pre-donation care, donation care and post donation care and were asked to come for donation following proper rest and sleep. Out of the 115 donors 93 donors turned up for donation and donated blood without any adverse effect.

Table - 1: Factors hindering blood donation.

Reason	Number of participants
Fear of needle / venepuncture	23
Fear of infection	12
Rejected due to a reason	14
Fear of weakness / fainting	11
Fear of losing weight	05
No proper motivation	02
Commercial use of blood	02
Total	69

Discussion

Recruiting a sufficient number of safe blood donors is an emerging challenge especially with the increase in demands as a result of an increase in population size and an increase in the number of medical facilities and diseases.

This current study results partially show a general lack of information regarding donation policies and practices among the surveyed individuals. As a group, donors had better understanding of the donation process when explained in detail about the procedure. Although the experience of having donated blood likely explains why donors are more knowledgeable in this area, it is also possible that an increased availability of correct information on donation requirement to more eligible potential donors may help persuade some of them to donate.

In our study, Male participants and male donors were more than female donors which is in correlation with the various studies conducted by various authors across the globe. The present study results are consistent with the reports by Montazeri, et al. [7] who showed that the percentage of female blood donors was significantly lower than the percentage of male

blood donors. In their study, 88.8% of blood donors were male, and the majority of female participants stated that anemia is one of the main factors that discourage women from blood donation [7]. Similarly, in another study in Iran, only about 12% of blood donors were female [8]. While in some countries, such as Italy, Greece, and Portugal, there are significant differences between the number of male and female blood donors, in other countries like Norway and Denmark there is no significant difference between the two genders in terms of blood donation [7]. In a study performed in Saudi Arabia, Al-Drees has shown that men are more likely to donate blood than women [9]. Nigatu, et al. [10] showed that although the frequency of blood donation is higher among men, women have higher levels of awareness about blood donation; women's awareness was reported to be approximately 1.7 times higher than that of men. It is worth mentioning that, there are various reports on the rate of women's participation in blood donation in other parts of the world. For example, the rate of women's participation in blood donation has been reported to be 51.07% in China, 54% in the USA, 33.2% in Brazil, 16% in Nigeria, and 2.5% in Ghana [11].

In our study only 46 donors donated blood once. A study of Kasraian and Negarestani donors [12], conducted in other provinces of Iran, showed that on average 30% to 60% of blood donors were first-time donors. Other studies however, have shown higher rates of blood donation in other countries. For example, the percentage of people who had donated blood more than once in a year was reported to be 30.8% in Brazil [13], and 64% in China [14]. In this study, repeat donor rate was 67% which is marginally better than other studies.

In our study, 115 participants had low awareness to moderate awareness, and 235 participants had good awareness of blood donation. These results are generally in line with the findings of other studies conducted in Iran. For instance, in the study by Hashemi Tayer, et al. only 11.4% of the participants had a good level of awareness

towards blood donation [15]. On the contrary, the results of studies conducted in other countries show higher levels of awareness towards blood donation; for example, in a study conducted on university students in Thailand in 2001, 80% of the participants had a good level of awareness [16]. The study by Nigatu, et al. also showed that 40.4% of Ethiopian students had good awareness of blood donation [10]. We propose that the low percentage of people with good awareness of blood donation in our study might be due to the inadequate educational programs at different levels of community. In a study conducted in Sistan Baluchestan, Hormozgan, and Khuzestan provinces in 2006, Rakhshani, et al. found that lack of awareness was the most important barrier to blood donation [17].

A possible limitation in the present study is that it was focused on medical science students only whose education and socioeconomic status are generally higher from general population [18]. Hence; these results may not be totally applied to general population. However, as young and healthy sector of the society, medical science students are the potential source of safe blood and this study gives clues to what motivates and hinders them from donating blood voluntarily and if these shortfalls are addressed properly, we may not have to rely completely on replacement donors to fulfill total blood requirement.

Conclusion

Blood donation is a safe process and many lives can be saved by blood transfusion. Proper knowledge, awareness about blood donation increases number of voluntary donors who can serve the needy. Medical students are future doctors who can spread the awareness in the community about the blood donation. We conclude that there is a critical need for training and culture building activities and programs to increase people's awareness and improve their attitude towards blood donation.

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