



KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING BLOOD DONATION AMONG NEWLY JOINED MEDICAL INTERNS IN INDIRA GANDHI GOVERNMENT MEDICAL COLLEGE, NAGPUR, MAHARASHTRA

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ABSTRACT

Introduction: Blood donation is an integral part of life saving procedures. Medical interns who can be the potential source of safe blood as they are young, physically fit, easily accessible and well educated at their young age to recruit themselves for blood donation after reaching the legal age for it. **Objective:** to determine Knowledge, Attitude and Practices regarding blood donation among newly joined medical interns. **Material and methods:** It was a cross sectional study that was conducted in Indira Gandhi Government medical college, Nagpur. A total of 144 students who passed the final year of MBBS and were going to start their compulsory rotatory internship on the day of their orientation program were included in the study, provided they gave verbal informed consent. A google form consisting of 33 questions was used to collect the data. The data was analyzed by applying suitable statistical methods **Results:** Out of total 144 newly joined interns, 97.92% had good knowledge about their blood group. Also, 48.61% students voluntarily donated blood ever in their life and 89.58% reported to have encouraged others to donate blood voluntarily. **Conclusion:** Newly joined medical interns had relatively good knowledge and a favourable attitude about voluntary blood donation.

KEYWORDS : Voluntary blood donation; opportunity; knowledge; attitude; practices.

INTRODUCTION

Human blood is an essential part of the human life and nothing can substitute it. World health organization defines as most valuable drug that can be substituted only by blood. It is the nature's unique gift to the human beings for the survival, maintenance and normal restoration.² According to World Health Organisation, there are 118.5 million blood donations collected worldwide, and out of that 40% are collected in high-income countries, which includes 16% of the world's population. In low-income countries, 54 % of blood transfusions are required by children under 5 years of age; but in high-income countries, the most frequently transfused patients are over 60 years of age, accounting for up to 76% of all transfusions. India requires 8 million units of blood every year, out of which only one third is obtained from voluntary blood donors.³

The number of voluntary blood donors increased from 54.4% in 2006–2007 to 83.1% in 2011–2012, with the number of blood units increasing from 4.4 million units in 2006–2007 to 9.3 million units in 2012–2013. In 2016, the Ministry of Health and Family Welfare reported a donation of 10.9 million units against a requirement of 12 million units. 12.7 million units were donated in 2020, lower than projected due to the COVID-19 pandemic.^{4,5}

According to WHO, people under the age of 25 years contributes 38% of total voluntary blood donations^{6,7}. Medical interns who can be the potential source of safe blood as they are young, physically fit, easily accessible and well educated at their young age to recruit themselves for blood donation after reaching the legal age for it. Correct knowledge and Positive attitude towards blood donation among medical interns can not only recruit them for regular blood donation but also help to motivate others to donate blood regularly.⁸

Therefore, this study was conducted to determine Knowledge, Attitude and Practices regarding blood donation among newly joined medical interns in Indira Gandhi Government Medical College, Nagpur and motivate them to donate blood voluntarily on regular basis.

MATERIAL AND METHODS

Study design, setting and study population

It was a cross sectional study conducted in Indira Gandhi Government medical college, Nagpur between the period of April 2022 to May 2022. Students who passed the final year of MBBS and were going to start their compulsory rotatory internship on the day of their orientation program were included in the study, provided they gave verbal informed consent.

Sampling technique and sample size

Universal sampling was done to select the newly joined medical interns. A total of 144 interns out of 150 students who passed final MBBS were included in the study that were present on the day of data collection. Hundred percent response was obtained.

Data collection tool and procedure

After approval from institutional ethics committee of our institute, principal investigator and other team members of the project explained the nature and purpose of the study to all randomly selected students. Those, who agreed to participate, their verbal informed consent was taken. Data was collected through predesigned google form and the data was collected during orientation program of newly joined interns. Four sections namely socio-demographic variables, knowledge, attitude and practice regarding blood donation were included in the google form.

The intern's level of knowledge was assessed through a set of 16 questions. Maximum score of 80% was considered to excellent knowledge and 60% was considered to be adequate. The attitude of interns was assessed through a set of 12 questions. Maximum score of 80% was considered to excellent knowledge and 60% was considered to be adequate. The intern's level of practice was assessed through a set of 5 questions. Maximum score of 80% was considered to excellent knowledge and 60% was considered to be adequate. A total of 144 interns responded to the google form with responses.

Statistical analysis

The data collected was entered using SPSS software version 26 and analyzed using frequency, mean and percentage. Chi-square test was used for testing the significance between the proportions. P value <0.05 was considered significant.

RESULTS

Figure 1 shows gender distribution. Majority 76(52.78%) were males and rest 68(52.78%) were females. Table 1 shows that majority 67(47.52%) of study subjects had blood group B+ followed by O+ in 21.28% subjects. Least common blood group was AB- which was seen only in one participant. Table 2 shows knowledge of study participants about voluntary blood donation.

Gender



Figure 1. Figure showing gender distribution

Table 1. Distribution of blood groups as reported by the study participants

Blood group	Number	Percentage
A+	31	21.99
AB-	01	0.71
AB+	08	5.67
B-	02	1.42
B+	67	47.52
O-	02	1.42
O+	30	21.28
Total	141	100.00

Table 3. Attitude regarding voluntary blood donation among newly joined interns, n=144

Questions	Correct response (%)
Do you think blood donation will cause anemia?	84.03%
Do you think blood will be wasted after blood donation?	93.06%
Do you think that people should voluntarily donate blood?	95.83%
Do you think voluntary blood donors should receive compensation?	32.64%
Is health affected after blood donation?	89.58%
Would you prefer to donate blood to any one in need?	97.22%
Does it require any preparation before donating blood?	45%
Is blood donation a painful phenomena?	80.55%
Is blood in blood bank safe?	92.36%

Table 2. Knowledge regarding voluntary blood donation among newly joined interns

Questions	Correct response (%)
General Knowledge about Blood donation	
Do you know how much amount of blood collected in ml during each time ?	28.47%
Do you have knowledge of your own blood group?	97.92%
Can a person frequently donate blood?	75%
What is interval between two blood donations?	34.29%
Knowledge regarding criteria for a blood donor	
Minimum age to donate blood	94.44%
Maximum age to donate blood	44.44%

Minimum hemoglobin concentration required to donate blood in males	85.42%
Minimum hemoglobin concentration required to donate blood in females	25.69%
Which blood group is universal Donor?	81.94%
Which blood group is Universal Recipient?	80.56%
Can a person be infected with by receiving blood transfusion?	98.61%
Is there any need to modify dietary patterns for blood donation?	56.25%

Table 3 shows attitude regarding voluntary blood donation among newly joined interns. Almost 95.83% interns had the correct attitude that people should voluntarily donate blood.

Table 4. Practices regarding voluntary blood donation among newly joined interns, n=144

Questions	Response n(%)
Have you ever donated blood?	
Yes	70(48.61%)
No	74(51.39%)
If yes, how many times?(n=70)	
Once	10.42%
More than once	89.58%
If you donated blood, then for whom you donated?(n=70)	
Family /Relatives	07(10%)
Friends	01(1.43%)
Voluntarily to blood bank	62(88.57%)
Have you encouraged anyone to donate blood?	129(89.58%)

Table 4 shows practices regarding voluntary blood donation among newly joined interns. Out of 144 interns, 48.61% donated blood in their life and 89.58% interns donated blood more than once.

DISCUSSION

The present study was conducted to assess the knowledge, attitude and practices of young newly joined interns as they are accessible and healthy source of blood for voluntary donation. The over dependence on family replacement and remunerated donors to meet the increasing demand for blood and blood products poses serious danger to potential recipient. There is need to improve the recruitment and retention of voluntary donor population to ensure a reasonably safe blood transfusion practice. There are lots of publications assessing the knowledge, attitude, and practice of voluntary blood donation; however, very few studies have been published which assess the same on the newly joined medical interns in our environment and globally. This study has shown as expected that medical students have a good knowledge of blood groups, possible transfusion transmissible infection, and the appropriate donor population but on the contrary exhibited a poor attitude of the certain blood donation criterias.⁹

In our study, 48.61% donated blood in their past and 89.58% interns donated blood more than once. Other studies like Amit et al⁹, Desai et al¹⁰, Chopra et al¹¹, Devi SH et al¹², Hossain GM et al¹³, Jose AP et al¹⁴ where only 24% and 22%, 23 %, 14%, 16%,22% students have donated blood in the past respectively, which is lower than present study. In our study, reasons for not donating blood included no particular reason in (54.05%), low hemoglobin levels(25.68%) and being underweight in 14.86% interns while Desai et al reported reasons for non-donations being that no one has ever asked them to donate blood; lack of information on blood donation and its importance.

In our study, 84.03% interns reported that blood donation causes anemia while Dadwani et al¹⁵ reported 90% students

reporting that blood donation causes anemia which is higher than our study findings while other studies reported less percent of this attitude.(18.7%,18.82%)^{16,17}.

CONCLUSION

Awareness sessions and regular camps should help to increase the knowledge of interns and to create positive attitude about voluntary blood donation to remove misconceptions.

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