

## Perception among medical students regarding blood donation A cross sectional study

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**Abstract:** Blood donation is major concern to the society as donated blood is life saving for those who need it. There is no substitute for blood. Voluntary blood donation is safe source of good quality blood and ideal method to face blood shortage. College students constitute large healthy group of assessable quality blood providers if they are motivated and sensitized about the importance of blood donation. Hence, this study was undertaken to know the knowledge and practice of blood donation among medical students

**Methodology:** A cross sectional study was done among 200 preclinical medical students with the help of pretested, semi structured questionnaire during the month of January 2015. The data was analyzed by using MS-Excel and the results were represented in the form of tables and figures

**Results:** The knowledge among participants regarding various aspects of blood donation was not satisfactory. All the participants (100%) stated that blood donation is good. Most of them, 194 members (97%) knew blood donation is safe and is a voluntary service. However only 59 members (29.5%) have ever donated blood. Major reasons stated by participants for not donating are "parents won't allow", "fear of weakness" and "fear of needle pain".

**Conclusion:** There is a need to conduct Awareness sessions about Importance of blood donation to students on entry into college helps to sensitize students about importance of blood donation and motivate them for blood donation

**Keywords:** attitude, blood donation, knowledge, medical students, practice

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### I. Introduction

Blood donation is major concern to the society as donated blood is life saving for those who need it. There is no substitute for blood. Voluntary blood donation is safe source of good quality blood and ideal method to face blood shortage. The World Health Organization estimates that blood donation by 1% of the population is generally the minimum needed to meet a nation's most basic requirements for blood. Blood transfusion is considered an important component of health care as it saves millions of lives each year worldwide. As a result of the advances in clinical sciences and population increase, the need for blood is growing day by day all over the world. World Health Organization advocates that 3-5% of the population should donate blood every year, which would be the ideal rate for maintaining a country's stock of blood and blood products at acceptable level. 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. Unfortunately, 83% of the global population who are living in developing countries have access to only 40% of blood supplied, and this blood in 60% of cases is collected from paid or replacement blood donors rather than from voluntary non-remunerated low risk donors. In India there is a need of about 8 million units of blood every year, out of which only about one third are obtained from voluntary donors. College students including medical students constitute large, healthy group of assessable quality blood providers if they are motivated and sensitized about the importance of blood donation. According to WHO, 38% of reported VBD are under the age of 25 years and WHO insists the countries to focus on young people to achieve 100% non-remunerated voluntary blood donation. So, keeping in view the significance of blood donation the present study was conducted to know the knowledge and practice about blood donation among preclinical medical students in Andhra medical college

### II. Methodology

A cross sectional study was done among 200 preclinical medical students in Andhra medical college, Visakhapatnam with the help of pretested, semi structured questionnaire during the month of January 2015. the

purpose of the study was explained and informed consent was taken from the study participants. The data was analyzed by using MS-EXCEL and the results were represented in the form of tables and figures.

### III. Results

**Table no 1 - knowledge regarding blood donation; (n=200)**

s.no	question	Correct answer	Incorrect answer
1	Know about ABO blood group	200(100%)	0(0.0)
2	Know about other blood groups	179(89.5%)	21(10.5%)
3	Know about Universal donor	188(94%)	12(6%)
4	Know about Universal recipient	199(99.5%)	1(0.5%)
5	Time taken to draw blood	114(57%)	86(43%)
6	Blood collected for every donation	175(87.5%)	25(12.5%)
7	Do u think u can donate blood	168(84%)	32(16%)

From the above table regarding knowledge about blood donation, majority of the students know about blood groups(100%), universal donor(94%), and recipient(99.5%). amount of blood collected for each donation(87.5%). knowledge regarding time taken to draw blood is poor(57%)

**Table no 2 - Knowledge regarding donor eligibility (n=200)**

s.no	question	Correct answer	Wrong answer
1	Minimum age for blood donor	187 (93.5%)	13(6.5%)
2	Maximum age for blood donor	99(49.5%)	101(50.5%)
3	Minimum weight for blood donor	107(53.5%)	93(46.5%)
4	Can pregnant donate blood	198(99%)	2(1%)
5	Can person with hypertension donate	152(51%)	48(49%)
6	Can person with chronic medication donate	197(98.5%)	3(1.5%)
7	Can menstruating women donate	147(73.5%)	53(26.5%)
8	Can person with fever donate	190(95%)	10(5%)
9	Can person be infected by blood donation	87(43.5%)	113(56.5%)

From the above table it was observed that majority of the students were not aware of maximum age limit for donating blood(50.5%) , minimum weight to donate blood(46.5%) and person can be infected by blood donation(56.5%)

**Table no 3 – Practice of blood donation (n=200)**

S.NO	question	Correct answer	Wrong answer
1	u think about blood donation is good	199(99.5%)	1(0.5%)
2	Do ur parents allow u to donate blood	159(79.5%)	41(21.5%)
3	Do u think u can donate blood	168(84%)	32(16%)
4	Have u donated blood before	59(29.5%)	141(70.5%)
5	Did u donate blood voluntarily	59(29.5%)	141(70.5%)
6	Are u willing to donate blood for others need	80(40%)	120(60%)

Regarding practice of blood donation, majority of the students think they can donate blood(84%) but very few of them donated voluntarily(29.5%). Most of the students in this study stated that their parents allow to donate blood(79.5%) but they are not willing to donate for others need(40%).

**Table No 4 - Reasons Cited For Not Donating Blood**

1	Parents won't allow to donate	41
2	Fear of weakness	35
3	Think it's for physically strong	25
4	Fear of needle pain	54
5	Do not like to donate	23
6	Fear of contracting disease	9
7	Fear of sight of blood	5

Major reasons cited for not donating blood were parents won't allow, fear of weakness, fear of needle pain

### IV. Discussion

College students are considered very important portion of the donor-eligible population, by number as well as safety. Further, their retention as donors would form a reliable and sizeable reservoir of blood. Maintaining an adequate and safe blood supply is an issue of concern to health planners especially with the increase in demand. Therefore, understanding the beliefs, attitude and level of knowledge associated with blood safety and donation is crucial. This study was conducted in order to obtain information and inputs from

undergraduate students of medical colleges which will be useful in implementing relevant donor recruitment strategies because this population can contribute to health promoting activities in the society. .

In the present study regarding general knowledge about blood donation, majority of the students know about blood groups(100%), universal donor(94%), and recipient(99.5%). amount of blood collected for each donation(87.5%). general knowledge regarding time taken to draw blood is poor(57%).Results in this study were almost similar to study conducted by Sanayama et al(2012)<sup>(2)</sup> which showed knowledge regarding blood groups in their study population is 100% and another study conducted by Olubiyi et al(2014)<sup>(7)</sup> showed similar results as this study regarding general knowledge of participants.

In the present study majority of the students were not aware of maximum age limit for donating blood(50.5%) , minimum weight to donate blood(46.5%) and person can be infected by blood donation(56.5%) similar findings regarding infection by donating blood were seen in various studies conducted by Humayun et al(2015)<sup>(6)</sup>,Mrigandra et al(2013)<sup>(1)</sup> . Sanayama et al(2012)<sup>(2)</sup> study showed 58% were aware of min age for donating blood. Which is almost similar to the present study(49.5%) Shahshahani et al reported that 45% in the general population had correct knowledge regarding minimum age requirement for blood donation. Regarding practice of blood donation, majority of the students think they can donate blood(84%) but very few of them donated before voluntarily(29.5%). Most of the students in this study stated that their parents allow to donate blood (79.5%) but they are willing to donate for others need (40%) In this present study. similar results were found in other studies conducted by Sanayama et al(13.9%)<sup>(2)</sup>,Umakant et al(17.5%)<sup>(5)</sup> and 20.4% in study done by Humayun et al<sup>(6)</sup> regarding blood donated before and respondents showed positive attitude to donate as studies conducted by Manikandan et al(64%)<sup>(3)</sup> ,Sanayama et al (88%)<sup>(2)</sup> and Humayun et al(78%)<sup>(6)</sup>. Major reasons cited for not donating blood were parents won't allow, fear of weakness, fear of needle pain. Not physically strong and fear of contracting disease. Similar results were shown in studies done by Manikandan et al(2013)<sup>(3)</sup>. Sanayama et al(2012)<sup>(2)</sup>, Umakant et al(2015)<sup>(5)</sup>. Humayun et al(2015)<sup>(6)</sup>, Najd et al(2014)<sup>(7)</sup>, Mrigandra et al(2013)<sup>(1)</sup>.

## V. Conclusion

It has been noticed that 'being knowledgeable' and having 'positive attitude' does not transform into actual practice of blood donation. There is need to conduct Awareness sessions about Importance of blood donation to students on entry into college helps to sensitize students about importance of blood donation and motivate them for blood donation

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