

A Study on Knowledge, Attitude and Practice on Blood Donation among Health Professional Students in Chennai, Tamil Nadu, South India

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Abstract- Background: Role of youngsters in voluntary blood donation is crucial to meet the demand of safe blood. Therefore understanding the various factors contributing to knowledge, attitude and practice of Voluntary Blood Donation (VBD) among youngsters is important.

Objectives: The present study aims to assess the level of knowledge, attitude and practice regarding blood donation among the health care medical students.

Methods: A cross-sectional study was conducted among 400 health care medical students from Tagore Medical College and Hospital, Matha Medical College and Research Institute, and Tagore Dental College and Hospital Chennai, Tamil Nadu, South India using a structured survey questionnaire.

Results: Overall knowledge on blood donation among respondents was 35.65%, majority of the participants (89.25%) never donated blood in which few of the non-donors had negative attitude (36.41%) like blood donation leads to weakness (12.61%), anemia (19.61%) and 4.2% of non-donors felt that blood donation leads to reduced immunity. Majority of non-donors showed positive attitude (63.59%) by expressing their willingness to donate blood if they were asked to donate blood (32.21%), about 7% of the non-donors don't know the importance of blood donation and 24.37% of non-donors don't know where to donate blood. In this study 10.75% of students had donated blood only once, in which 34.88 % of blood donors said no privacy was provided while donation, few (11.63%) had experienced some discomfort after donation and 53.49% of respondent said that they have not tried again.

Conclusion: The present study recommends that even student community needs to be educated about the importance and health benefits; awareness and motivation of blood donation on regular basis and addressing the problems faced during blood donation will strengthen the recruitment and retention of blood donors to donate blood on regular basis.

Index Terms- Blood Bank; Voluntary Blood Donation; Health care professional students

I. INTRODUCTION

Blood can save millions of life. The requirement of blood and blood products in a country depends on the population, health care structure, prevalence of conditions requiring regular transfusions, such as haemophilia and thalassaemia etc.,

availability of surgical centers using modern sophisticated techniques, and awareness amongst clinicians regarding judicious use of blood. However problem regarding a permanent shortage of blood is observed in blood services all over the world.⁽¹⁾ The only source of blood is by blood donation.⁽²⁾ However, recruitment of voluntary, non-remunerated blood donors poses major challenges to transfusion services throughout the world.⁽³⁾ As per World Health Organization (WHO) norms, 1% of the population is generally the minimum needed to meet the country's most basic requirements for blood.⁽⁴⁾ In India, during the year 2006-2007, Voluntary Blood Donation (VBD) was only 54.4% and it increased to 79.4% during the year 2010 - 2011.⁽⁵⁾ The total population of Tamil Nadu State in India comes around 72.1 million as per the census calculation. Annually, Tamil Nadu needs about a minimum of 700 thousand units of blood as per WHO's norms. Every year increase in population along with increase in life expectancy rate, urban development and associated increase in accidents and specialized surgeries requiring blood, the rate of blood usage is on the rises.

Internationally, regular voluntary non-remunerated blood donors, who donate blood out of altruism, are considered safe blood donors. In many countries, continuous efforts are needed to achieve 100% VBD. Even though in Indian law forbidden collection of blood from paid donors, many times health care facilities forced to accept blood from paid donors as there are scarcity of voluntary blood donors.⁽²⁾ It is well established that paid donors constitute a group with high risk behavior leading to greater chances of transfusion transmitted infections in the recipients. In addition blood shortage are experienced in Tamil Nadu state in India during the summer holidays. Hence awareness through education and motivation of the young people about the VBD are an important for recruitment and retention of the voluntary non-numerated blood donors. According to WHO, an estimated 38% of reported VBDs are contributed by people under the age of 25 years. WHO also insist countries to focus on young people to achieve 100% regular voluntary non-numerated blood donation.⁽⁴⁾

Young students are healthy, active, dynamic, resourceful, and receptive and constitute a greater proportion in the Indian population. Those young students have to be encouraged, inspired and motivated to donate blood voluntarily on regular basis.

II. OBJECTIVE OF THE STUDY

This study has carried out to understand the knowledge, attitude, and practice about blood donation among undergraduate health care medical students in Chennai, Tamil Nadu, South India for an effective blood donor recruitment and retention programme.

III. METHODOLOGY

This study was conducted among first year health care medical under graduate students in Tagore Medical College and Hospital, Matha Medical College and Research Institute and Tagore Dental College and Hospital, Chennai, Tamil Nadu State, South India. Four hundred students participated on voluntary basis. A briefing was given to the participants about the objective of this study and assured confidentiality in collection of personal data. A well structured validated and pre-tested questionnaire on knowledge, attitude and practice on blood donation was assessed among students through questions covering nature of donation, requirements for donation; test carried in the blood banks, storage, blood components, usage of blood and health benefits for blood donors. A scoring mechanism was used to understand knowledge level and attitude on blood donation; each correct answer was given one score and in practice reason for not a regular donor was assessed and results were expressed in percentage.

IV. RESULT

In the present study overall knowledge (Table 1) on blood donation among respondents was 35.65%, about 357 of the participants (89.25%) never donated blood and 36.41% of the non-donors have negative attitude (Table 1) like blood donation leads to weakness (12.61%), anemia (19.61%), and reduced immunity (4.2%). About 63.59% of non-donors showed positive attitude (Table 1) by expressing their willingness to donate blood if they were asked to donate blood (32.21%), 7% of the non-donors don't know the importance and health benefits of blood donations and 24.37% of the non-donors don't know where to donate blood. About 43 students (10.75%) have donated blood only once (Table 1), among the blood donors, 34.88 % of blood donors said that no privacy was provided while donation, 11.63% of the donors had experienced some discomfort after donation and 53.49% of respondent said they have not asked again to donate blood.

V. DISCUSSION

Studies to understand the various factors that could change the perception and awareness about blood donation among the student community may come out to be useful for the successful implementation of 100% VBD program in the Tamil Nadu state. The present study assessed the knowledge, attitudes and practice regarding blood donations and transfusion services among the Health care professional medical students in Chennai, Tamil Nadu, India. The main purpose of this study was to identify strategies and factors that influence the recruitment and retention of voluntary non-remunerated blood donors to achieve 100% VBD.

Knowledge on blood donation among students was measured using the following questions; which comprised of respondents' understanding on benefits of blood donation to donors; the general requirements to become an eligible donor, how many times in a year a healthy male and female can donate blood, volume of donated blood, number of days donated blood can be stored; components of donated blood; maximum number of lives saved from the donated blood. The overall knowledge on blood donation among respondents was 35.65%. Present study showed that lack of awareness on blood donation was there even among the health care medical professional students. Hence, a periodic awareness program on blood donation in various educational institutions across India is needed in addition to the medical professional students to achieve a 100% VBD programs. The present study indicates that majority of the participants (89.25%) never donated blood and observed positive attitude (63.58%). The reasons for non-donations were no one has ever asked to donate blood; lack of information on blood donation and its importance and don't know where to donate blood and negative attitude (36.42%) like blood donation makes the person weak, reduce immunity and leads to anemia.⁽⁶⁾ The non-donors with positive attitude should be motivated and awareness about voluntary blood donation should be provided to promote blood donation on voluntary basis, while non-donors with the negative attitude are needed to be educated about the importance and health benefits upon blood donation. Their doubts regarding blood donation should be clarified and they should be motivated to donate blood on regular basis.

This study clearly shows that respondents who donated blood once (10.75 %) are not regular donors because 53.49% donors said no one has asked them to donate blood again. This indicates that these students are willing to donate blood on regular basis but they need constant awareness about importance of blood donation and regular motivation.⁽⁷⁾ About 34.88% of donors pointed out that there was no privacy during blood donation, while few (11.63%) expressed a little discomfort after blood donation. Provision of adequate privacy, awareness, communication materials and advertisements to address the fear factor may strengthen the recruitment and retention of voluntary blood donors to donate blood on regular basis to achieve 100% of blood donation only on voluntary basis.⁽⁸⁾

Present study concludes that students believe that they are less willing to take part in the VBD due to insufficient information. Hence, a periodic awareness program on voluntary blood donation is needed for even among health care medical students. Students should lead from the front to donate blood regularly on voluntary basis and also to take all necessary steps for spreading awareness about the advantages of blood donation not only for the recipient but also for the donor himself could be a motivating factor. Making students aware of recent findings, like frequent and long-term blood donation is associated with a lower risk of cardiovascular events in donors can motivate them to be regular donors. This study will also create awareness on blood donations among the entire student's community. Such studies are needed to be carried out at all district levels across the Tamil Nadu to march towards 100% blood donation only on Voluntary basis in the Tamil Nadu State, which will be spread to other states in India.

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Table No.1 Knowledge, Attitude and Practice on blood donation

KNOWLEDGE	Percentage (%)
Suitable age for blood donation	76.25
Minimum weight for blood donation	72.75
Normal Blood Pressure to donate blood	46.75
Healthy male can donate blood how many times in a year	32.25
Healthy female can donate blood how many times in a year	13.75
Blood volume that donated in every blood donation	14.25
Number of days donated blood stored at 2-4oC	12.5
Separation of blood Components from the donated blood	20
Number of live saved from the each unit of donated blood	22
Blood-borne infections for which the donated blood is tested	36.25
Benefits of blood donation to donors	45.5
Over all percentage of knowledge	35.65
ATTITUDE	89.25

Blood donation makes you weak	Negative (12.61)
Blood donation can leads to anemia	Negative (19.61)
Blood donation can leads to reduce immunity	Negative (4.2)
No one has ever asked to donate blood	Positive (32.21)
Lack of information on blood donation and its importance	Positive(7.00)
Don't know where to donate	Positive(24.37)
PRACTICE - Reason for not a regular donor	10.75
No privacy was provided while donation	34.88
Experienced some discomfort after donation	11.63
No one has asked again to donate blood	53.49