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COMPARISON REGARDING KNOWLEDGE, ATTITUDE AND PRACTICE OF BLOOD DONATION BETWEEN HEALTH PROFESSIONALS AND GENERAL POPULATION

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ABSTRACT

Objectives: The objectives of this study are to assess the knowledge, attitude and practice regarding blood donation among various categories of health professionals and comparing them with that of the general population. **Material and method:** A cross sectional descriptive study was carried out at Pondicherry. Total 150 individuals were interviewed including doctors (n=25), nurses (n=25), technicians (n=25) and general population of Pondicherry (n=75). All were interviewed with the help of a pretested and semi-structured questionnaire. **Results:** There was a significant difference in knowledge pertaining to blood donation between health professionals and the general population. On the other hand there was no difference of attitude of the two groups. There was no difference in knowledge and attitudes according to gender but most of the donors were males.

Conclusion: There is a need to increase the awareness and attitude among the paramedical staff and in general population. There is also need to motivate females for blood donation. There is also need to create awareness about blood safety in paramedical staff and general population.

Keywords: Attitude, Blood donation, General population, Health professionals, Knowledge, Practice.

INTRODUCTION

Blood is the most donated tissue in medical practice and a veritable tool in many life saving situations when used judiciously. In spite of the rapid and remarkable conquest and breakthrough of medical science today, there is still no ideal substitute. Blood is manufactured by only human beings and human donation is the only way of acquiring blood to meet emergency requirements in cases of road traffic accidents, complications of pregnancy and childbirth, various anaemic disorders and surgical emergencies. Blood donation is the act of giving one's blood, so it can be transfused into another for therapy. It is safe and advantageous to the donor, recipient, community and the blood transfusion service. Blood can save millions of life and young people are the hope and future of a safe blood supply in the world. [1]

The World Health Organization (WHO) estimated that donation by 1 % of a country population is the minimum blood required to meet a nation's most basic needs for blood. [2] India needs about 6 to 7.5 million units of blood annually and every year there is gradual increase in this demand. [3] The reasons for increase in demand are because of the rise in human life expectancy and the implementation of new and aggressive surgical and therapeutic methods requiring large quantities of blood and blood products. [4] Donor blood procurement from voluntary, non-remunerated donor has been adjudged the safest source of blood. Even though 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. [5] Hence the World Health Organization has adopted a policy aimed at 100 % voluntary, non-remunerated donor blood procurement by the year 2020. [6] It is a well known fact that in developing countries more than 50 % of blood donations are made by paid and voluntary donors. [7, 8] Ignorance, fear and wrong concepts about blood donation and lack of voluntary blood donation organizations are major constraints in many developing countries to facilitate voluntary blood donation. The study was designed to determine the behaviour of the medical and paramedical persons and general population towards blood donation by their knowledge, attitude and blood donation practice along with factors influencing blood donation and their willingness to donate the blood voluntarily.

MATERIAL AND METHOD

This cross sectional study was conducted among health professionals and general population of South India. Total 25 doctors, 25 nurses, 25 technicians and general population (75) of Pondicherry were included as study population. A well structured validated and self administered questionnaire was used to assess the knowledge, attitude and practice about blood donation. The questionnaire was pretested and verified for errors. Questionnaire consists of three sections: practice, knowledge and attitude. Blood donation practice was assessed through six questions addressing the nature of donation, frequency of donation, reasons for not donating blood etc. Knowledge part contains 6 questions; knowledge on blood donation was assessed through questions covering benefits, requirements and restrictions of blood donation. The attitude for blood donation was assessed through 6 questions with 'yes' and 'no' options. A scoring mechanism was used to understand overall knowledge level; a score of one has given for each correct response and zero for wrong response. Respondents with all correct response get a maximum of 18 points, higher points indicate good knowledge. Based on total score, knowledge level on blood donation was categorized into poor (≤8 points), average (9 -14 points) and good (≥15 points). The participation to survey was on voluntary basis. All participants were given a briefing about objective of the study and assured confidentiality in collection of personal data.

RESULTS

Table – I showed details of the demographics of respondents. The response was gathered from a total of 150 respondents voluntarily participated in the survey. The age of the respondents ranged between 17 to 54 years. The study sample consisted of 93 males (62 %) and 57 females (38 %). The mean age of males was 37 years and the mean age of females was 26 years. The demographics showed the mean age of the respondents to be 32 years.

There was significant difference in knowledge pertaining to blood donation between health professionals and general population. More than half 42 (56 %) of the general population had poor overall score regarding knowledge, attitude and practice of blood donation as per Table – II which showed overall score comparison of the respondents.

Total 68 (45.33 %) of the respondents had good knowledge about blood donation. About one quarter 43 (28.67 %) had poor knowledge on what blood donation entails. Total 62 (41.33%) respondents had poor knowledge about the health conditions that would require blood transfusion, only 46.67% could state correctly some of the health conditions like anaemia, trauma, road traffic accidents, sickle cell anaemia and surgery. Total 112 (74.67 %) said they can donate blood voluntarily as per Table – III which showed knowledge of respondents on blood donation.

More than half of the respondents, total 94 (62.67 %) had never donated blood; only few of the respondents, total 61 (37.33 %) had ever donated blood. Among those that had ever donated, males

(85.71 %) were more than females (14.29 %). More than half, total 30 (53.57 %) of the blood donated by the study population was for relations and total 19 (33.93 %) donated for friends. Very few, only 11 (7.33 %) of the total respondents had voluntarily donated blood. Total 17 (30.35 %) donated for emergency situations, 28 (50 %) donated to replace blood units borrowed from the blood bank as per Table – IV which showed blood donation practice among the respondents.

DISCUSSION

Escalating demand for safe blood and its availability in our country can be only ensured through enhancing voluntary blood donations. Role of general population in voluntary blood donation is crucial to meet the demand of safe blood and more over health professionals having a better understanding on healthcare requirements of our country should come in forefront. Therefore understanding the various factors contributing to knowledge, attitude and practice of blood donation among health professionals and general population is important.

This study revealed that the respondents had good knowledge about blood donation; however, it did not find any significant relationship between age, ethnic group and literacy level with knowledge about blood donation. Even though the respondents had a good knowledge of blood donation, poor blood donation practice was observed in this study as 37.33 % had ever donated and only 7.33% had voluntarily donated blood in the past. This finding agrees with the study in Mmabatho where only 17.5 % had ever donated blood. [9] The results of this study also revealed that almost more than two third of males (85.71 %) while only 14.29 % of female had donated blood, which is comparable to the study by Olaiya where female donors compared to males were abysmally low (1%). [10]

It is important to note that majority of the respondents 112 (74.67 %) participated in this study shown positive attitude towards voluntary blood donation. Hossain et al. has reported similar results, 82 % of participants showed a positive attitude towards voluntary blood donation. [11] The negative attitude towards paid blood donation reported in other studies [8, 11, 12] was also reported in this study. However in this study, only 7.33 % of the respondents had actually donated blood voluntarily. Therefore, the findings of this study would suggest that greater knowledge about blood donation does not necessarily lead to actual blood donation practice, probably because of the mythical beliefs and wrong perceptions about blood donation still held by people. In this study, large number of male and female respondents expressed their willingness to donate blood if they learn more about the importance of blood donation.

Blood donations among the respondents in this study were mostly for beneficial reasons as the recipients were mostly friends (33.93 %) and relatives (53.57 %) and the majority claimed replacement from the blood bank compelled them to donate blood. The voluntarily donated blood was scarce (7.33 %) and about two thirds of those who had donated voluntarily, did so during organizations' activity. This agrees with the findings of Olaiya that voluntarily donated blood was donated during religious week and club activities. [10] Hence the need to explore the unions and departmental activities of tertiary institutions in the country as a means of voluntary blood donation drive.

The reasons given by the respondents for not donating blood include lack of opportunity (26.59 %) and inaccessibility of blood bank facilities, inadequate information about the benefits of voluntary blood donation to the donor, recipient and community (9.57 %) as well as the fear (14.89 %) that the process is harmful to the health of the donor. Additionally, other inhibitory factors (18.08 %) that would deter them from blood donation were inadequate information about the blood donation process, fear of exposure to HIV/ Hepatitis infection and fear of fainting. This shows

the wrong perception still held by people of the transmission of HIV infection. The same finding was seen in Mwanza, Tanzania where donors were afraid of being infected with HIV. [13] This was also a deterrent amongst the Scottish population as it adversely affected their blood donation practice. In Australia, a study conducted among the college students showed that the reluctance was mostly due to fear, contracting possible illness afterward and inconveniences of giving blood. [14] Another study in Mexico also found that non donation was mainly due to the fear of getting dizzy after blood donation.

A study in Baltimore also found that the donors would be encouraged to donate if specific incentives were offered; the highest response was for future blood credits and medical testing. [15] Another study in Texas also concluded that individuals donate in order to reduce medical risks and that earning future blood credits would be a primary motivator. [16] A study amongst the adults in Mwanza Region, Tanzania, also noted a positive attitude towards voluntary blood donation but the majority of the people will do so only for an incentive. [13] In Nigeria, the National blood transfusion service is making an effort to retain its voluntary donors by giving incentives such as free blood tests (blood group, haemoglobin genotype, HIV/ hepatitis) to donors, allowing the immediate family of volunteers to use blood without replacement and giving gift items such as certificates, T-shirts, haematinics, refreshments and badges. [17] When assessing donor incentives and enablers, the study found that, in general, people are focused primarily on motivational tools, rather than rewards. This is critical in beginning to change the blood donation culture from replacement to that of volunteerism. [18, 19]

CONCLUSION

The findings of this study revealed that although the majority of respondents had good knowledge of blood donation, only a few had donated blood in the past. There is prime need to increase the awareness and attitude among the paramedical staffs & general population. Blood donor education and sensitization should begin at secondary school by blood donor organizers. It is also needed to motivate females for the blood donation and to create awareness about blood safety in paramedical staffs and general population. Healthcare institutions should take all necessary steps to create more awareness program on blood donations among entire community. Incentives and gift items such as T-shirts, wrist bands, haematinics and certificates can motivate an altruistic spirit among the people.

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Table 1: Details of the demographics of respondents.

Variables	Frequency	(%)
Age (years)		
<18	11	7.33
18-25	53	35.33
25-50	70	46.67
>50	16	10.67
Total	150	100
Gender		
Female	57	38
Male	93	62
Religion		
Hindu	94	62.67
Islam	37	24.67
Christianity	19	12.67

Table 2: Overall score comparison of the respondents

Overall score	Doctors		Nurses		Technicians		General population	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Good	17	68	10	40	08	32	18	24
Fair	08	32	11	44	10	40	15	20
Poor	00	00	04	16	07	28	42	56
Total	25	100	25	100	25	100	75	100

Table 3: Knowledge of respondents on blood donation

Variables	Frequency	%
What is blood donation?		
Good	68	45.33
Fair	39	26
Poor	43	28.67
Any health problem after blood donation?		
Yes	41	27.33
No	109	72.67
Indications for blood transfusion?		
Good	70	46.67
Fair	18	12
Poor	62	41.33
Can females donate blood?		
Yes	98	65.33
No	52	34.67
Would you donate blood voluntarily?		
Yes	112	74.67
No	38	25.33

Table 4: Blood donation practice among the respondents.

Variables	**Frequency**	**%**
Ever donated blood?		
Yes	56	37.33
No	94	62.67
Total	150	100
Ever donated blood?(by gender) (N=56)		
Male	48	85.71
Female	08	14.29
Types of blood donation		
Voluntarily	11	7.33
Non voluntarily	45	30
Non donor	94	62.67
Reasons for blood donation (N=56)		
Emergency	17	30.36
Replacement	28	50
Organization activity	07	12.5
Free will	04	7.14
Reasons for non-donation (N=94)		
No opportunity	25	26.59
No knowledge	09	9.58
Fear	14	14.89
Other reasons	17	18.08
Unfit	29	30.86