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DO RESIDENT DOCTORS DONATE BLOOD?- AN EVALUATION OF VOLUNTARY BLOOD DONATION AMONG THE RESIDENT DOCTORS IN A TERTIARY CARE TEACHING INSTITUTE OF A DEVELOPING COUNTRY, INDIA.

Immunohematology

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ABSTRACT

Introduction: The major shortage of blood and blood components in developing countries is because of the increase in demand with fewer voluntary blood donations. Thus, identifying motivational factors affecting blood donation and recruitment of safe and low risk donors is necessary. Though a study on the knowledge, attitude and the practice of donors may prove to be useful in the successful implementation of the blood donation programme, a study on resident doctors will have an added advantage of motivating the patient's attenders also for blood donation. For this reason, our aim was to find the level of the knowledge, attitude and practice of blood donation among resident doctors in a tertiary care teaching hospital. .

Material and Methods: A structured questionnaire was given to 104 resident doctors to assess their knowledge, attitude and practice with respect to blood donations. The statistical analyses were done by using the SPSS software. The associations between the demographic factors were analysed by using the Chi square test.

Results: Among the 104 resident doctors, 59% were males and 41% were female residents. About 46% of the resident doctors expressed good knowledge about voluntary blood donation. There was no significant statistical association between gender and knowledge regarding blood donation. All residents felt that blood donation was a good gesture. Only 11% were regular donors. There was a significant statistical association between donation practices and gender.

Conclusion: A majority of the donors were willing to be regular donors. Though our residents are knowledgeable regarding blood donation process and have positive perception towards blood donation, there is no translation of this knowledge and attitude, towards blood donation practices.

KEYWORDS

Donor, motivation, knowledge, attitude, Practice

INTRODUCTION:

Voluntary non remunerated blood donation is the corner stone of a safe and adequate national blood supply that meets the transfusion requirements of all patients1.Inspite of extensive promising research, a true substitute for blood and blood components may not be available for many years2.The safest donors are those who donate blood voluntarily, who are self aware of their unsuitability to serve as blood donors, where there might be slightest risk of causing health damage for the blood recipients[3].

Blood and blood components cannot be considered as mere commodities, rather as a result of conscious decisions of healthy and socially committed people4. As there is escalating demand for safe blood in our country, its availability can only be ensured through enhancing voluntary blood donation (VBD) 5.It is reported that there is progressive increase in VBD in India[6].

During 2009, experts and representatives of 40 countries across WHO regions at Melbourne, Australia have taken a pledge to work towards 100% voluntary blood donation to provide universal access to safe blood.WHO has called for action to all governments to achieve this 100% voluntary non remunerated blood donation by 20204.

The responsibility of achieving the desired goal cannot be left to government alone; nor it is the sole responsibility of blood bank; it is the responsibility of civil society and the health care fraternity as well7.The concerned groups including the health care team should be involved in a concerted effort; both in exemplary action by being regular voluntary donor themselves and persevering in making others also see the light.

Although, the literature is rich with demographics and motives for blood donation, little information is available about physicians as donors7. Anyone would expect physicians to have high awareness of the need for blood donation based on their daily activities including ordering and administering blood products to patients. Yet it was observed that physicians represent a minority of donors[7].

Resident doctors are the ones who send the requests for blood and blood components for the patients and it is expected that they should be conversant with the challenges of blood procurement.They are within the age group for blood donation and thus they constitute a pool of potential donors. The study of KAP enables us to understand any obstacles for blood donation, leading to efforts to eliminate such obstacles in order to enhance voluntary blood donation. The aim of our study was to assess the knowledge, attitude and practice of voluntary blood donation among the resident doctors at the tertiary care teaching institute in a developing country.

MATERIALAND METHODS:

This is a cross sectional study conducted among the resident doctors of a tertiary care teaching hospital in South India. This study was approved by the Institutional Ethical committee. Residents who were willing to participate by giving Informed consent were included in the study.

Data was collected using structured questionnaire which used to assess the level of knowledge, attitude and practices regarding blood donation in the participants.Descriptive statistics was used to assess the level of knowledge, attitude and practice of blood donation.Scoring was given to assess the knowledge of residents regarding blood donation. The minimum score was zero and maximum was 20. Score between 0-10 was graded as poor, 11-15 as average, 16-20 as good.The statistical analysis was done by using SPSS version 16.Chi square test was applied to examine the association between sex and blood donation status.A p-value <0.05 was taken as statistically significant.

RESULTS:

Among the 143 residents available, 104 residents consented to be the part of study. The study population consisted of 61 males (59%) and 43 females (41%) within the age range of 26-38 years and male to female

ratio was 1.4:1. Among them, 60 (58%) were junior residents and 44 (42%) were senior residents.

The mean score of knowledge of residents is 15.7 (SD=2.34). The mean score of knowledge of male residents is 15.48 (SD= 2.34) and the mean score of knowledge of females is 14.49 (SD=2.303) as shown in Table 1.

Table 1: Mean score of knowledge of residents

	mean score of knowledge of residents	Standered Deviation
All residents	15.7	2.34
Male residents	15.48	2.34
Female residents	14.49	2.3O

Only 48 (46%) resident doctors expressed good knowledge about voluntary blood donation in which 30 (63%) were males and 18 (37%)were females as shown in Figure 1. There was no significant statistical association between gender and knowledge regarding blood donation (P=0.17).

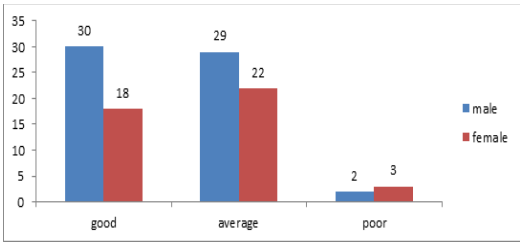

Figure 1: Level of Knowledge among Residents

All residents felt that blood donation was a good gesture. Fifty one (49%) have donated in the past. Among them 29 (57%) donated voluntarily, and 22 (43%) donated to a friend or relative in need of blood. Only 11 (11%) were regular donors. There was a significant statistical association between donation practices and gender (p=0.03). Seventy seven residents (74%) stated that the minimum interval between donations is 3 months, 21 (20.2%) said 6months, and 04 (3.8%) said once a year, while 2 (2%) said they have no knowledge of that. There was a significant statistical association between gender and repeat donations. There was a significant statistical association between gender and willingness to donate blood.

All residents said that blood donation is good. Voluntary non-renumerated donation was accepted as the best source of blood donation by 95 (91.3%), 7 residents (6.7%) felt that patient relatives should be asked to donate as shown in Figure 2.

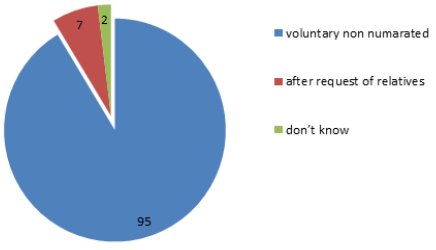

Figure 2:Best way to donate

There was no significant association between level of knowledge and blood donation. This implies that even the increased level of awareness in residents does not result in actual act of donating blood. About the factors that would motivate to become blood donor, 35% answered as "creating opportunity".Only 12 (11%) residents were aware of Melbourne declaration.

There was no significant association between knowledge and year of residency (junior resident / senior resident)(p=0.62). There was no significant association between year of residency and practice of blood donation (p=0.86).

Among the 53 residents (50.96%) who have not donated at least once, the reasons for non donation by them include- never been asked to donate by 46 (86.7%), did not know that blood donation is necessary 5 (9.4%) and 2 (3.7%) said donation time/place not convenient.

Forty nine (47.1%) stated that Mass media campaign, 40 (38.4%) stated informational material and 15 (14.5%) stated donor appreciation as the best way to have more people donating blood.

To the question about convincing people to donate blood, 65 (62.5%) answered- tell about the need for blood donation, 39 (37.5%) answered- tell the benefits of blood donation.

No opportunity (33.3%) and fear of pain (24%) are the main reasons for only few people donating blood as shown in Table 2.

Table 2: Why do only few people donate?

	Males	Females	Total (%)
No opportunity	17	16	33 (31.7)
Fear of pain	10	15	25 (24)
Laziness	16	08	24 (23)
Don't Know	18	04	22 (21.1)
Total	61	43	

About the factors that would motivate to become blood donor, majority 37 (35.5%) answered as creating opportunity as shown in Table 3.

Table 3: Factors that would motivate to become blood donor

Factor	Number of residents (%)
Ask to donate	34 (32.6)
Creating opportunity	37(35.5)
More information on need for blood	23(22.1)
Program donor recognition	03(2.8)
Efficient and competent staff	02(1.9)
Convenient place and time	05(4.8)

DISCUSSION:

The study of knowledge, attitude and practices of blood donation enables one to understand the outlook towards donation, and the barriers to it.Such information can then be used in devising modules to eliminate these obstacles. The present study assessed the knowledge, attitude and practices regarding blood donation among the resident doctors of SVIMS. Though one would expect physicians to have high awareness of the need for blood donation, a report from academic based hospital donor site in Virginia involving physicians and interns reported that only 3 % of donors were doctors[7].

The questionnaire covered various aspects of blood donation, ranging from knowledge about eligibility criteria of blood donation, the need and importance of donating, various misconceptions, fears, reasons for not donating, suggestions on encouraging blood donation, individual preferences and experiences.

The percentage of the population that had donated blood at least once in the past was 49% which is higher than a study conducted in Rajkot8, Gujarat9, where 24% had donated blood. A greater proportion of the donors were males (46, 93%) compared to females (05, 7%). These findings are consistent with a study conducted in Uttarakhand10 where males constituted 84% and females 16%.

However gender did not arise as a significant factor for knowledge about blood donation, which is similar to a study carried out by Sabu et al in Karnataka11. Majority (95%) felt that voluntary donation was the best mode of blood donation and 7% felt that blood can be donated on request from relatives. Though they felt that voluntary donation was the best way, only 51 had donated in the past, out of which, only 29(57%) had voluntarily donated.

It is of interest to note that majority of the residents under study (84, 81%) were aware of the eligibility criteria for blood donation.As resident doctors in a tertiary care centre with utilization of more than 18,000 blood and blood component units per annum, almost all (92%) have fairly good knowledge about blood donation.

The level of knowledge between male and female residents was almost same (males: 97%; females: 93%) but the practice of voluntary blood donation was observed to be much less among female residents i.e. 5% only.There is no significant association between level of knowledge and blood donation practice.This implies that even the increased level of awareness in residents does not result in actual act of donating blood.

Compared to female residents 5/43(12%), more number of male residents 46/61(75%) donated blood voluntarily. Maximum number of donations per candidate was 3 to 5 times on the whole.This is quite understandable, since women within the donor age range usually may have one or other factor interfering with their chances of being suitable to donate. Factors such as their frequent menstrual cycles, pregnancy, and lactation may prevent them from donation.

Variation in knowledge of blood donation and transfusion processes may be attributable to the degree of enlightenment program. The major reason given by those who had never donated was that no one approached them to donate. This highlights the need for serious sensitization and education to all the residents. Literature clearly indicates the lower level of safety of family replacement donors compared to first-time voluntary donors12 and recommended that the only policy effectively improving blood safety was repeat donation.13 Voluntary donors are safer than family replacement donors and regular repeat donors are safer than first time voluntary donors14. Among the total, only 11 (11%) residents have donated regularly. WHO insists countries to focus on young people to achieve 100% voluntary blood donation.1According to WHO, 38.4% of voluntary blood donors are under the age of 25 years.Hence we wish to focus on the young residents. In our study, residents are in the age group of 26-38 (with a mean age of 29).

Compared to females who have not donated 38/43(88%),less number of males 15/61(25%)have not donated even once. The main reasons offered were 'they were not asked'.

Though 34/43(79%) of female residents were willing to donate, only 5/43(12%) have donated. Reasons for not donating were given as fear of pain, lack of opportunity etc.,Anemia and Endocrinal disorder were given as reasons by few female residents.The nutritional status of the resident doctors would be much better than others. Still anemia could be one of the reasons for not donating blood as per their statement.Commonly cited reasons for non-donating blood have remained unchanged over decades and includes “not being asked to donate” 7. In our study also 46 residents (44%) have offered the same reason for not donating.Obtaining such an answer from resident doctors was surprising.

Doctors are not only healers but also teachers; before they teach and motivate people for voluntary blood donation, they need to have a positive attitude towards voluntary blood donation themselves15.In our study, 88% agreed to this effect.

There was a significant association between donation practices and gender in our study. A study reported by Chopra D et al has shown significant association between gender and voluntary blood donation 16. Whereas a study reported by Nwogoh B in Nigeria found that there was no significant association between gender and voluntary blood donation practices17.A study at an army hospital in Srilanka among post intern doctors realized that they have inadequate knowledge of Transfusion medicine. The authors suggested launching of 2 weeks training in blood bank as an immediate solution to improve their knowledge18 .Such posting of residents in the blood bank for at least one week will give an opportunity for them to witness the challenges encountered in procuring at least one unit of safe blood and may motivate them for voluntary blood donation.

One of our resident also stated that he could donate blood when given time off.Such provision of “time off” for blood donation may promote voluntary blood donation among resident doctors also.Though it is desirable that voluntary blood donors are not supposed to expect anything in return for the donated blood, some such small incentives may facilitate voluntary blood donation.Some blood banks in western countries have introduced donor cards with certain advantages19. Government of Uttar Pradesh has provided half day leave to employees who donated blood on fixed dates20. Another hospital management decided that every employee who donated blood or blood component by apheresis would get one day leave and a privilege card for 1 year21 .

CONCLUSION:

Though our residents are knowledgeable regarding blood donation process and have positive perception towards blood donation, there is no translation of this knowledge and attitude, towards blood donation practices. There is a need for active education program to encourage all and if this happens, adequate and safe blood from this group will be guaranteed.

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