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Original Article:

Study of Knowledge, Perceptions and Practices Related to Blood Donation Among the Healthcare Support Staff of a Tertiary Care Hospital in Gujarat, India.

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Abstract: Background: There is a serious mismatch between demand and availability of blood in our country. One of the important factors motivating people for donating blood is their interaction with staff of health facilities including support staff. The knowledge and perceptions of support staff about blood donation have not been studied adequately. **Methodology:** Data was collected from randomly selected 100healthcare support staff using a pretested questionnaire. The questionnaire was based on prior qualitative analysis of perceptions of few of the potential participants. **Results**: 91% of the respondents felt that blood donation was not safe. Only 16% had adequate knowledge about eligibility for blood donation and all of them were females. 39% respondents had donated blood themselves and 79% had family history of blood donation. None of the socio-demographic factors except young age were found to be associated with better knowledge or positive perceptions about blood donation. Many among those who had donated blood also did not perceive blood donation as safe. Apprehension about blood being not properly used and not having been approached by anyone were commonest reasons for not donating. **Conclusions:** The knowledge about safety, eligibility and motivation for blood donation is very poor among the healthcare support staff. Efforts must be made to educate these employees and promote voluntary blood donation among them. Various incentives as suggested by employees themselves and several international bodies may be considered to promote blood donation among healthcare support staff.

Key Words: Voluntary blood donation; Hospital employees; Healthcare support staff

Introduction:

Blood transfusion is a core service within health care systems and individuals who donate their blood provide a unique contribution to the health and survival of others. Donation of blood has always been considered as a humanitarian act. Although many individuals are eligible to donate blood and numerous awareness campaigns promote its importance, only a small percentage of eligible individuals about 1/3rd donate blood in the US and other developed countries, and even fewer do so in developing countries.[1] There is a serious mismatch between demand and availability of blood in our country. Against the target of blood collection as 10 million units, 8.01 million units were collected by public sector and registered blood banks in India in 2009-10. In public and charitable sector blood banks, currently 76.1% of blood is collected through voluntary blood donation.[2] Systems based on replacement donation by the family and friends of patients requiring transfusion are rarely able to meet clinical demands for blood while paid "donation" poses serious threats to the health and safety of the recipients as well as the donors themselves.[3] In the current scenario, more and more emphasis is towards voluntary donation and retaining the transfusion transmitted infections negative donors by World Health Organization and National Aids Control Society.[3,4] The hesitation towards blood donation is mainly due to inadequate and incorrect knowledge for its necessity and misconceptions related to fears of physical harm in the process of donating blood. The perceptions toward voluntary blood donation could be influenced to a large extent by socio-demographic variables of knowledge among the general population.[5] One of the important factors motivating people for donating blood is their interaction with staff of health facilities. Traditionally the hospital staff including the

non-medical and non-paramedical health staff (support staff) is looked upon by the community as a source of knowledge and motivation for various health related matters including blood donation. Also the non-medical staffs are involved in considerable interaction with the patients and their caretakers, in some instances more than physicians themselves.[6] The faulty perceptions of such staff may mislead or undermine the motivation of communities regarding blood donation. The knowledge and perceptions of support staff have not been studied as frequently as those of healthcare staff directly involved in providing clinical care. Our study looked into the knowledge and perceptions of staff not directly related to providing healthcare in a tertiary care hospital in Gujarat about blood donation and various factors influencing the same.

Methodology:
A sample of 100 employees was randomly selected from staff not directly related to providing healthcare (management executives and general duty attendant staff) of a tertiary level healthcare centre of Gujarat. The sample size was calculated based on data from previous study where about 50% staff not directly related to providing healthcare believed blood donation to be safe.[7] Using the formula $4pq/d^2$,where p=q=0.5 ,d= 0.1 (20% of p) ,the final sample size was 100. The data was collected using pre- tested questionnaire designed based on the qualitative analysis (Free listing and Pile sorting) of perceptions of few of the potential participants.[8] The questionnaire was translated and back translated in the Gujarati language as majority of the employees were of Gujarati origin. The questionnaire was divided in three parts. First part was of their personal demographic information related to age, sex, education etc. Second part was about their blood donation related experiences and knowledge of blood donation. Last part was about their perception regarding barriers in blood donation and possible ways to increase voluntary blood donors. The knowledge component had maximum score of 4 and only individuals with score of 4 were considered as having adequate knowledge. The questions were open-ended in nature. For the people who could not write the researcher arranged for someone to write. The data was entered in Microsoft Excel and analyzed using SPSS (Statistical Package for Social Sciences) version 15. Ethical clearance was obtained from the local Hospital Research and Ethic Committee. Written consent was also taken from the participants.

Results:
Of the 100 respondents in the study group there were 63 males and 47 females. Fifty two had been in service for more than 5 years, 35 for 1-5 years and 13 less than 1 year. Two respondents had primary education, 12 secondary education, 45 were graduates and 41 post-graduates. Thirty nine respondents had donated blood themselves and 79 had family history of blood donation. Seven respondents had received blood transfusion themselves and 34 had family history of any one in family having received a blood transfusion. More males (30) had donated blood compared to females (9) (Chi-square=5.317, p=0.012). There was no significant difference in having received a blood transfusion among males and females. Ninety one respondents perceived that it was not safe to donate blood. All the employees who perceived blood donation to be safe were less than 40 years of age as shown in Table 1.

Table 1: Perception of the respondents about safety of blood donation among various age groups.

	Is blood donation is safe		Total
Age category	Yes	No	
Age 20-29 years	8 (19.5%)	33 (80.5%)	41
Age30-39 years	1(3.03%)	32 (96.97%)	33
Age 40-49 years	0	14 (100%)	14
Age >50 years	0	10 (100%)	10
	9 (9.18%)	89 (90.82%)	98*
Chi square= 6.798, p=0.002 *-2 No responses			

The younger employees perceived blood donation as safer compared to their older counterparts. Even many among those who had history of having donated blood, received blood transfusion either themselves or in family members did not consider blood donation safe. Sex, service duration and education level were not related to the perception regarding the safety of blood donation.
The knowledge about eligibility for blood donation among respondents is depicted in Table 2.

Table 2: Knowledge about eligibility for blood donation among the respondents. (N=100)

	Correct knowledge about:				
	Lower age limit (18 years)	Upper age limit (60 years)	Lower weight limit (45 kgs)	Safe gap (3 months)	All four questions
Males (63)	27 (42.8%)	0	0	31 (49.2%)	0
Females (37)	37 (100%)	25 (67.5%)	16 (43.2%)	37 (100%)	16 (43.2%)
Total	64 (64%)	25 (25%)	16 (16%)	68 (68%)	16 (16%)

All the differences were statistically significant (p<0.001). Age, education and duration of service were not associated with significant difference in knowledge score. Having history of donated blood, received blood transfusion either themselves or in family members was also not associated with adequate knowledge score.
Of the 61 respondents who had never donated blood 2 did not mention any reason for not donating. Some respondents gave multiple reasons. The commonest reasons for not donating blood were apprehension about blood being not properly used (25) and employees not having been approached by anyone for blood donation (20). The list of reasons for not donating blood is provided in Table 3.

Table 3: The list of reasons for not donating blood (N=61*)

Reason for not donating blood	**No. of responses**
Blood is not used properly	25
Nobody approached me	20
I am scared	8
Bad experience of others	7
Not eligible for donation	5
Will lose weight and become weak	3
No response	2
Blood bank does not provide blood for free	1
* Total responses are >61 as there were multiple responses.	

Thirty one of the respondents had several fears about donating blood .Commonest was about becoming weak (21) followed by fear of getting infections (12) and other unspecified harmful effects (5).
Respondents also suggested various incentives and methods to encourage blood donation among employees of the hospital as listed in Table 4.

Table 4: The list of incentives and methods suggested encouraging blood donation among employees (N=100*)

Method to encourage blood donation:	No. of responses
Issuing donor cards	60
Providing awards	25
Providing certificates	10
Others	2
Incentive for those donating blood:	
Honoring during functions	29
Monetary incentives /gifts	29
Providing extra leaves	25
Weightage in appraisal	22
Others	7
* Total responses are >100 as there were multiple responses	

Discussion:
The study looked into the knowledge and perceptions of non healthcare providing staff of a tertiary care hospital in Gujarat about blood donation and factors and various factors influencing the same. Of the 100 employees who responded 91 did not consider blood donation to be safe. This was despite about 40% of them having donated blood themselves and about 80% having blood donors in the family. More male employees had donated blood compared to their female counterparts .This is line with finding of other studies.[9] Also only 16% had correct knowledge about the eligibility criteria to donate blood and all 16 of them were females. This is less than that reported in other studies.[7,10] This is highly unacceptable of any community especially so of the employees of a teaching hospital. This reflects that not adequate efforts are being made to promote blood donation and educate employees about safety of the procedure. The knowledge about blood donation was poor in both erstwhile donors and non-donors. Even though they had donated blood under various circumstances at blood banks probably adequate efforts were not made to convince theses people about safety of blood donation. These misconceptions and poor knowledge are likely to demotivate other people who interact with these employees. None of the socio-demographic factors except young age were found to be associated with better knowledge or positive perceptions about blood donation. As other studies have also reported similar findings[11] any intervention designed need to focus on the entire administrative staff.
The commonest reasons for not donating blood were apprehension about blood being not properly used and employees not having being approached by anyone for blood donation. Similar reasons were also reported in other studies.[7,9,12] Both these issues can be easily tackled at the institute level. The newsletters about blood use patterns, blood needs and some inspiring stories can be put up on different notice boards, including in place where people wait before and after donating blood. Educative events like skits, poster competition, and quiz can be conducted for the hospital employees with special focus on administrative staff.
The respondents have suggested certain methods to promote voluntary blood donation among employees and also certain incentives which can be provided to the voluntary donors. Certain blood banks in western countries have introduced donor cards with certain advantages.[13] Government of Uttar Pradesh has decided to provide half day leave to employees who donate blood on fixed dates.[14] The International Federation of Blood Donor Organizations (IFBDO) has come up with a global strategic policy initiative for Institutions, Governments and Businesses that are committed with the ideals and ethics of voluntary unpaid blood donation [15]. The Safe Blood Pact includes 6 basic guidelines that its signees commit to observe in their social responsibility policies. These guidelines provides for various initiatives to voluntary blood donation among employees. The European Union has also brought out report on various practices followed among its member countries to promote voluntary blood donation among employees.[16] The hospital management should take into consideration some of these suggestions to improve voluntary blood donation among employees without compromising on the spirit of voluntarism.

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References:
1. Riley W et al. The United States' potential blood donor pool: estimating the prevalence of donor-exclusion factors on the pool of potential donors. *Transfusion* 2007;47:1180-11188.
2. Status note on Blood Safety. NACO New Delhi.[Internet]. Available from: http://nacoonline.org/Divisions/Blood_Safety/Status_note_on_Blood_Safety/. [Accessed on 30th October 2012].
3. Fordham J, Dhingra N. Towards 100% voluntary blood donation: a global framework for action. World Health Organization, Geneva; 2010. Availabe at http://www.fiods.org/main/SAFEBLOODPACT. [cited 30th October 2012].
4. NACO. Voluntary Blood Donation Programme - An Operational Guideline. National AIDS Control Organization. New Delhi.[Internet]. Available from:http://www.nacoonline.org/upload/Policies%20&%20Guidelines/29,%20voluntary%20blood%20donation.pdf [updated 29/08/2007: cited 08/11/2012].
5. Shenga N, Pal R, Sengupta S. Behavior disparities towards blood donation in Sikkim, India. *Asian J Transfus Sci.* 2008 July;2(2):56–60.
6. Jagani NL, Dagdischandran A. Medical care interaction process analysis: A study of hospital staff-patient interactions. [Internet]. Available from: www.medind.nic.in/haa/t00/i1/haat00i1p43g.pdf. [cited 30th October 2012].
7. Mitra K, Mandal PK, Nandy S, Roy R, Joardar GK, Mishra R. A study on awareness and perceptions regarding blood safety and blood donation among health care provider in a teaching hospital of Calcutta. *Indian J Community Med.* 2001;26(1):21-24.
8. Dhara A, Kumar D. A qualitative study of perceptions about voluntary blood donation among the supportive service employees of a multispecialty rural tertiary care hospital. *National Journal of Community Medicine*2012;3(2):310-315. Available at http://njcmindia.org/uploads/3-2_310-315.pdf
9. Marantidou O, Loukopoulou L, Zervou E, Martinis G, Egglezou A, Fountouli P et al. Factors that motivate and hinder blood donation in Greece. *Transfusion Medicine.* 2007;17:443–450.
10. Reza PA, Aziz SV, Ali MA, Marjan MH, Reza TM. Evaluation of knowledge of healthcare workers in hospitals of Zabol city on proper methods of blood and

components transfusion. *Asian J Transfus Sci.* 2009 July;3(2):78–81. doi: 10.4103/0973-6247.53878. Available at http://www.ncbi.nlm.nih.gov/pmc/articles/pmid/20808651/

11. Shenga N, Thankappan KR, Kartha CC, Pal R. Analyzing sociodemographic factors amongst blood donors. *J Emerg Trauma Shock.* 2010 Jan-Mar;3(1):21–25. doi: 10.4103/0974-2700.58667
12. Singh B, Pandey RM , D'Souza N, Anushyanthan A, Krishna V, Gupta V et al. Knowledge, attitudes and socio-demographic factors differentiating blood donors from non-donors in an urban slum of Delhi. *Indian J Community Med* 2002;27(3):118-124.
13. New York Blood Centre-Donor advantage programme. [Internet]. Available from: Http://www.nybc.org/advantage-prog-page.do?Sid0=61&page_id=163. [Cited 30th October 2012].
14. Dixit K. Special leave for government employees donating blood. The Times of India, Allahabad; Jun 13, 2012. [Internet]. Available from: http://articles.timesofindia.indiatimes.com/2012-06-13/allahabad/32214593_1_voluntary-blood-donation-day-blood-donor-national-youth-day. [Cited 30th October 2012].
15. Safe Blood Fact. [Internet]. Available from: http://www.fiods.org/main/SAFEBLOODPACT. [cited 30th October 2012].
16. The Commission to the council and the European Parliament -Report on the promotion by Member States of voluntary unpaid blood donations. Brussels ; 2006. May 17. [Internet]. Available from: http://ec.europa.eu/health/ph_threats/human_substance/documents/blood_com_0217_en.pdf . [Cited 30th October 2012].