Psychosocial Variables of Voluntary Blood Donors at Blood Bank of a Medical College

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Abstract

Background: This study was undertaken to study the motivational factors leading to voluntary blood donation and understanding the psychosocial variables of blood donors.

Methods: 300 blood donors were selected by systematic random sampling method.

Result: It was observed that most of the voluntary donors were males (89.3%) and belonged to age group 16-25 years (48%). Most of the donors (93.46%) had studied upto high school and above and 84.33% of the donors belonged to the middle class. 27% of the donors had donated blood previously. The common motivational factors to donate blood were for 'a good cause', 'for the society' and 'to save a life'. 4.67% of them donated blood for self satisfaction.

Conclusion: Motivation, recruitment and retention of voluntary blood donors are important criteria to achieve safe blood donation.

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Key Words: Motivation; Psychosocial; Voluntary; Blood Donors

Introduction

Donation of blood is a behavioural phenomenon and is always considered a humanitarian act. During national emergencies like the Gujarat earthquake, there was no dearth of voluntary donors. What is not realized perhaps is that, there is a necessity for blood even otherwise and hence there is a need for motivation to donate blood voluntarily. The decision to donate blood is motivated by a host of factors including altruism, social behaviour, social pressure and replacement [1].

There has been a steady decline of blood donation while the demand for transfusion continues to rise [2]. Recruitment and retention of donors to sustain and increase the donor base are critical for blood banks [3]. This study was undertaken with the objective of studying the psychosocial variables and motivational factors of voluntary blood donors.

Material and Methods

Place and Period of Study

The study was carried out in the Blood Transfusion Department and in the blood donation camps organized by the department from 01 May 2001 to 31 Oct 2001. The study questionnaire was pretested on 25 cases before finalisation. The responses of the subjects were recorded as narrated by them.

Selection of the donors

All donors coming and seeking to donate blood were

subjected to a preliminary rapid medical examination to detect any obvious disease. Those who were suffering clinically from skin diseases, severe anaemia, general debility, icterus and so on were rejected. The provisionally selected donors were subjected to examination of their blood and were included in the study only if found fit to donate blood. Systematic random sampling technique was used to choose the donors. Every 3rd donor was taken for the study. In all 300 voluntary blood donors were selected.

Results

A total of 300 voluntary donors were interviewed out of which 89.3% were males and 10.7% females (Table 1). 48% donors belonged to the age group 16-25 years. The youngest donor was aged 19 years and the oldest was 53 years of age.

Table 1
Age group and sex

Age group	Male (%)	Female (%)	Total (%)
16-20	46 (17.16)	6 (18.75)	52 (17.33)
21-25	82 (30.60)	10 (31.25)	92 (30.67)
26-30	62 (23.13)	9 (28.12)	71 (23.67)
31-35	40 (14.92)	6 (18.75)	46 (15.33)
36-40	20 (07.46)	1 (03.13)	21 (07.00)
41-45	8 (02.99)	0	8 (02.67)
46-50	7 (02.62)	0	7 (02.33)
51-55	3 (01.12)	0	3 (01.00)
Total	268 (100)	32 (100)	300 (100)

$\chi^2=0.87$, $df=3$, $p=0.83$ Not significant (Rows 4-8 were clubbed for analysis)

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Table 2**Religion and sex**

Religion	Male (%)	Female (%)	Total (%)
Hindu	251 (93.65)	28 (87.50)	279 (93.00)
Muslim	8 (02.99)	3 (09.37)	11 (03.67)
Sikh	4 (01.49)	-	4 (01.33)
Christian	5 (01.87)	1 (03.13)	6 (02.00)
Total	268 (100)	32 (100)	300 (100)

$\chi^2=0.85$, df = 1, p=0.25 (Fisher Exact 2 tailed), not significant
(Rows 2-4 were clubbed for analysis)

Table 3**Literacy level**

Literacy level	No of donors (%)
Illiterate	2 (00.67)
Primary	3 (01.00)
Middle school	14 (04.67)
High school	52 (17.33)
Higher secondary	84 (28.00)
Graduate	124 (41.33)
Post graduate	21 (7.00)
Total	300 (100)

Table 4**Socio-economic status**

Socio-economic class	Male (%)	Female (%)	Total (%)
I (Upper)	35 (13.07)	7 (21.87)	42 (14.00)
II (Upper Middle)	84 (31.36)	14 (43.75)	98 (32.66)
III (Middle)	79 (29.49)	8 (25.00)	87 (29.00)
IV (Lower Middle)	65 (24.22)	3 (09.38)	68 (22.67)
V (Lower)	5 (01.86)	0	5 (01.67)
Total	268 (100)	32 (100)	300 (100)

$\chi^2=6.43$, df - 3, p=0.09, Not significant
Rows 4 & 5 clubbed for analysis

Most of the donors (93%) were Hindus coming from a nuclear family (88.6%) and living in an urban area (92.3%). 61.7% were unmarried donors. Two donors were widows. 93.46% had studied upto high school and above including 48.3% graduates and post graduates. 3 donors had primary education and only 2 were illiterate.

Maximum donors (84.33%) belonged to middle socioeconomic classes (Upper middle, middle and lower middle) followed by upper class (14%). 65% of the donors were vegetarians. 5.9% males were smokers and 5.2% males consumed more than 3 pegs (90 ml) of alcohol daily. 27% donors had donated blood at least once previously. 1.6% donors had a fear of illness, 0.3% had a fear of weakness and 1.3% donors had a fear of needle prick or disliked the sight of blood. Immediate family member / close relative of 20.9% donors had donated blood previously whereas relative / family member of 1.3% donors had received blood previously. 23.33% donors had come for the donation for a good cause, 18% for the society or on humanitarian grounds and 20.34%

Table 5**No of times donated blood previously**

No of times	Males (%)	Female (%)	Total (%)
Nil times	195 (72.76)	24 (75.00)	219 (73.00)
Once	48 (17.91)	6 (18.75)	54 (18.00)
Twice	12 (04.48)	1 (03.13)	13 (04.33)
Thrice	7 (02.61)	0	7 (02.33)
3 or more	6 (02.24)	1 (03.13)	7 (02.33)
Total	268 (100)	32 (100)	300 (100)

$\chi^2=0.07$, df=1, p=0.71 (Fisher exact 2 tailed), Not significant
Rows 2-5 clubbed for statistical analysis

Table 6**Motivating factors to donate blood**

Motivating factors	Male (%)	Female (%)	Total (%)
For a good cause	61 (22.76)	9 (28.12)	70 (23.33)
For the society (humanitarian)	46 (17.16)	8 (25.00)	54 (18.00)
To save a life	54 (20.15)	7 (21.88)	61 (20.34)
National integration	28 (10.45)	3 (09.38)	31 (10.34)
For the Armed forces	24 (08.96)	1 (03.12)	25 (08.33)
New experience	21 (07.84)	-	21 (07.00)
Excitement	15 (05.60)	-	15 (05.00)
Inspired by mother	1 (00.37)	-	1 (00.33)
Inspired by peer	4 (01.49)	-	4 (01.33)
To reduce weight	1 (00.37)	-	1 (00.33)
Self satisfaction	10 (03.73)	4 (12.50)	14 (04.67)
I'll get blood when I need	1 (00.37)	-	1 (00.33)
To stay healthy	2 (00.75)	-	2 (00.67)
Total	268 (100)	32 (100)	300 (100)

$\chi^2=3.58$, df=5, p=0.62, Not significant

(Rows 1-5 donated for 'self' and Rows 6-13 donated for 'others'
Rows 6-13 clubbed for analysis)

to save a life. There were 10.34% donors who donated for national integration and 08.33% for the Armed Forces. There were 7% donors who donated for having a new experience, 5% for excitement and 4.67% to have a self satisfaction. As observed from Tables 1 and 2 and 4 to 6, none of the variables showed any statistically significant sex differential in the study sample.

Discussion

Data generated through the WHO Global Database on Blood Safety (GDBS) reveal that 20% of the global population residing in the developed countries has access to 80% of safe blood supply, whereas 80% of the population inhabiting the developing countries has access to only 20% of safe blood [4].

In this study it was found that there were 268 (89.3%) males and 32 (10.7%) females donating blood. In other studies [5,6], it has been found that most of the donors (60-70%) are usually males. The higher percentage of males in this study could be due to the fact that a number of camps were held in recruiting centers comprising of only male population. Majority of the donors (93%) were

Hindus followed by 3.67% Muslims. Not many studies were found in the Indian context regarding this difference. Possibly it reflects the representation of each religion in the given population.

In India as well as in USA and Europe, most of the voluntary blood donors belong to the younger age group as had been reported in various studies [7,8]. The same trend has been seen in the present study in which 71.67% of the donors were less than 30 years of age. Majority of the donors (61.7%) were unmarried. This was mainly because the donors who came out overwhelmingly for donation were students. In the military units most of the donors were recruits and were obviously unmarried. 92.3% respondents hailed from an urban area which is expected as the blood donation camps were organized in Pune city. Education creates awareness and change in attitude. This conforms to the present study where 93.46% donors had studied upto high school and above.

Nutrition forms an important part in case of blood donors. Studies [6] have shown that blood donation is safe in donors who are otherwise healthy and of good nutritional status but the studies don't mention about any difference between vegetarian and non-vegetarian donor. In this study it was seen that 65% donors were vegetarians. Alcoholism can also relate to promiscuous behaviour. It has been found from a study that 14.2% of donors with history of alcohol consumption are HIV +ve [9]. Newmann BH et al reported in their study that raised oral temperature due to cigarette smoking is a common blood donation deferral, occurring in 1% of the donors [10]. In this study the number of smokers were higher (5.3%) and those who consumed alcohol were less (4.6%) as compared to other studies [9,10]. This could be due to the fact that consumption of alcohol at a younger age is considered a taboo in some societies in our country where as, there may be no such restriction on smoking.

Other studies [11] have shown repeat donors comprise 85% of the total blood donors. In the present study, it is seen that 27% donors are regular donors. The lower number of repeat donors may be due to imposition of statutory regulation banning the blood donation by professional donors who invariably donate blood repeatedly. In this study, only 1.6% donors had a fear of illness after blood donation. Nevertheless, all of them believed that if proper precautions are taken, these infections could be prevented. Sharma UK et al reported

that 1.3% have a fear of illness of AIDS after blood donation [12], which is in conformity with our study.

Oswalt RM et al reported that majority (87%) of the donors did not have any fear of weakness or loss of vitality after donating blood [1]. Even in this study, only one donor (0.3%) thought he would become weak after donation. DJ Osborne et al discovered in their study that the largest proportion of donors (44.5%) considered that they had donated blood because of contact with other donors (13). In this study also, it is seen that there were 17.3% donors who had a close relative / friend as a donor. However there was no peer pressure to donate blood. Oswalt RM has also reported that the most common cause for donating blood is altruism which has been found in this study.

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