



Research Article

KNOWLEDGE ATTITUDE AND PRACTICES OF PEOPLE TOWARDS VOLUNTARY BLOOD DONATION

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ABSTRACT

Introduction: Voluntary blood donation is the easiest and most effective means to collect blood. In developing countries more than 50% of blood donations are made by paid and voluntary donors. There are replacement donors who donate blood for their friends, relatives. Ignorance, fear and misconceptions about blood donation and lack of voluntary blood donation organizations are major constraints in developing countries to facilitate voluntary blood donation. Considering the estimated shortfall of 3 to 4 million units of blood annually in India, more awareness must be created among all strata of population especially among youngsters and females on importance of blood donation.

Aims and Objectives: The objective of this study was to determine the factors influencing blood donation at selected sites in Udaipur.

1. To assess the knowledge regarding blood donation among voluntary blood donors.
2. To assess the attitude regarding blood donation among voluntary blood donors.
3. To establish the socio-economic and demographic characteristics of blood donors and potential blood donors at selected sites in Udaipur.
4. To find out the correlation between knowledge and attitude regarding blood donation among voluntary blood donors.

Materials and Method: The data was collected from voluntary blood donors in Udaipur zone. Predesigned questionnaire before and after interview used for study. The research approach used was evaluative approach. This study was conducted in voluntary blood donation camps outdoor and indoor in Udaipur. Data was collected by using closed ended questions in the form of structured questionnaire.

Conclusion: Majority of the respondents (53.07%; 242) were aged 18–27 years with a small proportion (5.92%; 27) aged 48 years or more. Maximum respondents were students (33.55%), followed by businessmen (19.96%), office worker (service) 8.55%, labourers (4.61%) etc. 66% were mentally strong enough of not afraid of needles. 34.43% were afraid of needles. 68% of respondents felt that blood donation is altruistic whereas 32.24% felt it is not. In our region maximum number of donors (27.85%) were of the 'O +ve' blood group, followed by (24.56%) 'B +ve'. There rarest blood group was AB –ve (1.54%). 28.73% replied that they had a fear of acquiring anemia by donating blood followed by 25.88% had lack of knowledge about blood donation, 18.64% had fear of fainting /poor health, 11.18% had fear of needle pain etc. Only 1.97% feared of contaminated needle. There is a need for more public awareness steps involved in blood donation so as to remove unfounded fears. There is a need for regular studies on blood donation practices in various parts of the country so as to be able to formulate comprehensive policies as other regions may have differing reasons for donation or non-donation of blood.

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INTRODUCTION

Background information

Blood is that magic portion which gives life to another person. Though we have done tremendous discoveries and inventions in science, we are not yet able to make the magic portion called Blood.

Human blood has no substitute. Requirement of safe blood is increasing and regular voluntary blood donations are vital for blood transfusion service [SamleePianbang Chang]. Blood can save millions of life, and Young people are the hope and future of a safe blood supply in the world [Knowledgebase-script.com].

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In ancient times, attempts at replacing lost blood involved the drinking of blood by the patient. But this custom of blood ingestion was found to have adverse reaction. One of the most important discoveries permitting the transfusion of blood was then made, that of the formulation of the theory of the circulation of blood, discovered by William Harvey in 1613. The discovery of the human ABO blood groups by Dr. Karl Landsteiner was the major step in understanding that these wrong reactions were in fact due to what is now known to be blood group incompatibility.

Science and technological developments became more and more involved in the development of transfusion during the 20th Century. The development of electrical refrigeration resulted shortly after in the first 'blood bank' being set up in Barcelona in 1936. Currently, voluntary blood donation process together with the sophisticated methods are used for

the collection, storage, processing and testing of blood required by the complex medical and surgical procedures [funguerilla.com].

Blood and blood products are an essential part of health care for patients deficient in one or more blood components. The demand for blood and blood products in most countries, including India, continues to increase 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 (Marantidou *et al.*, 2007). Blood services worldwide have struggled with a permanent shortage of blood. Blood needs have been increasing gradually on a global scale as a consequence of road accidents, obs & gyne cases and diseases like thalassaemia, hemophilia, sickle cell diseases, heart diseases and cancers like lymphoma or leukaemia (Sunitha *et al.*, 2007). Ensuring an adequate blood supply is thus a major concern. It is vital that efforts be made to educate the public about the importance of blood donation and encourage more people to become regular donors by devising successful recruitment and retention strategies. In accordance with the directive of the Supreme Court, National Blood Transfusion Council was constituted in 1996 with the objectives to promote voluntary blood donation, ensure safe blood transfusion, provide infrastructure to blood centres, develop human resource and formulate and implement the Blood Policy.

National Blood Transfusion Council (NBTC) is the policy formulating apex body in relation to all matters pertaining to operation of blood centres. The NBTC is the central body that coordinates the State Blood Transfusion Councils (SBTCs) and also ensures involvement of other Ministries and other health programmes for various activities related to Blood Transfusion Services (BTS) [NBTC, wikipedia 2016-17].

Milestones of Blood Transfusion Services in India are:

- 1942 : First blood bank in Kolkata.
- 1954 : Voluntary blood donation began.
- 1975 : Blood bank licensing process started with HBV, Syphilis & Malaria screening.
- 1988 : HIV testing made mandatory.
- 1992 : BTS under EMR division of DGHS
- 1992 : NACO started and BTS shifted under NACO
- 1996 : NBTC and SBTC formed
- 1997 : Mandatory licensing of Blood banks
- 1998 : Professional donor banned
- 2001 : HCV testing made mandatory
- 2002 : National Blood Policy formulated
- 2008 : Blood Storage Centers
- 2009 : New Initiatives (Metro Blood Banks and plasma Fractionation Centre)
- 2014 : National Plasma Policy formulated
- 2016 : Baseline Assessment of all licensed Blood Banks in the Country

Presently, the NBTC is housed within NACO and functions through resources available with the Blood Transfusion Services Division. 25 meetings of the Governing Body of NBTC have been held and important policy decisions have been taken pertaining to Blood Transfusion Services [NACO Wikipedia, 2015-16].

National Blood Transfusion Council is being empowered to fulfill its roles and responsibilities as the policy formulating apex body for all matters pertaining to the organization, operation, standards and training of a sustainable and safe blood transfusion service for the country. Mechanism for better coordination between NBTC and SBTC and providing technical, financial and managerial assistance to SBTC as needed to implement the national blood programme are being developed and implemented. The annual requirement of blood for the country is estimated at 12 million units of blood, of which NACO supported blood banks have collected 63.85 Lakh units in 2015-16. 79% of this was through voluntary non remunerated blood donation. Despite these efforts the national minimum target of 12 million units of blood needed annually has never been reached. This study is to determine factors, both positive and negative, that affect voluntary blood donation in Udaipur, Rajasthan and hence determine how to motivate more people to donate blood. There are several benefits of blood donation to the donor himself. The Kansas university medical centre found that women who participate in blood donation experience a 30 percent fewer incidents of heart disease and stroke compared to those people who don't donate blood. The American journal of epidemiology stated that blood donation can reduce overall high level of blood cholesterol which may protect against heart attack. Blood donation also reduces the risks of cancers including liver, lung, colon, stomach and throat cancers [Saching.com]. 6 Voluntary blood donation is the easiest and most effective means to collect blood [Raktha Kranthi]. In developing countries more than 50% of blood donations are made by paid and replacement donors [Alam M]. There are replacement donors who donate blood for their friends, relatives [Wake D]. Ignorance, fear and misconcepts about blood donation and lack of voluntary blood donation organizations are major constraints in developing countries to facilitate voluntary blood donation. Considering the estimated shortfall of 3 to 4 million units of blood annually in India, more awareness must be created among all strata of population especially among youngsters on importance of blood donation [who.int 2015-16]

According to World Health Organization, an estimated 38% of reported voluntary blood donations are contributed by people under the age of 25. WHO also insist countries to focus on young people to achieve 100 per cent voluntary unpaid blood donation [who.int 2015-16]. Young students are healthy, active, dynamic and receptive and constitute a greater proportion of population. They have to be encouraged, inspired and motivated to donate blood voluntarily.

As per the report of Indian RedCross society, Ahmedabad is the No.1 city and Gujarat, the No.1 state in the field of voluntary blood donation in terms of blood donor population ratio [who.int 2015-16].

Less than a quarter of countries have achieved 100% voluntary blood donation. Many countries are still dependent on donation by families or friends of the patient who requires blood. In addition, some 7 countries like Bangladesh still have paid donors. Yet, evidence from around the world demonstrates that voluntary unpaid donors are the foundation of a safe blood supply because they are least likely to transmit potentially life-threatening infections such as HIV and hepatitis virus to recipient [who.int 2015-16].

World Blood Donor Day celebrated on 14th June is an annual

event officially designated by world health assembly to recognize and thank millions of voluntary blood donors. The aim is to create wide awareness to the importance of voluntary blood donation and to encourage more people to become regular blood donors [Vivek R].

“People travel by many means but we are not aware of the transportation system in our body, without which no man can survive”.

Blood is essential for human life. Blood is like the body's transportation system, busy making deliveries and pickups. As blood circulates throughout the body, it delivers oxygen and nutrients to all the places they are needed. Blood also collects waste products, such as carbon dioxide, and carries them to the organs responsible for making sure the wastes leave the body. It was an Austrian named Karl Land Steiner who first classified blood groups, in early 20th century. His findings have changed modern medicine and science immensely. Every year, 1st October the birthday of Karl Land Steiner is celebrated as the National Voluntary Blood Donation Day [Samlee Pianbang Chang].

REVIEW OF LITERATURE

A study was conducted on knowledge attitude and sociodemographic factors of donors and non-donors among 402 subjects in urban slums of Delhi which showed that 22.4% had not heard about blood donation and only 10.9% were aware of their own blood group. It also stated that only 6.4% had correct knowledge regarding of interdonation intervals and 6% had donated blood before. Out of the subjects, blood donors were likely to have a more favorable attitude than non donors in their general perception about blood donation, societal needs, positive feelings concerning blood donation that it will not cause any harm to the body. The study concluded that public had lack of knowledge and low attitude regarding blood donation. Those who knew own blood group were nearly 8 times more likely to donate as compared to those who did not. There is a gap in the awareness (cognition) and practice (behavior) [Breckler S]. A study was conducted in Northern India among 300 adults to assess their attitude regarding blood donation. A majority (78.7%) of people responded they had donated blood to save their family member, relatives or friends. Fifteen (15%) respondents said that people donated blood to be healthy, 37% responded that they donated blood to get some free investigation done for HIV/AIDS and Hepatitis and 27% responded they donate for money. On the contrary minority respondents (46%) were ready to donate blood voluntarily; only 12.7% of respondents had ever donated blood while 87.3% had never donated at all. Among ever donors, gender wise men donors were found to be more, (89%) were married, and half of them were 30 to 39 years age group. As per capita income or level of education increased the percentage of blood donors also increased [WHO 2000].

A study was conducted on Awareness and Perceptions Regarding Blood Safety and Blood Donation among Health Care Providers in a Teaching Hospital of Calcutta. The results of the study stated that Trainee doctors were well aware about screening tests. Guidelines for blood donation were best known by 'other group' of staffs. Most were aware about needle safety but not about banning of professional donors. Most had positive attitude about blood donation except 'other group' of staff, less than 50% HCPs had ever donated blood and

donor retention was variable. Commonest reason for not donating blood was 'never approached by anybody'. Most were, however, willing to donate in future [Sabu KM]. A study was conducted on knowledge and behavior towards voluntary blood donation among students of a tertiary institution in Nigeria stated that less than two-thirds (61%) of total respondents had good knowledge of blood donation. More than three quarters (85%) of the respondents had never donated blood. Of the 15% that had donated, only 3% donated voluntarily. Among those that had ever donated, males (57%) were more than females. Many of the donors donated for relatives (57%). The majority of the respondents were compelled to donate because of emergency situations (75%). The reasons why many did not donate were lack of opportunity (45%) due to tight lecture schedule and inadequate knowledge (24%). Gift items such as hematinics, T-shirts and wrist bands (29%) would motivate respondents to donate. The study concluded that the Students' Union body and other Organizations in the University should include a blood donation drive in their monthly/annual activities. The University authorities, the University health service center and the Hematology Department of the Teaching hospital should collaborate in promoting voluntary blood donation among the students [Shenga Namgay]. A study was conducted on knowledge, attitude beliefs and motivations about blood donation and a total of 542 blood donors from Lagos State University Teaching Hospital were interviewed with questionnaires. It was found that a large number of them (92.9%) donated because of the benefits they would obtain from the hospital, like antenatal registration (67.15%) and saving the lives of relatives (25.8%). Even though many of the donors were educated (98.9%), majority had university degrees (36.15%) and had heard about blood donation before, (52.4%) of them believed that they can contact human immunodeficiency virus or hepatitis infection from blood donation. A good number (47.0%) were afraid of the side-effects, such as weight loss (23.8%), sexual failure (5.9%), high blood pressure (5.2%), sudden death (3.3%) and convulsions (1.47%). About 41% preferred certificates as an incentive for donation, whereas 13.6% preferred money, less than 3% would like that their names got announced or published in the media and 2.58% would donate for nothing. It was recommended that an intensive blood donation campaign should be maintained as this will allow people to be well informed, turning the positive attitude of saving life through blood donation to a regular practice [Med Ethics.2010]. A study was conducted at the Armed forces hospital Sharourah kingdom of Saudi Arabia. 500 individual were interviewed and out of 291 (58.2%) were donors and 209 (41.8%) were non donors. Four hundred and seventy one (94.2%) replied that a person more than 45 years of age cannot donate blood, 51.2% (107 out of 209) of non donors answered that one could donate blood once a year. Out of 291 donors 186 (63.9%) donated blood to their family members or friends and 105 (36%) were volunteer blood donors. Non donors 89 (42.6%) replied that they were not approached by anybody. For blood donation 80 (38.3%) considered themselves unfit for donation due to weakness [Hosain GM]. A study was conducted about knowledge, attitude and practice regarding blood donation, among 1394 people (697 women and 697 men) using a structured knowledge questionnaire. Result showed that less than half of the populations under study were aware about the appropriate age for blood donation and certain. Majority (98%) of them

believed that blood donation is a moral duty with a spiritual reward and 38% of the population under study (60% of men and 16% of women) had donated blood at least once in past. Women and young people had the least of knowledge and performance. Although the attitude level of women was high, their performance level was very low. It was observed that with an increase in level of knowledge and attitude, the performance level was also increased [Olaiya A]. A study was conducted on attitude towards blood donation among 400 people who got health services from the Bang Span Hospital in Thailand. A self administered questionnaire was used and analysis showed that less than 50% people had good attitude. Attitude of subjects significantly correlated with their level of education. It was found that only 14% of the subjects had overall good attitude, 76% had an overall fair attitude and 10% had an overall poor attitude. Study showed that there was no significant correlation between attitude and sex. Also, there was no significant correlation between attitude and age. But there was a significant correlation between attitude and education level of the subjects. Study suggested that every blood bank should design a program for provoking knowledge in order to improve the attitude of the people [JavadzadehShahshahani]. An explorative study was conducted to assess the knowledge and attitude of non remunerated blood donation among youth in Namibia. The sample size was 120. The sample technique adopted was non probable convenient sampling. The result of the study showed that 95% of students knew the function of blood, but doesn't know their blood group. The youth had a positive attitude towards blood donation but mentioned several reason for not donating [WHO 2006].

Aims and Objectives

The objective of this study was to determine the factors influencing blood donation at selected sites in Udaipur.

1. To assess the knowledge regarding blood donation among voluntary blood donors.
2. To assess the attitude regarding blood donation among voluntary blood donors.
3. To establish the socio-economic and demographic characteristics of blood donors and potential blood donors at selected sites in Udaipur.
4. To find out the correlation between knowledge and attitude regarding blood donation among voluntary blood donors.

MATERIAL AND METHODS

This descriptive cross-sectional study was conducted on voluntary blood donors and non donors attending blood donation camps outdoor and indoor of MBGH Blood bank, Department of Transfusion Medicine, R.N.T. Medical College, Udaipur during January 2017 to January 2018.

Inclusion criteria

The study included males and females who had the following characteristics:

1. Age - between 18-60 years.
2. Weight – 45 kg or more. This is a medical requirement for all donors.
3. Those who gave consent.

Exclusion criteria

The study excluded the following people:

1. Pregnant women – this is because they are medically ineligible as potential donors. Women were asked about their last menstrual period and any who were suspected to be pregnant (that is, who had not had menses for 4 weeks or more) were excluded.
2. Age – people <18 years or >60 years.
3. Weight – all who weigh <45 kg as they were medically ineligible to donate blood.
4. Those who did not give consent to take part in the study.

Sample size estimation

Sample size estimation was done using the formula by Fischer *et al* (1998) at 95% confidence interval and prevalence of 50% because the exact proportion of Udaipur population that donates blood is not well known.

$$n = \frac{Z^2 (1 - \alpha) / 2 P (1 - P)}{d^2}$$

Where;

n = Minimum sample size required

d = Absolute precision (5%)

α = Level of significance at 95% confidence interval (5%)

Z = Standard normal deviate corresponding to 95% confidence interval

(1.96)

P = Assumed proportion of the population that donates blood (this is not known hence it is assumed to be 50%).

Therefore, $n = \frac{(1.96)^2 \times 0.5(1 - 0.5)}{(0.05)^2} = 385$

An allowance of 18% was calculated for spoilt or incomplete questionnaires hence this figure was adjusted to 456 which was distributed as evenly as possible within the three sites.

Sampling procedure

Blood donation centers generally fall into 3 strata: the street, educational institutions and corporate institutions. The 19 study sites were chosen from among many sites at which the MBGH BLOODBANK carries out regular blood donation exercises.

Data collection and verification

A semi-structured pre-tested interviewer administered questionnaire was applied to participants who consented to the study drawn from all the 19 study sites. The questionnaire was administered either in English or Hindi depending on the preference of each respondent.

Study sites

The study was conducted in MBGH Blood Bank, Udaipur, Rajasthan.

Study was conducted at following blood donation camps conducted under MBGH Blood Bank, Udaipur:

1. VD Camp Mahesh Public School, Chitrakootnagar.
2. VD Camp Udaipur Cement Works Limited, Udaipur.
3. VD Camp Gogunda, Udaipur
4. VD Camp MewarYadavYuvaVikas, Sanwar, Udaipur
5. VD Camp Scout and Guide, Udaipur
6. VD Camp Kapasan, Chittor, Udaipur

7. VD Camp Vagrecha Trust, Udaipur
8. VD Camp Rotary Club Elite, Udaipur
9. VD Camp Bharat Vikas Parishad, BadiSaadri, Chittor.
10. VD Camp Sindhi Samaj, Udaipur
11. VD Camp Sawaliya Ji Chittor
12. VD Camp RNT PG College, Kapasan, Chittor
13. VD Camp Mercy League, Sanatan Mandir, Udaipur
14. VD Camp Officer's Training Center, Udaipur
15. VD Camp Dangi Samaj, Kaladwas
16. VD Camp, Salambar
17. VD Camp Samor Bagh, Caterer's Association, Udaipur
18. VD Camp MMRSMS, RNT Medical College, Udaipur
19. VD Camp D. P. Jewellers, Udaipur

Operational definitions

Assess

In this study, it refers the way of finding the level of knowledge and attitude about blood donation in donors.

Knowledge

In the study, it refers to the correct responses of donors regarding voluntary donation of blood.

Attitude

In this study, it refers to the expressed positive, negative or neutral views of donors regarding blood donation.

Blood donation

In this study, it refers to offering one's own blood voluntarily.

Research variables

Research variable- Knowledge and attitude of the sample.

Ethical considerations

The study involved human subjects aged 18 years and over hence ethical consideration was pertinent. Written consent was also sought from each respondent. The respondents were expected to willingly participate in the study and they were given all information about the study in order to make an informed decision about participating or not.

Study limitations

For those who had donated blood before, there was difficulty in recalling the pre-donation questions hence difficulty in grading them. This may have led to some recall bias.

RESULTS AND CONCLUSION

The present study was conducted on voluntary blood donors and non donors attending blood donation camps outdoor and indoor of MBGH Blood bank, Dept. of Transfusion Medicine, R.N.T. Medical College, Udaipur during January 2017 to January 2018. Our findings are summarized as follows:

- There was a higher proportion of males (86.18%; 393) compared to females (13.82%; 63).
- Majority of the respondents (53.07%; 242) were aged 18–27 years with a small proportion (5.92%; 27) aged 48 years or more.
- Maximum 62.94% of respondents were educated, either college or university level, 23.03% had elementary education and 14.04% were educated up to high school.

- Maximum respondents were students (33.55%), followed by businessmen (19.96%), office worker (service) 8.55%, labourers (4.61%) etc.
- 61.40% had knowledge regarding blood transfusion needed in their circle of friends, colleagues, family and neighbours.
- 47.81% didn't know about blood donation drive near their residence, workplace, or in a place which they go to regularly in last three months.
- Only 10.31% felt that their health was bad or average for donating blood. 50.22% of respondents didn't know any reason for refusing a blood donor. 49.78% knew one or more reasons for refusing a blood donor.
- 87.28% intended to give blood during next 6 months. Only 12.72% were unwilling to do so. 86.84% had felt that their blood donation would help to save someone's life.
- 45.83% feared that they would expose themselves to catching a disease. 54.17% felt that it is safe to donate blood and they wouldn't catch any infection while donating blood.
- 76.54% respondents wanted to donate blood so that it would help avoid blood shortages. 75.44% of respondents were willing to donate blood, if they knew that blood supplies were low.
- 24.56% were willing to donate blood on their ease.
- 82.6% thought that blood donation would allow them to renew their blood and make them feel younger.
- 50.44% felt that blood donation will have no effect on their health. 49.56% had myth that blood donation could cause them health problems.
- 82.46% thought that blood donation would be a gesture of generosity towards those in need. 74.12% had a feeling that they will donate blood for the people who are most important to them in next six months. 25.88% people felt that their blood can be used for anyone needy. People very seldom think about generously donating blood, 63.38% agrees to this fact. Only 36.62% thought about donating blood otherwise.
- 54.61% of people felt that they will not donate blood for any reward such as money, cinema tickets etc. 45.39% had a feeling to get some reward for donating blood.
- 76% people knew that others give blood and for blood donation gender is not a barrier. 83.99% of respondents were aware about the age group who can donate blood. 82.24% believed it is appropriate for a person in their state of health to donate blood.
- 69.08% persons felt that for them being a blood donor means more than just donating blood. 72.59% of respondents wanted to know how their blood was going to be used, than they would have liked to donate blood. 86.84% of respondents would feel pride in donating blood in the near future. They were optimistic in giving blood to needy if required.
- 71.71% respondents agree to donate blood even though the blood donation place is far off from their residence or work place. Distance mattered for only 28.29% of donors.
- 66% were mentally strong enough of not afraid of needles, i.e. needle wouldn't frighten them. 34.43% were afraid of needles. Females were statistically more afraid of needle prick than males ($p < 0.05$).

- 63% of respondents were unmarried, 34% were married and only 3% of them were divorced/ separated or widowed.
- 93.42% knew their blood groups. In our region maximum number of donors (27.85%) were of the 'O +ve' blood group, followed by (24.56%) 'B +ve'. There rarest blood group was AB -ve (1.54%).
- 72.15% had once or more donated blood in their life time. Still there were quite a large number (27.85%) of population who had never given blood, who needs to be addressed, of them females were more in number.
- 68% of respondents felt that blood donation is altruistic whereas 32.24% felt it is not.
- 80% of respondents felt that their blood donation would encourage others to donate. Females felt statistically significant more that their blood donation will encourage others than males ($p < 0.001$).
- 67.11% thought that giving blood would be acting according to their moral values. Females felt that they were more morally bound to give blood than males ($p < 0.05$). 62.06% felt that it's their religious duty as well to donate blood. Rather many of them (82.89%) felt that it is their national duty to donate blood, and participate in blood donation camps.
- 66.67% replied that they would like to donate blood if given leave from work, whereas 33.33% felt that they don't require a leave from their regular work as donating blood would not hamper to their health.
- 75.44% belief that a laboratory test performed on the donated blood may help them to evaluate their health, i.e. information regarding infectious diseases, if any.
- 69.74% replied correctly, they knew the minimum age of blood donation, but still 30.26% were unaware of the fact, who are required to be educated.
- For reason not donating blood in the past, 28.73% replied that they had a fear of acquiring anemia by donating blood followed by 25.88% had lack of knowledge about blood donation, 18.64% had fear of fainting /poor health, 11.18% had fear of needle pain etc. Only 1.97% feared of contaminated needle.
- 95.18% had positive attitude towards the questionnaire asked before donation. 89.69% had the view that the questions asked are clear and easy to understand. People generally (90.13%) had the feeling that they always tell the whole truth when answering these questions.
- Majority of donors have donated blood 2 to 3 times in the last 12 months. Still there are lot many people to be convinced (40.79%) to donate blood and to make them regular donors.
- In our study 28.73% respondents had fear of acquiring anemia by donating blood. Of the non donors 29.13% had this fear and 28.57% amongst the first time donors felt the same. 25.98% of non donors felt fear of fainting/ poor health as the main reasons for non donation of blood. Even 28.88% respondents who had
- Donated blood for first time responded that they had lack of knowledge about blood donation. People need to be educated and motivated at large towards blood donation.
- 43.16% of respondents who donated blood were educated upto college level and 50.39% of non blood donors had elementary or upto high school education

level. The difference in opinion regarding blood donation between never ever blood donated respondent and previously blood donated respondent educational level was statistically highly significant ($p < 0.001$).

- Youngsters and new donors of the age group 18-27 were high in both donors and not ever donated blood groups. There were none respondent above the age of 47 years who had not donated blood in his/her lifetime ($p < 0.05$).
- Out of people who didn't ever donated blood, maximum had good to excellent health conditions (83.46%), which was statistically significant ($p < 0.05$).
- Respondents either who donated or didn't donated blood were interested in small rewards or appreciation towards their voluntary blood donation.
- Majority of people (66.67%) had an attitude that they should be given a leave from their work on the day of blood donation. People need to be educated and motivated towards blood donation. There are still lot many misconceptions and disbeliefs in people regarding voluntary and replacement blood donations.

The study showed that most of the blood donors were young within the age group of 18-37 years. The main motivating factors to donate blood amongst previous blood donors were to help a friend or relative in need and because it was the right thing to do. The main reason for not donating blood amongst those who had never donated was reluctance to donate and recognition to donate. Majority were of ignorance/lack of knowledge about blood donation were the biggest barriers to donation of blood. A clean, warm and welcoming blood donation site encourages voluntary blood donors. Most respondents suggested that public education through increasing awareness and marketing 'Voluntary blood donation' can enhance adequacy of blood needs of a state or for that matter the entire country.

Recommendations

1. There is need for more public awareness steps involved in blood donation so as to remove unfounded fears (fear of getting a disease through contaminated needles, fear of getting one's HIV status checked, getting anemic etc.).
2. There is need for regular studies on blood donation practices in various parts of the country so as to be able to formulate comprehensive policies as other regions may have differing reasons for donation or non-donation of blood.
3. There is need to target other groups of donors apart from students, such as NGO's, industries, social organizations, so as to enlarge the blood donor pool.
4. There is a need for more awareness among women so as to raise their contribution towards blood donation.

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