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Voluntary Blood Donation: Attitude and Practice among Indian Adults

Verma S, Sharma RK*, Sharma M and Pugazhendi S

Department of Nursing, Swami Rama Himalayan University, Dehradun, India

***Corresponding author:** Rajesh Kumar Sharma, M.Sc. Nursing, Assistant Professor, Department of Nursing, Himalayan College of Nursing, Swami Rama Himalayan University, Swami Rama Nagar, P.O. Jollygrant, Dehradun, Uttarakhand-248140, India, Tel: 919927467464; E-mail: rajeshsharma.hcn@gmail.com

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Abstract

Background: Human blood is universally recognized as the most precious and essential element of human life. The collection of blood from voluntary, non-remunerated blood donors is an important measure for ensuring the availability and safety of blood transfusion. Adequate and safe blood supply is a demanding challenge in developing countries like India. Every year, state like Uttarakhand which is visited by lakhs of visitors during pilgrimage season and where natural calamities and accidents are very common, the availability of blood is of utmost importance.

Material and Method: A quantitative approach with exploratory descriptive research design was undertaken on 198 adults by convenient sampling technique to assess the attitude and practice of adult population regarding voluntary blood donation. Attitude scale and practice checklist were used as data collection tool.

Results: Result of the study shows that half of adult participants were between the age group of 18 to 29 years. More than half of the samples were females (55.1%) and majority (72.7%) of them were Hindus. Students (15.7%) and homemakers (32.3%) constituted half of the study participants. There was a statistically significant association (p=0.021) of age and attitude at the significant level of p=0.05.

Conclusion: Voluntary blood donation was lacking among adult population. There was a gross difference between attitude and practice regarding blood donation. Factors associated not donation of blood were fear, pain related to needle prick, hesitation, anemia, beliefs, custom and weakness after donating. The study concluded that there is need of community awareness programs to motivate the general public for voluntary blood donation.

Keywords: Voluntary blood donation; Adults; Attitude and practice

Introduction

Human blood is an essential component of human life which is universally recognized as the most precious element that sustains life and there are no substitutes to blood as yet. Availability of safe blood and blood products is a critical aspect in improving health care [1]. A blood transfusion saves millions of lives each year, but adequate and safe blood supply is a demanding challenge in developing countries like India. Hence World Health Organization (WHO) has adopted a policy aimed at 100% voluntary donor blood procurement by the year 2020 [2]. Worldwide the total blood donations have been 92 million units including all types of blood groups and of them 45 percent donors were under 25 years and 40 per cent or more of the blood had come from women in 25 countries [3].

In India, however, only six per cent women donated blood in 2011. Every year, our nation requires about four crore units of blood, out of which only a meager 40 Lakh units of blood are available. A nation can meet all its need for blood if only one percentage to three percentage of its eligible population donate blood. India on an average has 50% of eligible donors [4]. The need for blood is growing day by day as a result of advancement in the clinical medicine as in most developing countries family donors and paid donors are still significant source of blood component for transfusion.

The shortage of safe blood impacts thalassemia patients, victims of road traffic accidents and trauma, women with complicated pregnancy, cancer patients and those undergoing major scheduled surgeries [5]. Many people in developing countries are facing problem with ignorance, misperceptions and fears about the blood donation process, which result in a limited number of voluntary donors. This study was therefore conducted with an aim to find out attitude and practices of people towards voluntary blood donation to comprehend the situation and find ways to enhance voluntary blood donation in the state of Uttarakhand.

Problem statement

Exploratory study on attitude and practice of adult population regarding voluntary blood donation in selected community areas of Dehradun, India.

Objective of Study

To assess an attitude and practice of adult population regarding voluntary blood donation in selected community areas of Dehradun.

To find out the association between the adult attitude and practice of adult population with selected demographic variables.

Materials and Method

A quantitative approach with exploratory descriptive research design was undertaken on 198 adults by Convenient Sampling technique to assess the attitude and practice of adult population regarding voluntary blood donation in rural community setting of Dehradun district, Uttarakhand. Tools which were used to collect data were as follow:

Socio-demographic performa

Attitude scale: The scale for the measurement of attitude towards blood donation was having 24 items under 5 sections. It was a 4 point likert scale.

Practice checklist: Checklist with 10 questions was developed to assess the practice of participants.

After obtaining approval from research committee and ethical committee, administrative permission was obtained from Principal, Himalayan College of Nursing, Dehradun, Informed written consent was obtained from all participants prior to data collection. The collected data were organized, tabulated, analyzed with SPSS version 20 and interpreted using descriptive and inferential statistics. The findings were organized with in the tables mentioned below.

Results

Demographic characteristics of adult participants

Table 1 depicts that half of the participants were in age group of 18-29 years and 55.05% were female. Majority participants were educated. Majority (72.7%) participants were hindu and married (59.1%). Majority of participants were homemaker (32.3%) and self-employed (28.3%). All participants were familiar regarding blood donation and getting information from television (41.9%), relatives (23.2%) and friends (22.7%).

Sample characteristics	Frequency (f)	Percentage (%)
Age in years		
18-29	101	51
30-39	49	24.7
40-49	32	16.2
50-60	16	8.1
Gender		
Male	89	44.94
Female	109	55.05
Educational qualification		
Never attended school	20	10.1
Primary school	51	25.8
Higher secondary	40	20.2
Intermediate	38	19.2
Graduate	41	20.7
Postgraduate	08	04
Religion		
Hindu	144	72.7
Muslim	37	18.7
Sikh	09	4.5
Christian	08	04
Marital status		
Married	117	59.1
Never married	81	40.9
Occupation		
Student	31	15.7
Homemaker	64	32.3
Self-employed	56	28.3
Business	19	9.6
Professional	21	10.6
Government service	07	03.5
Familiar to blood donation		
Yes	198	100
Source of information about blood donation		
Friends	45	22.7
Relatives	46	23.2
Television	83	41.9
Newspaper	06	3
Hoarding	18	9.1

Table 1: Frequency and percentage distribution of personal variables of adult participants (N=198).

Attitude regarding voluntary blood donation among the adult participants

Respondent expressed positive attitude regarding voluntary blood donation. The qualitative analysis of data pertaining to attitude was done under the sub categories

Table 2 depicts that the highly motivating factor for donating blood was stated as important for saving life (96.7%), voluntary blood donation prevent shortage of blood in blood banks (94.4%), voluntary blood donation is safe (91.9%) followed by donating blood gives proud feeling (72.3%) and nearby 65% of study participants feels that blood donation is a good way to express gratitude toward community.

Factors	Strongly agree	Agree	Disagree	Strongly disagree
I feel, donating blood is very important for saving life.	68.70	28.80	2.50	0.00
Voluntary blood donation would prevent shortage of blood in blood banks.	42.40	52.00	5.60	0.00
Blood donation is safe.	35.90	56.60	5.50	2.00
Blood should be donated as there is no substitute of human blood.	40.40	51.50	7.10	1.00
Blood donation gives me proud feeling.	27.30	45.50	20.70	6.50
Blood donation is a good way to express gratitude toward my community.	15.20	49.50	31.30	4.00

Table 2: Motivating factor (N=198).

Factors	Strongly agree (%)	Agree (%)	Disagree (%)	Strongly disagree (%)
Blood donation would allow me to renew my blood.	35.4	48.5	14.1	2
Blood donation improves blood circulation.	31.3	48.5	17.7	2.5
Blood donation makes me feel weak and tired.	16.7	24.2	44.4	14.7
Blood donation would expose me to infectious diseases	9.1	17.2	52.5	21.2

Table 3: Blood donation effect on health.

Table 3 has been observed that nearby 80% agreed that blood donation would allow renewal of blood and improve blood circulation. It was interesting to note that very negligible percentage (6.6%) adult felt that blood donation was harmful to the donors. About 40% agreed that the blood donation make them feel weak and tired, nearly 25% of respondent agreed that blood donation would expose them to infectious diseases and it would be harmful to the blood donor.

Factors	Strongly agree (%)	Agree (%)	Disagree (%)	Strongly disagree (%)
I shall donate blood as, I am medically fit.	28.8	47	19.7	4.5
Blood should be donated as, it provide free medical check-up.	21.7	50.5	20.2	7.6
I will donate blood, if called upon to donate blood.	15.2	45.5	33.2	6.1

Table 4: Willingness to donate blood.

Table 4 shows that the approximately 70% participants will consider that they should donate blood as they are medically fit and if they were provided with free medical checkup. Nearby 40% of study participants consider as future prospects that they will donate blood if they were called upon to donate blood.

Factors	Strongly Agree(%)	Agree(%)	Disagree(%)	Strongly disagree(%)
I am frightened to see blood removal site.	9.10	16.20	54	20.70
Blood donation is a lengthy procedure	8.10	18.70	60.60	12.60
I hesitate to donate blood because, I afraid that others will get to know my blood investigation results.	8.10	17.20	59.10	15.60
I am having fear of needle pricks.	18.70	23.70	34.90	22.70

I have less amount of blood so, I will not donate blood	14.60	19.70	51	14.70

Table 5: Reason for not donating blood.

Table 5 Illustrates that respondents mentioned fear of needle pricks (42.40%), as a reason for unwillingness to donate blood a considerable percentage of adults (34.30%) felt that they had less amount of blood and (25.30%) hesitation as the most common reason expressed for not-donating blood.

Factors	Strongly agree	Agree	Disagree	Strongly disagree
Blood donation should be done by unmarried people only.	1.50	6.10	47.50	44.90
Blood donation should be done when own relatives need it.	7.50	8.10	45.50	38.90
Blood donation should not be done by females.	7.10	12.10	44.90	35.90
Blood donor should be paid money for blood donation.	5.10	13.10	39.40	32.30
Old person should not donate blood.	23.20	23.70	34.30	18.80

Table 6: Opinions of people.

Table 6 depicts that 90% of participants disagreed that blood donation should be done by unmarried people only and it should be done when own relatives needed it. Nearby 20% of study participant agreed that blood donation should not be done by females and person should be paid for it. Nearly half (46.90%) of participants favored that old person should not donate blood.

Difference between attitude and practice regarding blood donation

Table 7 depicts that only 12.1% adult participants had donated blood, among them only 25% donated blood voluntary. 58.3% participants had donated blood within last 3 years. Only 20.8% adult participants had donated blood in camp and rest of in institutions or in hospitals.

Item	Frequency	Percentage (%)
Blood donation practice		
Yes	24	12.1
No	174	87.9
Circumstances leading to blood donation		
Voluntary	06	25
Paid	08	33.3
Replacement	10	41.7
Last time respondent donated Blood		
≤ 3 years	14	58.3
>3 years	10	41.7
Area for blood donation		
Camp	05	20.8
Well known Institute/Hospital	19	79.2

Table 7: Practice regarding Voluntary Blood Donation among the adult participants (N=24).

S.NO	Demographic variable	N	Mean	SD	Calculated value	P value
1	Age					
	18-29	100	73.16	7.79	F=3.304	0.021
	30-39	49	74.44	8.39		
	40-49	32	72.53	8.26		
	50-60	17	79.35	7.54		
2	Gender					

	Male	89	74.33	8.7	t=0.667	0.505
	Female	109	73.55	7.6		
3	Marital status					
	Married	117	74.22	8.05	t=0.649	0.517
	Never married	81	73.45	8.29		
4	Educational status					
	Never attended school	20	74.25	6.65	F=1.658	0.147
	Primary	51	72.92	9.52		
	Higher secondary	40	73.37	7.59		
	Intermediate	38	72.60	8.96		
	Graduate	41	75.82	6.82		
	Postgraduate	08	78.37	4.89		
5	Religion					
	Hindu	144	74.02	8.02	F=2.293	0.079
	Muslim	37	71.67	9.11		
	Sikh	09	77.66	6.96		
6	Occupation					
	student	31	73.64	8.14	F=1.335	0.147
	Homemaker	64	73.32	7.15		
	Self-employed	56	72.41	9.04		
	Business	19	75.68	7.46		
	professional	21	77.57	6.11		
	Government	07	76.57	7.20		

Table 8: Association between the attitude score of adult participants with selected socio demographic variables (N=198).

Table 8 depicts that age of respondents was statistically significant and had association with attitude scores i.e. ($p=0.021$ i.e. $p<0.05$) and remaining other variables (gender, marital status, educational status, religion, and occupational) were not significantly associated with attitude score. Practice score were not associated with any demographic variables. One way ANOVA, Independent t-test and Mann Whitney U test was performed to find out the association between attitude and practice scores and selected demographic variables. Therefore it was found that only the age was significantly associated with the attitude score of participants.

Discussion

The purpose of the study was to explore attitude and practice of adults regarding voluntary blood donation in selected community areas of Dehradun.

On analyzing data, it was seen that, factors such as feeling of weakness after donating blood, fear about needle pricks, anemia, prevalent beliefs, customs, lifestyle fear and hesitation were some of the reasons for lack of participation in blood donation. In a similar study conducted by Singh et al. in India, among the residents of a slum area, the most common reason for not donating blood was the perception of a harmful effect of donation on the body (50%) and 25% said that they had never felt a reason to give blood [6].

In present study, the major influential source was television (41.9%) followed by interaction with relatives (23.2%) to donate blood. As per reviews it was seen that mass media played a crucial role in motivating people to donate blood. In a similar study conducted by Dubey et al. it was found that television (45.2%) was found to be most influential medium in encouraging people to give blood [7].

In present study it was found that people will donate blood, if called upon to donate (75.8%) and also if provided with free medical checkup. A similar research done in Lithuania showed that people donated their blood if they received a call to do it, were informed of somebody's vital need for their blood, wish to test their health condition or get some earnings [8].

Conclusion

Based on the finding of the study, it is concluded that voluntary blood donation was lacking among adult population. Majority (87.9%) had not donated blood, factors contribute to non-donation of blood was fear, pain related to needle prick, hesitation, anemia, beliefs, custom and weakness after donating blood. The findings highlight the need to improve communication and awareness on blood donation in society.

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