

Socio-Demographic Factors Affecting Knowledge, Attitude and Practice towards Blood Donation among University Students in Lahore, Pakistan

AYESHA GHULAM RASOOL¹, NAZ SAUD², ASIFA KAMAL³, NAILA AMJAD⁴, NOOR SHAHID⁵, MASOOD NIZAM TABASSUM⁶

¹Student, Department of Statistics, Lahore College for Women University

²Assistant Professor, Department of Statistics, Lahore College for Women University

³Associate Professor, Department of Statistics, Lahore College for Women University

⁴Assistant Professor, Department of Statistics, Lahore College for Women University

⁵Research Analyst, Curiato Inc.

⁶Professor, Department of Community Medicine, Avicenna Medical & Dental College Lahore

Correspond to Dr. Masood Nizam Tabassum, Email; drmntabassumcm@gmail.com, Phone # 92333 4218380

ABSTRACT

Aim: To grasp the knowledge of blood donation among university students, their attitude and practice of donating blood.

Methodology: The cross-sectional study was conducted in private and public sector universities in Lahore, Pakistan from 16th February 2018 to 15th August 2018. The target population was students enrolled in universities. The Sample size comprises of 470 students. Two stage cluster sampling was applied to attain the required sample size. Bivariate Logistic Regression is applied to attain the factors associated with knowledge, attitude and practice towards blood donation. In order to obtain the practice rate of blood donation, several practice questions were asked.

Results: Total males were 42.1% and females were 57.9% in the study. In this study total blood donation rate was 27.7%. Among the total students 72.1% had proper knowledge for blood donation while 67.9 % had good attitude for blood donation. Statistically insignificant association were observed between knowledge and practice ($\chi^2=2.42$, p-value=0.135). Marital status showed the most significant effect on knowledge, attitude and practice.

Conclusion: Insignificant association exists between knowledge and practice. Significant effect of marital status, gender and age is established on knowledge about blood donation. Marital status and age have significant effect on attitude towards blood donation. Marital status, gender and residential area are observed to be statistically significant for blood donation practice.

Keywords: Attitude, Blood donation, knowledge

INTRODUCTION

Blood is precious, life-sustaining liquid that is important component of human body. Body cells are unable to attain the sufficient oxygen and other nutrients which are necessary for survival without adequate quantity of blood. Donating blood is a way to subscribe in making someone's health better. In health organizations, blood transfusion is considered as central facility and it help in saving many lives every day. It is an important component in health care providing systems¹. It is also used in improved surgical and expended medical processes. Blood requirement is increasing all around the world due to the development in clinical sciences. WHO 2010 stated serious medical issues rose to those who could not get the blood due to unavailability in emergencies. Safety issues, insufficient knowledge and poor behavior regarding blood donation are main factors those discourage people for donating blood².

Past literature describe different forms of blood donation. "Voluntary Non Remunerated Donors (VNRD)" is the most appropriate donors³. There is 57 successful countries from 2009 as they get 100% VNRD. With the advancement in last few years, VNRD has doubled its ratio. There are 52 countries that are successful because their

25% of the blood donation is from VNRD. Number of VNRD can be increased by providing adequate knowledge about blood donation, motivation and recruitment plan⁴. Safe blood is the requirement of all the time. People who suffered from serious medical or accidental issues, or military operations, social conflicts need safe blood. In addition, patient suffering from anemia require safe blood transfusion⁵.

Blood transfusion centers tries to promote awareness of blood donation. The first step is to create awareness among people towards blood donation. A recent study on blood donation illustrate that Youth can be a probable part in donating blood and students comprises a large proportion of it.⁵ Students can be a better way of getting safe blood. And the rate of blood donation in a barter system is not much appreciated. People usually have negative attitude towards paid blood donation⁶. In a study 32% of the students favored paid blood donation⁷.

There are 66% of the respondents who felt that the respective donor must be rewarded⁸. Therefore it is necessary to have an idea about blood donation in terms of practice, attitude and knowledge. Since these aspects play a key role in health care.

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MATERIAL AND METHODS

The cross-sectional study was conducted in private and public sector universities in Lahore, Pakistan from 16th February 2018 to 15th August 2018. The target population was students enrolled in universities. The Sample size comprises of 470 students. Two stage cluster sampling was applied to attain the required sample size. Universities were taken at first stage and students belonging to different universities were taken at second stage.

A questionnaire on the basis of past literature was developed. Questionnaire was pre-tested to determine its reliability. Questionnaire comprised of socio-demographic information such as marital status, gender, residential area, age, job status and educational level along with 23 questions about motivation towards blood donation. The dependent variable was knowledge, attitude and practice while age, gender, residential area, degree level, marital status and job status were taken as potential predictors.

First of all, six general questions were asked to assess the knowledge of blood donation from each respondent. Each response were rated as 0 for "No" and 1 for "Yes". The cumulative score for each subject lies in 0 to 6. Subjects with score greater than 3 were considered to have good knowledge while with scores less or equal to 3 were considered to have poor knowledge. Three questions were asked to check the attitude which was related to reasons and motivations for donating blood. Here the cumulative score for each subject lies in 0 to 3. Subjects with score (2-3) were considered to have good attitude while subjects with score (0-1) were considered to have poor attitude regarding blood donation.

Fisher's exact chi-square test is applied to test the association between knowledge and practice. Bivariate Logistic Regression is applied to attain the factors associated with knowledge, attitude and practice towards blood donation. In order to obtain the practice rate of blood donation, several practice questions were asked. Practice was assessed by considering total number of blood donations such as never or more than once.

RESULTS

Total 470 students were present in the study. Among those 198 were males and 272 were female. Age group (22-25) showed higher adequate knowledge. Single students and

those who lived in urban areas had enough knowledge of blood donation. From the total sample, 67.9% students were considered to have positive attitude towards blood donation. The age group (34 and above) showed poor attitude which means that elders are less likely towards blood donation. Males were observed to have proper knowledge and positive attitude but blood donation is less practiced. Adequate knowledge and good attitude was common in single students. Single students were fewer practitioners towards blood donation. The percentage of married people for blood donation is satisfactory. In the study 202 students were employed and 268 were unemployed. Employed students showed good knowledge and practice of blood donation. Students belonging to urban areas were observed to have adequate knowledge while the students from rural areas showed good attitude and practice towards blood donation (Table 1).

Chi-square test of association was used to test the association between knowledge and practice. There was statistically insignificant association exists between knowledge and practice ($\chi^2 = 2.42$, p-value=0.135). A bivariate logistic regression demonstrate that marital status and age being the significant factors for knowledge of blood donation whereas degree level, gender and job status had no significant effect on having knowledge about blood donation. The students in different age group were more likely to have enough knowledge of blood donation than in students of age group (34 or above). Single students showed more knowledge as compared to married students about blood donation (OR=2.674, p-value=0.000). Significant effect of age, gender and marital status appeared on attitude while degree, residential area and job status showed insignificance. Male students had more probability of having good attitude than female students (OR=1.619, p-value=0.035). Single students had good attitude than married students (OR= 1.685, p-value=0.023). Gender, marital status and residential area had significant effect on practice whereas age, degree and job status showed insignificant effect. Male Students were more participating in donating blood as compared to female one (OR=2.351, p-value=0.000). Participation of single students as compared to married one was observe to be less likely in blood donations (OR= 0.339, p-value=0.000). Students came to rural area are observed to be more participating in donating blood (OR=1.211, p-value=0.048).

Table 1: Percentage Distribution of Knowledge, Attitude and practice & Socio--Demographic Factors:

Variables	Category	knowledge		Attitude		Practice	
		Good	Poor	Good	Poor	Yes	No
Age	18-21	66.31%	33.64%	60.28%	39.71%	24.29%	75.7% 4
	22-25	80.10%	19.89%	79.03%	20.96%	29.56%	70.43%
	26-29	72.34%	23.40%	68.08%	27.65%	33.33%	66.66%
	30-33	69.23%	30.76%	46.15%	53.84%	30.76%	69.23%
	34 & above	41.6%	58.3%	41.6%	58.3%	33.33%	66.66%
Gender	Male	72.70%	27.27%	73.73%	26.26%	39.89%	60.10%
	Female	71.69%	28.30%	63.60%	36.39%	18.75%	81.25%
Degree	BS	69.15%	30.84%	66.44%	33.55%	28.13%	71.86%
	MS	79.47%	20.52%	72.18%	27.81%	25.82%	74.17%
	PhD	62.5%	37.5%	58.33%	41.66%	33.33%	66.66%
Marital	Single	79.57%	20.42%	71.47%	28.52%	19.01%	80.98%
	Married	60.75%	39.2%	62.36%	37.63%	40.86%	59.13%
Residential	Rural	68.76%	31.3%	69.87%	30.12%	34.93%	65.06%
	Urban	74.01%	25.98%	66.77%	33.22%	23.68%	76.31%
Job	Employed	74.25%	25.7%	66.33%	33.66%	28.71%	71.28%
	Un-Employed	70.52%	29.47%	69.03%	30.97%	26.86%	73.13%

Table 2: P-value and odd ratio by applying Logistic Regression Model for Knowledge, Attitude and Practice:

Variables	Knowledge			Attitude			Practice		
	p-value	Odd ratio	CI 90%	p-value	Odd ratio	CI 90%	p-value	Odd ratio	CI 90%
Age									
18-21	0.220	3.338	0.664-16.785	0.179	3.578	0.743-19.018	0.913	0.901	0.190-4.285
22-25	0.055	6.380	1.299-31.338	0.019	9.846	1.991-48.684	0.939	1.073	0.232-4.966
26-29	0.087	5.101	1.067-24.380	0.066	5.800	1.204-27.950	0.903	0.895	0.202-3.977
30-33	0.119	4.245	0.924-19.496	0.541	1.721	0.400-7.406	0.856	0.846	0.187-3.835
Gender									
Male	0.357	1.244	0.843-1.836	0.035	1.619	1.111-2.360	0.000	2.351	1.604-3.446
Degree									
BS	0.318	0.442	0.115-1.696	0.349	0.467	0.122-1.781	0.447	1.769	0.515-6.071
MS	0.426	0.528	0.141-0.1975	0.233	0.386	0.104-1.435	0.555	1.544	0.460-5.187
Marital status									
Single	0.000	2.674	1.817-3.935	0.023	1.685	1.155-2.457	0.000	0.399	0.272-0.586
Area									
Rural	0.428	0.837	0.578-1.211	0.386	1.211	0.842-1.743	0.048	1.566	1.078-2.273
Employed									
Employed	0.673	1.097	0.764-1.567	0.448	0.853	0.605-1.204	0.266	1.282	0.888-1.849

DISCUSSION

The study is conducted to explore the significant factors associated with knowledge, attitude and practice towards blood donation. To check whether there is any association between knowledge and practice. For this purpose, a cross-sectional study was carried out. Data were collected through questionnaire from universities in Lahore, Pakistan. In order to determine the significant factor, binary logistics regression is suitable choice because the dependent variables are of binary nature. Results demonstrated that 72.1% students had appropriate knowledge. We observed good attitude of students towards blood donation. . The rate of positive attitude towards blood donation was quite satisfactory. The rate of willingness for blood donation among general population was observed to be 46%.⁹ Male participants showed good knowledge, positive attitude and higher practice towards blood donation.^{3,10} Male donors were more likely to appear to donate blood with the reason that there is no need of female donor when male donor is available and female should donate blood only when no male donor is in accessible and female having a close relationship with the patient.¹¹ In the past literature a study revealed that blood donation rate was higher among women.^{2,12} Significant factors for knowledge, attitude and practice are marital status and age. Gender and residential area is significant factor for attitude and practice of blood donation. It is concluded that good knowledge and attitude does not mean good practice. So to make the practice of blood donation more common it is important to conduct the necessary campaign.¹³ These campaigns enhance the opportunity for donating blood.¹⁴ In conclusion good knowledge and attitude does not lead to good practice so we need to conduct blood donation companions to encourage blood donation. It was found in the literature that attitude is significantly associated with age of the respondent.¹⁵ Knowledge about the age of donating blood was also a vital actor.¹³ Degree shows no significant effect on attitude. The findings were supported by a research conducted in Serbia where attitude of blood donation of students in first and last year is same.¹⁶

CONCLUSION

Results indicated that male students had positive attitude for donating blood as compared to female students. Males were considered as more likely to donate blood. Married students donated more blood than single students. Marital status and age were the significant factors for knowledge of blood donation. Marital status and gender showed significant effect on the attitude towards donating blood. Gender, marital status and residential area had significant effect on practice. Students belonging to rural areas showed good attitude and practice towards blood donation. It is concluded that knowledge about blood donation does not ensure practice of donating blood.

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