

ORIGINAL ARTICLE

Blood Donation - Are We Willing? - a Cross-Sectional Study Among Dental Students

Dolar Doshi¹, P. Karunakar², D. Satyanarayana¹, B. Srikanth Reddy¹

¹ Department of Public Health Dentistry, Panineeya Institute of Dental Sciences and Hospital, Hyderabad, Telangana, India

² Department of Conservative Dentistry & Endodontics, Panineeya Institute of Dental Sciences and Hospital, Hyderabad, Telangana, India

SUMMARY

Background: To assess the knowledge, attitude, and practice towards blood donation among a cohort of dental students.

Methods: This cross-sectional study included all the undergraduate and post-graduate dental students of Panineeya Institute of Dental Sciences and Hospital. A self-administered questionnaire comprised of four parts. The first part gathered socio-demographic data. The subsequent parts consisted of 11-knowledge questions (K1-11), 11-attitude questions (A1-11), and the fourth part evaluated the practice of blood donation (P1-11). $p < 0.05$ was considered statistically significant.

Results: Around 63.7% responded correctly to the question that blood donation causes transmission of infection to the donor with the use of infected needles (K5), whereas only 3.8% knew that anemics, diabetics, hypertensives, and pregnant women cannot donate blood (K9). Most of the participants had positive attitudes towards blood donation except that only 23.7% thought it is not a religious duty (A5). Overall, when the practice regarding blood donation was asked, the majority of the participants (78.2%) had never donated blood, which was significant based on gender and year of study ($p = 0.0001$). The mean percentage of correct knowledge was significantly higher in males (24.52 ± 14.01 ; $p = 0.03$) but surprisingly a more positive attitude towards blood donation was seen among females (76.25 ± 18.27 ; $p = 0.0007$). Likewise, based on the year of study, a significant difference was observed for correct knowledge and positive attitude.

Conclusions: The present study reveals less than satisfactory blood donation practice among dental students and highlights the need for educational programs.

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Correspondence:

Dolar Doshi
Department of Public Health Dentistry
Panineeya Institute of Dental Sciences and
Research Centre
Road No. 5, Kamala Nagar
Dilsukhnagar
Hyderabad - 500060
Telangana (State)
India
Phone: +91 998 5217700
Fax: +91 40-24045037
Email: doshidolar@yahoo.com

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INTRODUCTION

Every year, June 14th is celebrated as 'World Blood Donors Day' highlighting the need for blood donations. With demand of blood and blood by-products growing constantly, equitable access to safe blood has been a continuous challenge for all health care systems. The only source of adequate supply of blood is through regular blood donation. Donors have been recognized as voluntary unpaid, family/replacement donors, and paid donors. Of these, the stable base for reliable supply of

safe blood is formed by voluntary unpaid donors. Also, the World Health Organisation (WHO) has pledged to procure all blood supplies from voluntary unpaid donors by 2020 [1].

Globally, an increase of 8.6 million blood donations from voluntary unpaid donors from 2004 to 2012 has been reported by 162 countries [1]. According to the WHO fact sheet, India has witnessed the greatest increase in the number of voluntary blood donors from 3.6 million in 2007 to 4.6 million in 2008. Out of 5,761,635 blood units collected in India, 84% was through voluntary donations in 2013 - 14. In the twin states of Telangana and Andhra Pradesh, 85% of the blood units collected was by voluntary blood donations [2].

Exploring the level of awareness plays a vital role in recruiting new voluntary donors and retention of regular donors. Literature review has shown deficient knowledge, diverse attitudes, and countless myths about blood donations among different sections of population [3-8] which can act as a source of obstacles for voluntary donors. Keeping this in mind, the present research focused on assessing the knowledge, attitude, and practice towards blood donation among a cohort of dental students who could potentially qualify and be motivated as regular voluntary blood donors.

MATERIALS AND METHODS

This study was approved by the Ethical Committee of the Institutional Review Board of Panineeya Institute of Dental Sciences & Hospital, Hyderabad (PMVIDS &RC/IEC/PHD/PR/0045-15). Participation of dental students was voluntary and completion of questionnaire signified informed consent. The study was conducted in full accordance with the World Medical Association Declaration of Helsinki. This cross-sectional study included all the undergraduate and post-graduate dental students of the institute present on the day of survey. A self-administered questionnaire based on review of literature [6,7,9] which was pilot-tested and validity was calculated. The questionnaire comprised four parts (Table 1 and 2). The first part gathered socio-demographic data such as age, gender, year of study, and religion. The second part consisted of 11 knowledge questions on blood donation. The responses to these questions were either Yes, No, or Don't Know. Each correct knowledge score was rated as one and incorrect answers as zero. The third part assessed the participants attitude towards blood donation. The eleven questions could be responded to with either Agree or Disagree. Each positive attitude was scored one and negative as zero. The fourth part evaluated the practice and frequency of blood donation among the participants. The possible reasons for not donating blood were drafted in the form of eleven questions.

Data was analyzed using SPSS software (SPSS version 22). Both descriptive and inferential statistics were per-

formed. Frequency distribution in the form of number and percentage was calculated. Mean and standard deviation were determined. Two-group comparison was done using *t*-test, and ANOVA was used for multiple group analysis. Mean percentage was calculated and analysed using Chi-square test. Correlation was performed using Pearson's correlation test. $p < 0.05$ was considered statistically significant.

RESULTS

The validity of the questionnaire, as calculated by Cronbach's alpha test, was 0.87. Table 1 illustrates the demographic distribution of the study population.

Correct responses to knowledge questions and favorable positive attitudes towards blood donation are demonstrated in Table 2. Also, reasons for not practicing blood donation is mentioned in Table 2. Around 63.7% responded correctly to the question that blood donation causes transmission of infection to the donor with use of infected needles (K5) whereas only 3.8% knew that anemics, diabetics, hypertensives, and pregnant women cannot donate blood (K9). Most of the participants had positive attitude towards blood donation except that only 23.7% thought it is not a religious duty (A5). Comparison of the correct responses to knowledge questions based on variables revealed significant difference among males and females for questions K1 ($p = 0.05$), K4 ($p = 0.002$), and K9 ($p = 0.04$) with a lower percentage of females answering them correctly. On the other hand, a significant difference was noted for questions K1 - K5 and K9 based on the year of study, with no particular year revealing a higher percentage for all the questions. A significantly smaller number of fourth year students answered questions K3 (8.6%), K5 (53.5%), and K9 (0%) correctly but the highest number answered question K2 (86.2%) correctly. For knowledge questions K1 and K4, a maximum number of post-graduates and interns, respectively, reported correct answers. However, only questions K5 and K6 showed a significant difference with participants belonging to other faiths (Jainism, Christianity, Buddhism, etc.) recording a higher percentage of correct knowledge answers (Table 3).

With regard to positive attitude towards blood donation, a higher percentage of females had positive attitude for all questions which was significant only for A2, A3, A7, A8, and A11. Based on the year of study, a significant difference was noted for most of the questions except A3 and A10. Second year students had greater positive attitude for questions A2, A4 - 8, and A11, whereas third years and postgraduates recorded a higher positive attitude for A9 and A1, respectively. Nevertheless, a significant difference was observed only for A5 and A9 based on religion (Table 4).

Overall, when the practice regarding blood donation was asked, majority of the participants (78.2%) had never donated blood, which was significant based on

Table 1. Demographic details of the study population.

Variable	n (%)
Gender	
Male	76 (18.2)
Female	341 (81.8)
Year of study	
Year I	83 (19.9)
Year II	79 (18.9)
Year III	70 (16.8)
Year IV	58 (13.9)
Interns	51 (12.3)
Postgraduates	76 (18.2)
Religion	
Hindu	310 (74.3)
Muslim	84 (20.2)
Others	23 (5.5)
Total	417 (100.00)

gender and year of study ($p = 0.0001$). A significant number of females were not eligible to donate blood on medical grounds compared to males (P8; $p = 0.0001$). Likewise, a significant difference in practice with regard to blood donation based on year of study was seen for unknown fears (P2), inadequate information (P5), afraid at the sight of blood (P6), not eligible on medical grounds (P8), no one asked for donation (P9), long and boring process (P10), and no remuneration (P11), whereas for religions, none of the reasons showed a significant difference (Table 5).

The mean percentage of correct knowledge was significantly higher in males (24.52 ± 14.01 ; $p = 0.03$), but, surprisingly, a more positive attitude towards blood donation was seen among females (76.25 ± 18.27 ; $p = 0.0007$). Likewise, based on the year of study, a significant difference was observed for mean percentage of correct knowledge and mean percentage of practice were higher in those with longer study, especially among interns (knowledge - 25.49 ± 14.66 ; Practice 30.66 ± 36.41). Based on the results utilizing the ANOVA test, significance in the mean percentage of correct knowledge score was noted for first year and fourth year with the interns. Alternatively, postgraduates exhibited significantly lower practice of blood donation compared to third year ($p = 0.03$) and interns ($p = 0.001$). In addition, a significant difference was seen among second year and interns ($p = 0.02$). However, mean percentage of positive attitude was highest among second year of college (82.05 ± 12.44) and least among interns. Applying the ANOVA test, interns had significantly lower values compared to all the other years of undergraduate study (first, second, third, and

fourth). On the other hand, religion did not play a significant role in determining their knowledge and behavior towards blood donation (Table 6).

A significant and positive correlation was noticed between correct knowledge score, positive attitude, and practice regarding blood donation. (knowledge vs. attitude, $r = 0.316^*$; knowledge vs. practice, $r = 0.1622^*$; attitude vs. practice, $r = 0.238^*$).

DISCUSSION

In order to enhance the practice of voluntary blood donation, the initial step is to conduct studies that evaluate the current knowledge, attitude, and practice of the population group. Information drawn from such studies will play an elementary role in implementing blood donation recruitment strategies like awareness campaigns, blood donation drives, etc. Hence, this questionnaire based-research aimed to understand the knowledge, attitude, and practice regarding blood donation among a cohort of undergraduate and postgraduate dental students of a dental institution in India. Noting the significance of blood donation for the health promotion activities, this study focussed on the future care-givers of the society who are a prospective pool of new and regular donors and also bridge the gap in educating the general public about the implications of blood donation.

Literature review did not reveal a standardised questionnaire to assess the blood donation knowledge, attitude, and practice, and, consequently, a questionnaire was formulated based on previous studies [6,7,9]. Demographic variables like gender, year of study, and religion were considered for comparison as they play a vital role in determining the practice and intention of blood donation.

Though the current study reflects a highly positive attitude towards blood donation amongst this study cohort, knowledge regarding blood donation was alarmingly low. Less than 10% of the study population knew that a history of drug abuse, unsafe sexual relationships, and systemic conditions like anemia, hypertension, diabetes, and pregnancy were contraindications to blood donation. On the other hand, a study by Abolfotouh [9] showed a majority of the Saudi adults had the right knowledge to these questions.

In the present study, 78.6% of the study population considered donating blood as altruistic which was similar among donors in Pakistan [10] and among Brazilians [11]. However, incentives like free blood investigations, lottery tickets and souvenirs were important among Americans [12]. Also, it has been reported the day off from work acts as an incentive among Italians [13]. Hence, such incentives can also be incorporated to enhance blood donation practice.

In this study, poor knowledge was noted for age-limit and recognising timely blood donation as a cause for anaemia. This contradicts the findings of the study by S U, et al. [14] wherein a minimum 18 years as a require-

Table 2. Distribution of study population based on correct knowledge responses and positive attitude towards blood donation.

S. no.	Knowledge questions	Correct response	n (%)
K1	Is there any age limit on blood donation?	Yes	62 (14.8)
K2	Can women donate blood while menstruating?	Yes	249 (59.7)
K3	Can people with any blood group donate blood?	Yes	93 (22.3)
K4	Does blood donation cause anaemia?	No	55 (13.1)
K5	Could blood donation cause transmission of infection to the donor with use of infected needle?	Yes	266 (63.7)
K6	Could blood donation cause transmission of infection to the receiver?	Yes	72 (17.2)
K7	Is someone with a history of drug abuse allowed to donate blood?	No	36 (8.6)
K8	Is someone with a history of an unsafe sexual relationship allowed to donate blood?	No	33 (7.9)
K9	Are anemic, diabetic or hypertensive people or pregnant ladies allowed to donate	No	16 (3.8)
K10	Does the laboratory test donated blood for HIV, Hepatitis and syphilis?	Yes	48 (11.5)
K11	Volume of blood collected each time	≤ 500 mL	71 (17.0)
S. no.	Attitude questions	Positive Response	N (%)
A1	I think blood donation is altruistic	Agree	328 (78.6)
A2	I do not think that my blood donation will encourage others to donate	Disagree	312 (74.8)
A3	I would donate blood if I was assured that donated blood will be given to me or one of my family members in the future	Disagree	310 (74.3)
A4	My family and friends consider blood donation as an important valuable act and encourage me to donate	Agree	334 (80.1)
A5	I do not think blood donation is a religious duty	Disagree	99 (23.7)
A6	I think that blood donation is a national duty	Agree	336 (80.5)
A7	I would donate blood if there were incentives or rewards	Disagree	359 (86.1)
A8	Donating blood makes me feel like I have helped one of my family members/friends	Agree	368 (88.2)
A9	I would donate blood if I am given leave that day	Disagree	325 (77.9)
A10	A laboratory test performed on donated blood may help me evaluate my health	Agree	334 (80.1)
A11	My blood will be misused by the blood bank	Disagree	325 (77.9)
S. no.	Practice questions	Response	N (%)
P1	Don't know where to donate	Yes	79 (18.9)
P2	Unknown Fears	Yes	69 (16.5)
P3	Concerned about sterility of Instruments	Yes	142 (34.1)
P4	Apprehension about feeling weak or dizzy	Yes	113 (27.1)
P5	Inadequate information	Yes	94 (22.5)
P6	Afraid of sign of blood	Yes	54 (12.9)
P7	Afraid of needle prick	Yes	83 (19.9)
P8	Not eligible on medical grounds (anemic etc.)	Yes	164 (39.3)
P9	No one asked for donation	Yes	135 (32.3)
P10	Process is long and Boring	Yes	38 (9.1)
P11	No remuneration	Yes	32 (7.6)

ment for blood donation was correctly answered by 79.4% of the Indian population.

The deferral to practice blood donation can be deemed as a barrier to blood donations. In the present study,

significantly higher number of females did not donate blood, likewise students who were in the lower years of education has significantly lower habit of blood donation, thereby demonstrating education and more clinical

Table 3. Comparison of correct responses to knowledge questions based on variables.

Items	Gender			Year of Study							Religion			
	Males	Females	P-value	I	II	III	IV	Interns	PG	p-value	Hindu	Muslim	Others	P-value
K1	19 (25)	43 (12.6)	0.005*	8 (9.6)	11 (13.9)	9 (12.9)	5 (8.6)	8 (15.7)	21 (27.6)	0.016*	53 (17.1)	7 (8.3)	2 (8.7)	0.09
K2	43 (56.6)	206 (60.4)	0.53	32 (38.6)	45 (57)	47 (67.1)	50 (86.2)	21 (41.2)	54 (71.1)	0.0001*	186 (60)	49 (58.3)	14 (60.8)	0.95
K3	20 (26.3)	73 (21.4)	0.35	20 (24.1)	19 (24.1)	18 (25.7)	3 (5.2)	13 (25.5)	20 (26.3)	0.04*	73 (23.6)	16 (19.1)	4 (17.3)	0.57
K4	16 (21.1)	39 (11.4)	0.02*	5 (6)	8 (10.1)	5 (7.1)	8 (13.8)	16 (31.4)	13 (17.1)	0.0001*	42 (13.6)	10 (11.9)	3 (13.1)	0.92
K5	46 (60.5)	220 (64.5)	0.51	61 (73.5)	59 (74.7)	41 (58.6)	31 (53.5)	30 (58.8)	44 (57.9)	0.02*	208 (67.1)	42 (50)	16 (69.5)	0.013*
K6	14 (18.4)	58 (17)	0.76	10 (12)	12 (15.2)	10 (14.3)	9 (15.5)	15 (29.4)	16 (21.1)	0.13	48 (15.5)	16 (19.1)	8 (34.7)	0.05*
K7	8 (10.5)	28 (8.2)	0.51	8 (9.6)	4 (5.1)	8 (11.4)	3 (5.2)	9 (17.7)	4 (5.3)	0.09	28 (9)	7 (8.3)	1 (4.3)	0.73
K8	10 (13.2)	23 (6.7)	0.06	4 (4.8)	7 (8.9)	5 (7.1)	6 (10.3)	7 (13.7)	4 (5.3)	0.44	23 (7.4)	9 (10.7)	1 (4.3)	0.49
K9	6 (7.9)	10 (2.9)	0.04*	2 (2.4)	1 (1.3)	1 (1.4)	0 (0.00)	9 (17.7)	3 (4)	0.0001*	11 (3.6)	4 (4.8)	1 (4.3)	0.86
K10	12 (15.8)	36 (10.6)	0.19	12 (14.5)	7 (8.9)	8 (11.4)	3 (5.2)	9 (17.7)	9 (11.8)	0.36	36 (11.6)	10 (12)	2 (8.7)	0.90
K11	11 (14.5)	60 (17.6)	0.51	17 (20.5)	15 (19)	10 (14.3)	9 (15.5)	6 (11.7)	14 (18.4)	0.77	53 (17.1)	14 (16.7)	4 (17.3)	0.99

* p < 0.05 - statistically significant.

Table 4. Comparison of positive attitude towards blood donation based on variables.

Items	Gender			Year of Study							Religion			
	Males	Females	P-value	I	II	III	IV	Interns	PG	p-value	Hindu	Muslim	Others	P-value
A1	54 (71.1)	274 (80.3)	0.07	66 (79.5)	64 (81.2)	45 (64.2)	49 (84.4)	36 (70.5)	68 (89.4)	0.004*	245 (79.1)	64 (76.1)	19 (82.6)	0.76
A2	48 (63.1)	264 (77.4)	0.01*	65 (78.3)	69 (87.3)	50 (71.4)	48 (82.7)	28 (54.9)	52 (68.4)	0.001*	223 (71.9)	70 (83.3)	19 (82.6)	0.07
A3	46 (60.5)	264 (77.4)	0.002*	66 (79.5)	61 (77.2)	56 (80)	43 (74.1)	35 (68.6)	49 (64.4)	0.19	237 (76.4)	58 (69.1)	15 (65.2)	0.22
A4	59 (77.6)	275 (80.6)	0.55	69 (83.1)	73 (92.4)	56 (80)	39 (67.2)	37 (72.5)	60 (78.9)	0.007*	248 (80)	71 (84.5)	15 (65.2)	0.12
A5	17 (22.3)	82 (24.1)	0.75	20 (24.1)	20 (25.3)	26 (37.1)	9 (15.5)	12 (23.5)	12 (15.7)	0.03*	67 (21.6)	30 (35.7)	2 (8.7)	0.006*
A6	56 (73.6)	280 (82.1)	0.09	60 (72.2)	72 (91.1)	58 (82.8)	49 (84.4)	37 (72.5)	60 (78.9)	0.03*	253 (81.6)	66 (78.5)	17 (73.9)	0.58
A7	58 (76.3)	301 (88.2)	0.007*	72 (86.7)	74 (93.6)	61 (87.1)	52 (89.6)	36 (70.5)	64 (84.2)	0.01*	268 (86.4)	72 (85.7)	19 (82.6)	0.87
A8	62 (81.5)	306 (89.7)	0.04*	76 (91.5)	75 (94.9)	63 (90)	52 (89.6)	39 (76.4)	63 (82.8)	0.01*	271 (87.4)	75 (89.2)	22 (95.6)	0.47
A9	58 (76.3)	267 (78.3)	0.70	66 (79.5)	67 (84.8)	60 (85.7)	43 (74.1)	32 (62.7)	57 (75)	0.02*	250 (80.6)	57 (67.8)	18 (78.2)	0.04*
A10	62 (81.5)	272 (79.7)	0.72	65 (78.3)	66 (83.5)	50 (71.4)	51 (87.9)	37 (72.5)	65 (85.5)	0.09	252 (81.2)	64 (76.1)	18 (78.2)	0.56
A11	50 (65.7)	275 (80.6)	0.005*	69 (83.1)	72 (91.1)	59 (84.2)	45 (77.5)	34 (66.6)	46 (60.5)	0.0001*	244 (78.7)	64 (76.1)	17 (73.9)	0.79

* p < 0.05 - statistically significant.

Table 5. Comparison of self-reported reasons for not donating blood based on variables.

Items	Gender			Year of Study							Religion				Total
	Males	Females	p-value	I	II	III	IV	Interns	PG	p-value	Hindu	Muslim	Others	p-value	
P1	12 (15.7)	67 (19.6)	0.46	17 (20.4)	12 (15.1)	11 (15.7)	13 (22.4)	15 (29.4)	11 (14.4)	0.23	54 (17.4)	20 (23.8)	5 (21.7)	0.35	79 (18.9)
P2	12 (15.7)	57 (16.7)	0.84	14 (16.8)	6 (7.5)	19 (27.1)	7 (12.1)	13 (25.4)	10 (13.1)	0.01*	54 (17.4)	13 (15.4)	2 (8.7)	0.53	69 (16.5)
P3	21 (27.6)	121 (35.4)	0.2	28 (33.7)	24 (30.3)	31 (44.2)	20 (34.4)	21 (41.1)	18 (23.6)	0.12	104 (33.5)	31 (36.9)	7 (30.4)	0.85	142 (34.1)
P4	17 (22.3)	96 (28.1)	0.3	19 (22.8)	16 (20.2)	26 (37.1)	19 (32.7)	17 (33.3)	16 (21.1)	0.09	89 (28.7)	17 (20.2)	7 (30.4)	0.28	113 (27.1)
P5	18 (23.6)	76 (22.2)	0.79	26 (31.3)	19 (24.1)	17 (24.2)	7 (12.1)	16 (31.3)	9 (11.8)	0.01*	74 (23.8)	15 (17.8)	5 (21.7)	0.50	94 (22.5)
P6	11 (14.4)	43 (12.6)	0.66	10 (12.1)	8 (10.1)	16 (22.8)	3 (5.1)	13 (25.4)	4 (5.2)	0.001*	41 (13.2)	10 (11.9)	3 (13.1)	0.95	54 (12.9)
P7	12 (15.7)	71 (20.8)	0.32	17 (20.4)	18 (22.7)	18 (25.7)	7 (12.1)	14 (27.4)	9 (11.8)	0.1	64 (20.6)	14 (16.6)	5 (21.7)	0.70	83 (19.9)
P8	14 (18.4)	150 (43.9)	0.0001*	17 (20.4)	27 (34.1)	33 (47.1)	34 (58.6)	30 (58.8)	23 (30.2)	0.0001*	130 (41.9)	24 (28.5)	10 (43.4)	0.07	164 (39.3)
P9	26 (34.2)	109 (31.9)	0.70	54 (65.1)	23 (29.1)	14 (20)	16 (27.5)	11 (21.5)	17 (22.3)	0.0001*	106 (34.1)	26 (30.9)	3 (13.1)	0.10	135 (32.3)
P10	9 (11.8)	29 (8.5)	0.31	7 (8.4)	2 (2.5)	11 (15.7)	1 (1.7)	12 (23.5)	5 (6.5)	0.0001*	27 (8.7)	11 (13.1)	0 (0)	0.19	38 (9.1)
P11	4 (5.2)	28 (8.2)	0.38	6 (7.2)	3 (3.8)	5 (7.1)	4 (6.9)	10 (19.6)	4 (5.2)	0.02*	21 (6.7)	10 (11.9)	1 (4.3)	0.24	32 (7.6)

* p < 0.05 - statistically significant.

Table 6. Comparison of mean percentage of correct knowledge, positive attitudes and practice towards blood donation based on variables.

Variables	Mean \pm SD (%)		
	Knowledge	Attitude	Practice
Gender			
Males	24.52 \pm 14.01	68.18 \pm 20.60	18.66 \pm 26.09
Females	21.22 \pm 12.04	76.25 \pm 18.27	22.58 \pm 22.14
p-value	0.03*	0.0007*	0.17
Year of Study			
Year I	19.61 \pm 12.09	76.01 \pm 21.18	23.55 \pm 18.13
Year II	21.63 \pm 11.21	82.05 \pm 12.44	18.18 \pm 17.35
Year III	21.04 \pm 12.63	75.84 \pm 16.80	26.10 \pm 23.67
Year IV	19.91 \pm 9.55	75.24 \pm 15.59	20.53 \pm 19.23
Interns	25.49 \pm 14.66	64.71 \pm 23.19	30.66 \pm 36.41
Others	24.16 \pm 13.73	71.29 \pm 19.92	15.07 \pm 20.71
p-value	0.04*	0.0001*	0.001*
Religion			
Hindu	22.32 \pm 12.55	75.01 \pm 19.30	22.40 \pm 22.77
Muslim	19.91 \pm 12.01	74.78 \pm 18.31	20.67 \pm 24.78
Others	22.13 \pm 12.81	71.54 \pm 16.74	18.97 \pm 17.96
p-value	0.29	0.69	0.68
Total	21.82 \pm 12.47	74.78 \pm 18.95	21.87 \pm 22.93

* p < 0.05 - statistically significant.

exposure favors voluntary blood donation.

Apart from low hemoglobin level (P8), which was a significant factor for gender, year of study, and religion for not donating blood, factors like concern about sterility of the instruments (P3; 31.9%) and no one asked for blood donation (P9; 32.2%), though not significant, played a significant role in determining the blood donation practice in a majority of this population. Similar reasons were cited by Oswalt et al. [15] among college students who regarded medical reasons and fear of needles as an impediment to blood donation whereas a study by Daniel JM et al. [16] among Indian medical personnel revealed, never being asked as the most cited reason for not donating blood.

Despite the above concerns, a higher percentage of students had still donated blood (21.8%) compared to the University students of Thailand [3] (11%) and Bangladesh [17] (16%). Another noteworthy finding of the study was the significant and positive correlation seen between the knowledge, attitude, and practice which reflects that adequate knowledge towards blood donation will instill positive behavior and enhance the willingness to practice to donate blood.

The study exhibits certain limitations with a major limitation being the characteristic of the study population and the convenience sampling method employed which can be a source for sampling bias. This constraint can challenge the extrapolation of findings of the study to different population groups. Also, the atmosphere in the health care institution per se may play a factor in influencing the knowledge, attitude, and practice of blood donation. Secondly, the responses to this questionnaire survey may generate socially desirable attributes. Lastly, the cross-sectional study design may restrict the identification of the true causal relationship among the variables. Nevertheless, the study brings to light certain viewpoints. The homogeneity of this particular group of students may minimize confounding effects. This distinct category of health care students may direct and promote the need of donating blood to broader sections of society.

CONCLUSION

The present study reveals less than satisfactory blood donation practice among dental students; however, it highlights their altruistic attitude towards blood donation. The results provide valuable information demonstrating the need to conduct interactive awareness campaigns, create opportunities to donate blood which may encourage the non-donors to overcome their fears and misconceptions regarding blood donation. Developing the needed strategies might help to harness this prospective pool of blood donors and convert them to regular voluntary blood donors corresponding with the World Health Organisation pledge for 2020.

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