STUDENT ORIGINAL ARTICLE

Knowledge, attitudes and practices on voluntary blood donation among final year undergraduates in the Faculty of Law, University of Colombo

Imana Iqbal[1], Yasasvi Siriwardena[1], Sivatharsika Sivalingam[1], Subashini Jayawardana[2]

[1] Faculty of Medicine, University of Colombo, Sri Lanka

[2] Department of Allied Health Sciences, Faculty of Medicine, University of Colombo, Sri Lanka

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Author responsible for correspondence:
Imana Iqbal
Faculty of Medicine,
University of Colombo, Sri Lanka
Email: imana.iqbal310@gmail.com

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https://orcid.org/0009-0009-1376-5794

Abstract

Background

Voluntary blood donation is essential to ensure the adequate availability of blood for transfusion in healthcare institutions. There should be sufficient knowledge, positive attitudes and good practices among voluntary blood donors to keep up regular blood donations. This study aimed to assess the knowledge, attitudes and practices regarding voluntary blood donation among final year undergraduates in the Faculty of Law, University of Colombo, Sri Lanka.

Methods

A descriptive cross-sectional study was conducted among 156 final year law undergraduates in the University of Colombo. A self-administered questionnaire was used to collect data. A descriptive analysis and chi-square test were used in data analysis.

Results

Majority of the participants had good knowledge (64.1%) but poor attitude (82.7%) regarding blood donation. Only 16% had donated blood previously, out of which only 2% had donated blood more than once per year. The reasons stated for not donating blood included being unfit to donate (22.7%), fear of needles (20.2%), not being approached to donate (16.6%) and needing to donate for friends or relatives in the future (7.4%). There was no statistically significant association between knowledge, attitudes and practices of voluntary blood donation ($p<0.05$).

Conclusion

In spite of having good knowledge, majority of the participants had poor attitudes towards blood donations, which most likely led to poor blood donating practices. To increase the practice of voluntary blood donation among university undergraduates, there should be awareness programmes to promote positive attitudes and eradicate misconceptions regarding blood donation.

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Background

Blood transfusion plays an important role as a life saving strategy during routine and emergency medical conditions. Adequate blood donations are vital for blood transfusion services, as this ensures that a sufficient supply of blood and its products are readily available. Among the three types of blood donations (voluntary, replacement and paid), voluntary blood donation (VBD) is widely regarded as the best method [1].

Sri Lanka has a long history of blood donation and has achieved 100% of VBD practice in 2014 [2]. As most of the blood products have a short shelf-life, uninterrupted blood donations are required to ensure that adequate amounts are in storage at any given time. According to a study conducted in Sri Lanka most blood donations are by those in the age group of 21-30 years [3]. University students fall under this age group thus it is essential to establish good blood donation practices through their curriculum.

A study conducted by the University of Peradeniya with 250 undergraduates concluded that the participants had good knowledge, but poor practices [4]. With regard to the University of Colombo (UOC), no VBD camps have been organized by the Faculty of Law over the last four years. This study aims to assess the knowledge, attitudes and practices on VBD among final year undergraduates in the Faculty of Law, UOC.

Methods

A survey-based, descriptive cross-sectional study was conducted among the final year undergraduates in the Faculty of Law, UOC, Sri Lanka. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, UOC.

A total of 156 participants were selected from a total of 250 undergraduates, using a convenient sampling method. Those who did not give consent, left the faculty for a certain period and foreign students were excluded from the study. Data collection was done by using a self-administered questionnaire, which comprised the participants' socio-demographic details, knowledge, attitudes and practices of VBD.

When analysing the data, a scoring system was devised to assess knowledge. The questions were categorized into mandatory to know (11) and not mandatory to know (5). Undergraduates who scored above 11 were considered to have good knowledge and those who scored below 11 were considered to have poor knowledge regarding VBD.

Attitudes regarding VBD were assessed by 12 positive and negative statements, using a 5-point Likert scale. For positive attitude statements, option "agree" and for negative attitude statements, option "disagree" each carried a score of 4, which were considered as the cut-off. Thus, the total cut-off score was taken as 48. Undergraduates were then categorized into having positive attitudes (>48) and negative attitudes (<48).

Practices regarding VBD are described using frequencies and percentages. Furthermore, the association between the practices with knowledge and attitudes regarding VBD was assessed by the Chi-square test and a p value of 0.05 was used to determine the significance.

Results

The sample for this study consisted of 156 consenting final year undergraduates of Faculty of Law, UOC, with a response rate of 95.1%. The ages ranged between 22-25 years and majority were females (86.5%, n=135).

The knowledge levels of undergraduates on blood grouping, donor requirements, procedures, safety and benefits of VBD were assessed based on the scores obtained from the questionnaire. Among the participants, majority had good knowledge (64.1%, n=100), while the rest had poor knowledge (39.5%, n=56). The mean total knowledge score was 11.12 (SD 1.73). Majority of the participants were aware of their blood group (83.3%, n=130) and the minimum weight required to donate blood (81.4%, n=127). However, only 8.3% (n=13) were aware that a first-degree relative is not considered as the safest source of blood. The participant's knowledge of VBD is summarised in Table 1.

Majority of undergraduates had poor attitudes (82.7%, n=129), while 17.3% (n=27) had good attitudes regarding VBD. Even though most agreed that blood donation is considered to be a moral responsibility (42.3%, n=28), only 37.2% (n=58) had a positive opinion about donors receiving recognition from the society. Moreover, only 30.8% (n=48) believed that VBD is not harmful to the donor. The participant's attitudes to VBD are summarised in Table 2.

Out of the 156 undergraduates, only 25 (16.0%) students had donated blood before and among those, only 17 (68.0%) are regular donors. Nearly three-fourth of these students (72.0%, n=18) felt positive after donating blood, while the rest (28.0%, n=7) felt indifferent. Details of VBD practices of past donors are shown in Table 3.

Despite not having donated blood before, majority (85.3%, n=133) will donate if called upon or reminded to do so and 84.6% (n=132) will encourage their relatives to donate blood. Some of the reasons stated for not donating blood are being unfit to donate, fear and not being approached to donate (Table 4).

Table 1. Knowledge on voluntary blood donations among study population (N=156)

Question	Number of correct responses	Percentage [%]
What is your blood group?	130	83.3
Which blood group is the universal donor?	143	91.7
Which blood group is the universal recipient?	133	85.3
What is the minimum legal age for blood donation in Sri Lanka?	134	85.9
What is the maximum legal age for blood donation in Sri Lanka?	77	49.4
How many times can a person donate blood in a year in Sri Lanka?	63	40.4
What is the minimum weight a person needs to have in order to donate blood?	127	81.4
Can a pregnant woman donate blood?	153	98.1
Can women who are menstruating donate blood?	82	52.6
Can drug addicts donate blood?	144	92.3
Can a person with diabetes donate blood?	146	93.6
During blood donation, how much of blood should be donated?	43	27.6
Can a person be infected by receiving blood transfusion?	131	84.0
Is it safer to receive blood from a first degree relative?	13	8.3
Does donating blood cause weight loss?	124	79.5
Does donating blood help you to maintain a healthy heart and liver?	91	58.3

Table 2. Attitudes regarding voluntary blood donation among study population (N=156)

Attitude statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Blood donation is considered to be a moral responsibility of the citizen.	28 (17.9%)	66 (42.3%)	52 (33.3%)	8 (5.1%)	2 (1.3%)
I think voluntary donors are better compared to replacement or remunerated donors.	41 (26.3%)	73 (46.8%)	35 (22.4%)	6(3.8%)	1 (0.6%)
Whenever possible a patient's relative should be asked to donate blood.	16 (10.3%)	38 (24.4%)	51 (32.7%)	45 (28.8%)	6 (3.8%)
Blood donation is a harmful procedure to the blood donor.	7 (4.5%)	30 (19.2%)	58 (37.2%)	48(30.8%)	13 (8.3%)
I think every person should always disclose correct information prior to donating blood.	119 (76.3%)	24 (15.5%)	6 (3.8%)	6 (3.8%)	1 (0.6%)
Donors should receive extra recognition from the society.	16 (10.3%)	42 (26.9%)	44 (28.2%)	45 (28.8%)	9 (5.8%)
Donating blood is good for one's own health.	28 (17.9%)	60 (38.5%)	63 (40.4%)	5 (3.2%)	0 (0.0%)
Blood should be donated only in an emergency.	5 (3.2%)	12 (7.7%)	35 (22.4%)	85 (54.5%)	19 (12.2%)
People who donate blood are temporarily weakened.	5 (3.2%)	26 (16.7%)	43 (27.6%)	64 (41.0%)	18 (11.5%)
The best way to get tested for HIV is by donating blood.	7 (4.5%)	12 (7.7%)	32 (20.5%)	57 (36.5%)	48 (30.8%)
Blood donation can save numerous lives.	90 (57.7%)	50 (32.1%)	15 (9.6%)	1 (0.6%)	0 (0.0%)
I would not donate blood if my religion identifies it as a sin.	4 (2.6%)	5 (3.2%)	11 (7.1%)	54 (34.6%)	82(52.6%)

Table 3. Voluntary blood donation practices of past donors (N=25)

Practice	Number (n=25)	Percentage (%)
When was the last time you donated blood?		
Less than 1 year ago	16	64.0
More than 1 year ago	9	36.0
Why did you donate blood?		
A friend or relative needed blood	1	4.0
Voluntary	23	92.0
Remuneration	1	4.0
To know my screening status	0	0.0
How often do you donate blood?		
Once a year	15	60.0
2-3 times per year	1	4.0
More than 3 times per year	1	4.0
Not a regular donor	8	32.0

Table 4. Reasons stated by the participants for not donating blood (N=156)

Practice	Number (n=156)	Percentage (%)
What do you think are the reasons for not donating blood?		
Not approached to donate	27	16.6
Unfit to donate	37	22.7
Fear of needles	33	20.2
Need to donate for friends or relatives in the future	12	7.4
Religion forbids it	0	0.0
Donated blood may be sold	2	1.2
Other	52	31.9

There was no statistically significant association between knowledge and practices (p=0.580) or between attitude and practices of VBD (p=0.698).

Discussion

According to this study, two-third of the undergraduates (64.1%, n=100) had good knowledge on VBD. This is consistent with a study done among students in the University of Peradeniya, Sri Lanka [4]. Similarly, in a study conducted in a tertiary institution in Nigeria, majority (64.8%, n=259) of the respondents had good knowledge about VBD [5]. In Sri Lanka, the establishment of the National Blood Transfusion Service (NBTS) and the blood donation camps conducted island-wide could be one of the reasons for having good knowledge regarding VBD. On further analysis, majority (83.3%) were aware of their blood group, whereas in a study conducted in Ambo University, Ethiopia only 23.3% was aware of their blood group [6]. The increased awareness of the blood group among Sri Lankans could be due to the incorporation of one's blood group into important documents like the National Identity Card and Driving License. However, the lack of awareness of the maximum age for VBD corresponded with a study done in Nepal, where 97.2% of undergraduates were unaware [7]. This could be a disadvantage as underestimation of this age limit could lead to a loss in significant numbers of potential donors.

A majority (82.7%) of undergraduates in this study had poor attitudes regarding VBD. In contrast, a study conducted among 100 medical undergraduates in India showed that most had positive attitudes towards blood donation [8]. Similarly, another study done in India showed that among 150 medical undergraduates, 94.6% felt that donating blood is a good practice [9]. This difference could be due to the above mentioned studies involving medical undergraduates, who are more likely to understand the importance of VBD.

The poor VBD practices of past donors observed in this study were consistent with a study done in University of Peradeniya, Sri Lanka [4]. Similarly, Kowsalya and team stated that only 13.2% of medical undergraduates had donated blood [10]. This could be due to busy schedules, which could be resolved by organizing more blood donation camps at educational institutions. Moreover, this study consisted of a predominantly female population (86.5%), while several studies have previously shown that males donated blood more than females [6,8,11]. Reasons for this could be a low donor turnover and temporary deferral conditions like low haemoglobin values, low weight and fear of pain [11]. Hence, lack of male representation in this study population may have led to poor practices.

Most of the literature supported the fact that the commonest reasons for not donating blood were due to being unfit to donate, fear of needles, and not being approached to donate [4-14]. Ignorance (31.0%) and lack of motivation (19.1%) were also mentioned as reasons in the study by Kowsalya *et al*. [10]. Misganaw and colleagues, also stated lack of privacy and the fear of someone else finding out about the results were other potential reasons [12]. Provision of privacy, awareness and communication to address the fear factor can strengthen the retention of blood donors to donate blood regularly [13].

According to the present study, even though there was no statistically significant association between knowledge and practices or between attitude and practices of VBD, a study in Korea showed otherwise [14]. This difference could be due to the limitation in sample size of this study.

Conclusion

Despite having good knowledge on VBD, the attitudes and practices of majority of the undergraduates were poor. There was no statistically significant relationship between knowledge and practices or attitude and practices of VBD. To promote blood donation among university undergraduates, special interactive motivational programs followed by donation campaigns should be planned. These programs need to be held regularly to promote positive attitudes. Awareness campaigns need to be carried out to make non-medical undergraduates aware about safety and procedure of VBD. Social media is an ideal tool to encourage the younger generation to be regular blood donors in the future.

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References

1. World Health Organization, 2010. Towards 100% voluntary blood donation: a global framework for action. World Health Organization.
2. NBTS A. 2021. About NBTS. [online] Nbts.health.gov.lk. Available at: <http://www.nbts.health.gov.lk/index.php/about/about-nbts>
3. De Zoysa NS. Survey of blood donors in Sri Lanka, 1985. *The Ceylon Medical Journal* 1992; 37(4): 129-30.
4. Sumali GAK. and Illeperuma RP. Awareness and attitudes of blood donation among undergraduate students in University of Peradeniya 2017.
5. Salaudeen AG, Odeh E. Knowledge and behavior towards voluntary blood donation among students of a tertiary institution in Nigeria. *Nigerian Journal of Clinical Practice* 2011; 14(3): 303-7.
6. Nigatu A, Demissie DB. Knowledge, attitude and practice on voluntary blood donation and associated factors among Ambo University Regular Students, Ambo Town, Ethiopia. *J Community Med Health Educ*. 2014; 4(5): 6-6.
7. Amatya M. Study on knowledge, attitude and practice of blood donation among students of different colleges of Kathmandu, Nepal. *International Journal of Pharmaceutical and Biological Archives* 2013; 4(3): 424-8.
8. Ponmari JS, Sivaraman M, Balasubramanian A. A study on knowledge, attitude and practice on blood donation among medical students in a tertiary care teaching hospital, Chennai, Tamil Nadu, India. *Int J Basic Clin Pharmacol* 2016; 5(3): 802-4.
9. Meinia SK, Kumar Y, Meinia A, Singh G, Dutt N. A study to assess the knowledge, attitude, and practices about voluntary blood donation amongst the undergraduate medical students in Solan, North India. *Int J Med Sci Public Health* 2016; 5(12): 2550.
10. Kowsalya V, Vijayakumar R, Chidambaram R, Srikumar R, Reddy EP, Latha S, Fathima IG, Kumar CK. A study on knowledge, attitude and practice regarding voluntary blood donation among medical students in Puducherry, India. *Pakistan Journal of Biological Sciences (PJBS)* 2013; 16(9): 439-42.
11. Uma S, Arun R, Arumugam P. The knowledge, attitude and practice towards blood donation among voluntary blood donors in Chennai, India. *Journal of Clinical and Diagnostic Research (JCDR*) 2013; 7(6): 1043.
12. Misganaw C, Tenkir M, Deresa A, Tesfaye M, Tessema TT, Taye H. The level and associated factors of knowledge, attitude and practice of blood donation among health science students of Addis Ababa University. *IJMHSR*. 2014; 1(10): 105-18.
13. Hupfer ME, Taylor DW, Letwin JA. Understanding Canadian student motivations and beliefs about giving blood. *Transfusion* 2005; 45: 149-61.
14. Kim JH, Yoon JS. Association between knowledge, attitude, and practice regarding blood donation in university students. 2015; 15(10): 316-26. doi: 10.5271/sjweh.410