Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Medical Surgical Nursing

A Study to Assess Knowledge and Attitude Regarding Blood Donation among Students of Bvvs Polytechnic (Autonomous), Bagalkot

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DOI: https://doi.org/10.36347/sjams.2025.v13i05.025 | **Received:** 14.04.2025 | **Accepted:** 19.05.2025 | **Published:** 21.05.2025

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Abstract **Original Research Article**

Introduction*:** Our study will helps to identify blood donor characteristics. The study aims to investigate the extent of awareness and knowledge regarding blood donation among students and to explore their attitudes towards blood donation in general. It also highlights various motivational factors and obstacles which impact the decision to donate blood among students. Efforts should be made to increase the level of awareness and positive attitude toward blood donation. An essential step to achieve this is obtaining comprehensive data about the current situation of awareness, knowledge, and attitudes of the population towards blood donation. ***The Aims of Study are as Follows*:** (1) To assess the knowledge regarding blood donation among students of bvvs polytechnic college, bagalkot **(2)** To assess the attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot. **(3)** To find out the correlation between knowledge and attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot. **(4)** To find out the association between knowledge and attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot. ***Materials and Methods: The Study approach was a quantitative research approach. Non- experimental descriptive research design was used. The study was conducted at bvvs polytechnic college, Bagalkot among 120 students studying in first year diploma electronic branch using stratified random sampling technique. The data were collected using structured self adminstred questionnaires. ***Results*:** Blood donation showed that in frequencies of students in knowledge good 33(27.6 %), average 76(63.3%), poor11 (9.1%), in attitude level of students with positive attitude 112(93.3%), negative attitude8 (6.66%).

Keywords: Blood Donations, Students, Frequency.

INTRODUCTION

Blood transfusions are needed for a wide range of health conditions including anaemia, complications during pregnancy and childbirth, severe trauma due to accidents, and surgical procedures. They are also regularly used for patients with conditions such as sickle cell disease and thalassaemia and for products to treat haemophilia. Nearly 120 million units of blood are donated every year. However, this is not sufficient to meet the global need many patients requiring a transfusion do not have timely access to safe blood. Blood cannot be stored indefinitely, meaning there is a constant need for donations. Regular donations are required to ensure there is always a supply for those in need. Despite global need, donation rates differ around the world and some high-income countries see up to seven times more donations than low-income countries. Maintaining safe and effective procedures around the collection, storage and use of donated blood is essential. Collectively called haemovigilance, these procedures cover the entire blood transfusion chain and are used to standardize the use of blood in healthcare [1].

WORLD HELATH ORGANIZATION

Blood is an essential body fluid primarily required for regulating the body's systems and maintaining homeostasis. However, the demand for a safe supply of blood is increasing on a daily basis internationally, and India is no exemptio Although previous studies reported that blood transfusions save millions of lives each year, the quality and safety of blood remain a serious concern, particularly in developing countries Indeed, concern about the demand and supply for blood is increasing in developed and developing countries. However, out of 195 nations, the blood supply of 119 (61%) nations were found inadequate for healthcare needs Interestingly, early findings indicated that India has the world's largest shortage of blood supply. Conversely, the prevalence of

blood borne diseases in India is on the rise as blood is essential for the treatment of various diseases (e.g., sickle cell anemia), bleeding disorders (e.g., hemophilia), and cancer. Evidence indicates that India is home to major surgical procedures, such as ~230,000,000 operations, 331,000,000 cancer procedures, and 10,000,000 pregnancy-related operations, every year. Such procedures require a large amount of blood [2].

Blood is a vital human body component, constantly breaking down and synthesizing through natural processes. Despite remarkable advancements in medicine and technology, artificial synthesis of blood is still impossible, rendering donation the sole means of providing blood and its components [1]. With the rise in life expectancy, traumatic accidents, blood diseases, cancers, and obstetrical complications, blood transfusion has become an essential management approach for numerous life-threatening conditions [3].

Providing sufficient, secure, accessible blood is challenging in developing nations5. Every year, over 112 million units of blood are collected, with nearly half of them obtained in high-income nations. Additionally, on average, the donation rate in high-income nations is nine times greater than in low- and middle-income country. As a result, LMICs have greater blood demands but lack a maintained blood supply [3].

OBJECTIVES:

1. To assess the knowledge regarding blood donation among students of bvvs polytechnic college, Bagalkot.
2. To assess the attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot.
3. To find out the correlation between knowledge and attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot.
4. To find out the association between knowledge and attitude regarding blood donation among students of bvvs polytechnic college, Bagalkot

MATERIALS AND METHODS

Study Design

The study adopted a quantitative research approach. The research design used was non-experimental descriptive research design. The study was conducted in bvvs polytechnic college, Bagalkot

Setting of the study: The study was conducted at Bvvs polytechnic (autonomous) at bagalkot.

Participants: Sample consist150 students are studying in first and second year of electroic brachof Bvvs polytechnic (autonomous) at bagalkot.

Sampling Techniques: Stratified random sampling technique was used to select the sample. There were 150 students from first and second year diploma. In that 56 girls and 64from first and second year selected by usage of lottery method.

DESCRIPTION OF DATA COLLECTION:

SECTION 1: Socio Demographic Factors:

Demographic proforma consisted of students age, religion, year of study,place of residency, mother education, father education,Previous Information about blood donation.

SECTION 2:

Self administered Knowledge questionnaire on blood donation had 10and attitude scale has 10items. The subjects were instructed to tick mark (✓) on the space provided towards the correct response. The scoring was done by just counting the correct responses and according to the total score obtained. The highest possible score was 10. It was arbitrarily classified into four levels: [0-3(Poor)], [4-7, (Average)], [7-10(Good)]. Attitude score consist (yes or no) options with positive and negative statements with score (0,1)

DATA COLLECTION

The data was collected on 20/3/2025. The exact time and data planned with college authority and was communicated to the respondents. The investigator approached principal of Bvvs polytechnic at Bagalkot.

VARIABLES UNDER THE STUDY:

Dependent Variables: The dependent variable refers to the level of knowledge and attitude regarding blood donation among students of at Bvvs polytechnic (autonomous) at bagalkot.

Independent Variables: self adminstred knowledge questionnaire and attitude scale.

Statistical Analysis: *Data was collected demographically perform and knowledge questionnaire consisting of 10 question. And attitude question consist 10 characteristic.*

The tool and the scale was validated by 3 experts. Reliability of the structured knowledge questionnaire was established using karlpearson's (α=0.05) Pilot study was conducted on 5 selected diploma students. The main study was conducted among 120 randomly diploma students20/3/2025. Following, self administered questionnaires was administered.

RESULT

The study was begin with selection of 120students who are presented at Bvvs polytechnic(autonomous) at bagalkot. All the students were screened for eligibility criteria. Researcher has allocated to subjects to the group.

Table 1: Description of Socio- demographic characteristic of sample

Variables		Frequency	Percentage (%)
Age	>15 years	4	3.3
	16 -19	46	38.3
	<20 years	0	0
Religion	Hindu	44	36.6
	Muslim	5	4.16
	Christian	0	0
	Other	1	0.8
Year of study	First year	22	18.3
	Second year	28	23.3
	Third year	0	0
Place of residency	rural	43	35
	urban	77	64
Mother education	10^{th}	30	25
	Puc	5	4.1
	Degree	1	0.8
	No any formal education	14	11.6
Father education	10^{th}	36	30
	Puc	8	6.6
	Degree	1	0.8
	No any formal education	5	4.16
Previous Information about blood donation	Yes	48	40
	No	2	1.6

TABLE 1:

Explains the demographic data in the study. It shows that majority of the students 46(38.3%) belong to the age group 16-19years,4(3.3%) students were 15 years of the age group none of them were in 20 years of the age group.

Data regarding religion reveals that majority samples were Hindu 44(36.6%) and Muslims were 5(4.16%), others were 2(0.8%), none of them were Christians.

Data regarding Year of study reveals that majority samples were Second year 28(23.3%) and First year were 22(18.3%), none of them were Third years.

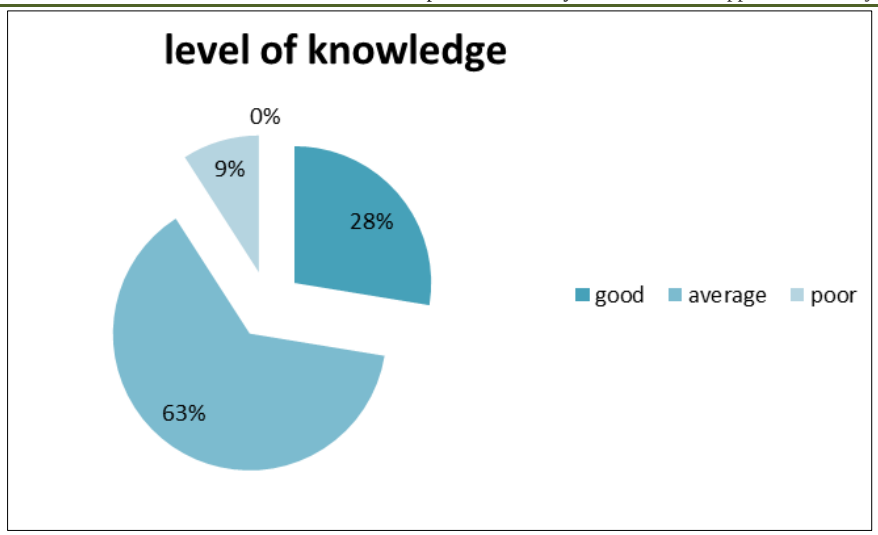
Data regarding Place of residency reveals that majority samples were rural 43(35%) and urban were 77(64%). Data regarding Mother education reveals that majority of mothers were completed 10^{th}, 30(25%) and 14(11.6%) has no any formal education, 5(4.1%) completed puc, 1(0.8%) were degree holders.

Data regarding father education reveals that majority of father were completed 10^{th}, 36(30%) and 5(4.16%) has no any formal education, 8(6.6%) completed puc, 1(0.8%) were degree holders.

Data regarding Previous Information about blood donation reveals that majority of students were had previous knowledge regarding blood donation 48(40%) and 2(1.6%) students not had any previous information about blood donation.

Table 2: Frequency and Percentage Wise Distrubution of Students Knowledge on Blood Donation N=120

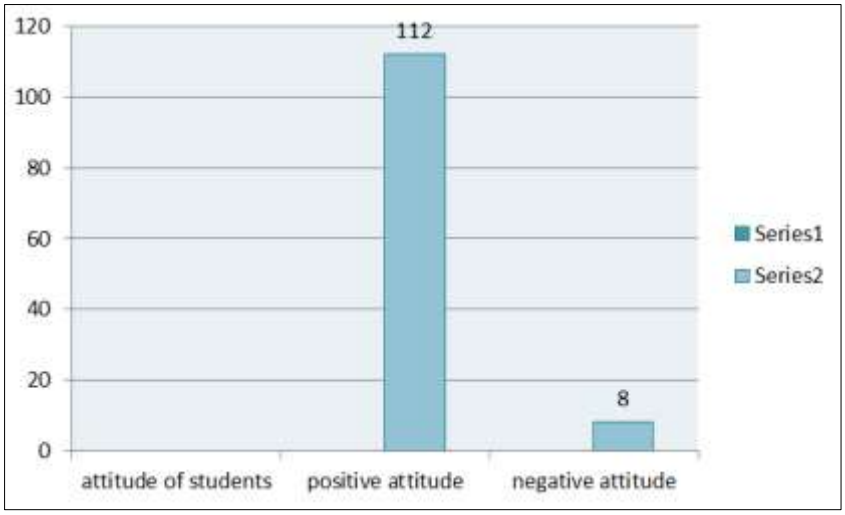
LEVEL OF KNOWLEDGE	FREQUENCY	PERECENTAGE
GOOD	33	27.6
AVARAGE	76	63.3
POOR	11	9.1
TOTAL	120	100



A pie diagram shows that students level of knowledge on blood donation in majority of them had average knowledge (63%), 28% of them had good knowledge, only 9% of them had poor knowledge.

Table 3: Frequency and Percentage Wise Distrubution of Students Attitude on Blood Donation N=120

ATTITUDE SCORE	FREQUENCY	PERECENTAGE
POSITIVE ATTITUDE	112	93.33
NEGATIVE ATTITUDE	08	6.66



A pie diagram shows that students level of attitude on blood donation in majority of them had positive attitude (112%), 8% of them had negative attitude.

Table 4: correlation between knowledge score and attitude score of the students regarding blood donation N=50

Level of knowledge and attitude score	Mean	SD	r value	inference
knowledge	**4.29**	**1.38**	**0.02**	**S**
Attitude	**8.04**	**0.94**		

Results of the pearson correlation indicated that there is a non significant very small positive relationship between knowledge and attitude of the student(r=**0.02)** which was statistically significant at 0.05 level of significance with corresponding p value<0.001. thus hypothesis H1 is accepted and null hypothesis H0i rejected. Therefore, it can be inferred that there is a significant correlation between knowledge and attitude.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH AGE N=120

Table 6.11: To find out the association between knowledge of students regarding blood donation with selected sociolect-demographic variables

Age in years	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
>15 years	0	0	0	11.73	1	0.0006	s
16 -19	6	72	25				
<20 years	7	5	5				

The data presented in Table 6.11 shows the Chi square χ 2 value 11.73 with df =1 and corresponding p value 0.0006 which is less than significant p value (0.5). Thus, there is significant association between knowledge of students regarding blood donation with age.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH RELIGION

Religion	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
Hindu	18	30	20	0.43	1	0.51	ns
Muslim	10	8	8				
Christian	0	0	0				
others	6	5	15				

The data presented in Table 6.12 shows the Chi square χ 2 value 0.43 with df =1 and corresponding p value 0.51 which is more than significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with religion.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH YEAR OF THE STUDY

Year of study	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
First year	27	48	0	0.24	1	0.62	ns
Second year	23	32	0				
Third year	50	0	0				

The data presented in Table 6.13 shows the Chi square χ 2 value 0.24 with df =1 and corresponding p value 0.62 which is more than significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with year of study.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PLACE OF RESIDENCY

Place of residency	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
Rural	20	25	30	0.31	1	0.5	ns
Urban	15	28	2				

The data presented in Table 6.14 shows the Chi square χ 2 value 0.31 with df =1 and corresponding p value 0.5 which is equal to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with place of residency.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH MOTHER OCCUPATION

Mother education	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
10th	0	15	30	0.5	1	0.4	s
puc	0	8	9				
degree	17	9	0				
No any formal education	0	27	5				

The data presented in Table 6.15 shows the Chi square χ 2 value 0.5 with df =1 and corresponding p value 0.4 which is less than to significant p value (0.5). Thus, there is significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH FATHER OCCUPATION

father education	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
10th	0	13	15	0.35	1	0.5	ns
puc	0	18	10				
degree	33	9	0				
No any formal education	0	7	15				

The data presented in Table 6.16 shows the Chi square χ 2 value 0.35 with df =1 and corresponding p value 0.5 which is equal to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PREVIOUS HISTORY OF BLOOD DONATION

Previous history of blood donation	Levels of knowledge			x^2	df	p-value	significance
	good	average	poor				
yes	0	15	15	0.14	1	0.7	ns
no	0	62	43				

The data presented in Table 6.17 shows the Chi square χ 2 value 0.14 with df =1 and corresponding p value 0.7 which is more than to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PREVIOUS AGE

Table 7: To find out the association between attitude of students regarding blood donation with selected sociolect-demographic variables

Age in years	attitude		x^2	df	p-value	significance
	Positive	negative				
>15 years	5	5	0.07	1	0.79	ns
16 -19	60	39				
<20 years	6	5				

The data presented in Table 7.1 shows the Chi square χ 2 value 0.07 with df =1 and corresponding p value 0.79 which is more than to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PREVIOUS RELIGION

religion	attitude		x^2	df	p-value	significance
	Positive	negative				
Hindu	80	14	11.76	1	0.006	s
Muslim	5	9				
christian	0	0				
others	5	7				

The data presented in Table 7.2 shows the Chi square χ 2 value 11.76 with df =1 and corresponding p value 0.006 which is less than to significant p value (0.5). Thus, there is significant association between knowledge of students regarding blood donation religion.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH YEAR OF THE STUDY

Year of study	attitude		x^2	df	p-value	significance
	Positive	negative				
First	50	20	1.24	1	0.26	s
Second	30	20				
Third	0	0				

The data presented in Table 7.3 shows the Chi square χ 2 value 1.24 with df =1 and corresponding p value 0.26 which is less than to significant p value (0.5). Thus, there is significant association between knowledge of students regarding blood donation year of the study.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PLACE OF RESIDENCY

Place of the residency	attitude		x^2	df	p-value	significance
	Positive	negative				
rural	57	20	0.01	1	0.92	ns
urban	33	10				

The data presented in Table 7.4shows the Chi square χ 2 value 0.01 with df =1 and corresponding p value 0.92 which is more than to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with year of the study.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH MOTHER EDUCATION

Mother education	attitude		x^2	df	p-value	significance
	Positive	negative				
10th	34	11	0.01	1	0.9	ns
Puc	11	5				
Degree	19	8				
No any formal education	26	6				

The data presented in Table 7.5 shows the Chi square χ 2 value 0.01 with df =1 and corresponding p value 0.92 which is more than to significant p value (0.5). Thus, there is no significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH FATHER EDUCATION

father education	attitude		x^2	df	p-value	significance
	Positive	negative				
10th	21	8	0.01	1	0.09	s
Puc	22	6				
Degree	27	15				
No any formal education	21	0				

The data presented in Table 7.6 shows the Chi square χ 2 value 0.01 with df =1 and corresponding p value 0.092 which is less than to significant p value (0.5). Thus, there is significant association between knowledge of students regarding blood donation with mother education.

ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH PREVIOUS HISTORY OF BLOOD DONATION

Previous history of blood donation	attitude		x^2	df	p-value	significance
	Positive	negative				
Yes	32	10	2.94	1	0.08	ns
no	70	8				

The data presented in Table 7.7 shows the Chi square χ 2 value 2.94 with df =1 and corresponding p value 0.08 which is less than to significant p value (0.5). Thus, there is significant association between knowledge

of students regarding blood donation with mother education.

CONCLUSION

Blood donation consistently revels that while many students express interest and have a generally positive attitude towards donating, their actual donation rates remains low.

Source of Funding: nil

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