



# “KNOWLEDGE AND ATTITUDE REGARDING BLOOD DONATION AMONG STUDENTS OF SELECTED

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## ABSTRACT

**Background of the study:** Human blood is essential and very important and lifesaving component, which is capable of saving millions of lives, if it is available readily. According to the World Health Organization (WHO), at least one percent of the country’s population should donate to meet the basic requirement for blood and blood products. In India, there is need for about 8 million units of blood every year out of which only about one-third are obtained from voluntary blood donors.

**Title of the study:** Knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

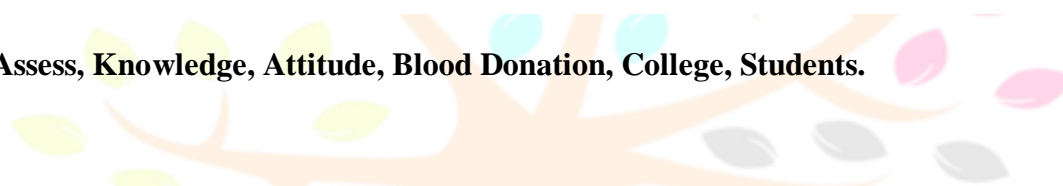
**Objectives:** To assess the knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam. To assess the attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam. To find out the correlation between knowledge and attitude regarding blood donation in selected colleges of Kamrup (M), Assam. To find out association between knowledge of students regarding blood donation with selected demographic variables. To find out the association between attitude of students regarding blood donation with selected demographic variables. To provide informational booklet regarding blood donation. **Materials and methods:** The study adopted a quantitative research approach. The research design used was non-experimental descriptive research design. The study was conducted in conveniently 3 selected colleges of Kamrup Metro Assam i.e., SB Deorah College, B. Borooah College and Guwahati college among 196 students studying in general B.Sc course using Stratified random sampling technique. The data were collected using Structured Self-Administered Knowledge questionnaire. Data was analyzed using SPSS 20 version.

**Results:** From findings of the present study revealed that after conducting the study majority i.e., 102 (52.04%) of the students have moderately adequate knowledge, others 49 (25%) of the students have adequate knowledge,

and 45 (22.96%) of the students have inadequate knowledge and majority i.e., 88 (44.90%) of the students have neutral attitude 44 (22.45%) of the students have negative attitude, and 64 (32.65%) of the students have positive attitude. The association between knowledge with selected demographic variables were not found statically significant at  $p < 0.05$  level of significance. Thus, the research hypothesis  $H_2$  is rejected and null hypothesis  $H_0$  is retained. The association of attitude with selected demographic variable with regard to age was found to be statistically significant. The rest of the demographic variables i.e., gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood, any of your friends have donated blood for attitude were found to be not statistically significant at  $p < 0.05$  level of significance. Thus, the null hypothesis  $H_{02}$  is rejected only in terms of age. The present study reveals a moderately significant positive correlation between knowledge and attitude of the students on blood donation ( $r = 0.37$ ) which was statistically significant at 0.05 level of significance.

**Conclusion:** After conducting the study it can be concluded that majority of the students have moderately adequate knowledge and have neutral attitude towards blood donation. Therefore, it is important for health personnel to take initiatives in educating the students regarding blood donation to encourage them in donating blood in futures as they are the future of the nation.

**Keywords:** Assess, Knowledge, Attitude, Blood Donation, College, Students.



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## CHAPTER-I

### INTRODUCTION

*“Safe blood starts with me, blood saves lives.”*

*-World Health Organization*

#### BACKGROUND OF THE STUDY

Human blood is essential and very important and lifesaving component, which is capable of saving millions of lives, if it is available readily. According to the World Health Organization (WHO), at least one percent of the country's population should donate to meet the basic requirement for blood and blood products. In India, there is need for about 8 million units of blood every year out of which only about one-third are obtained from voluntary blood donors. <sup>(1)</sup>

We all know that blood is often identified as necessary and valuable component for mankind. Blood cannot be replaced with any other element. Education has made a change among the students about blood donation. Large part of the population has a misunderstanding and myths that there is risk of getting infections like HIV, Hep-B etc. and physical weakness after donating blood. Regular blood donation is associated with lower blood pressure and lower risk of heart attacks. Both donors and recipient are benefitted from blood donation. Coming generations account for a major part of the population who can provide sufficient and safe blood. Developing countries should encourage younger individual to donate blood on their own by not expecting any financial rewards. To meet the demand for blood all over the country, there is notable need to assess the knowledge of young healthy and physically fit students. <sup>(2)</sup>

Donating blood is an act of kindness that saves millions of lives worldwide as it is an essential element of human life and there are no substitutes for it. The World Health Organization estimates that blood donation by one percent of the population is generally the minimum needed to meet a nation's most basic requirement for blood. WHO also advocates for 100 percent non-remunerated voluntary blood donation (VBD), citing it as the first line of defense against transmission of diseases through the transfusion route. Although many individuals are eligible to donate blood and numerous awareness campaigns promote its importance, only a small percentage of eligible individuals, about one third, donate blood in the US and other developed countries, and even fewer do so in developing countries. However, the issue of permanent shortage of blood are observed in blood services all over the world. <sup>(3)</sup>

Any donor, who is healthy, fit and not suffering from any transmittable diseases can donate blood. A donor whose age is around 18-60 years age and having a minimum weight of 50 kg can donate blood. Donor's hemoglobin level should be 12.5 gm minimum; pulse rate must be between 50 to 100 beats/min without any irregularities, BP diastolic 50 to 100 mmHg and systolic 100 to 180 mmHg, body temperature should be normal

(not exceed 37.5 degree Celsius). Today, blood transfusion services constitute a pivotal part of any health care delivery system. Adequate and safe supply of blood and blood component is essential, to enable a wide range of critical care procedures to be carried out in hospitals. India with a population of about 150 crore is naturally the country which requires a lot of blood to save the life of citizens. It has been quoted that “there is need of 8 million units of blood every year in India”. Out of this, only half i.e., is 4 million units of blood can be obtained from voluntary blood donors. Rest all comes from replacement blood donation from relatives or paid donors<sup>(4)</sup>

According to World Health Organization (WHO), young people should be the special target population because they from great part full of zeal and enthusiasm. They can be educated to become voluntary donors, when they reach the legal accepted age group so we can inspire to become regular non remunerated blood donors. Therefore, it is a serious need to improve the recruitment and retention of voluntary donor population specially the students to ensure a sustainable and safe blood transfusion practice in the future<sup>(5)</sup>

## NEED OF THE STUDY

Donating blood saves lives and improves health of the people. Based on samples of 1000 people, the blood donation rate is 31.5 percent donation in high-income countries, 16.4 percent in upper-middle-income countries, 6.6 percent in lower-middle-income countries and 5.0 percent in low-income countries. In 2018, 73 percent of reporting countries i.e., 125 out of 171 countries, had a national blood policy. Overall, 66 percent of reporting countries i.e., 113 out of 171 countries, have specific legislation covering the safety and quality of blood transfusion, including 79 percent of high-income countries 63 percent of middle-income countries 39 percent of low-income countries. 60 countries report collecting fewer than 10 donations per 1000 people. Of these, 34 countries are in the WHO African Region, four in the WHO Regions of the Americas, four in the WHO Eastern Mediterranean region, four in the WHO European Region, five in the WHO South-Eastern Asia Region, and nine in the WHO Western Pacific Region. All are low- or middle-income countries.<sup>(6)</sup>

In 2019, October 17, Nicolas Roberts and Spencer James, M Delaney, conducted a cross sectional study regarding the global blood need and availability of blood products. Across 119 countries, the unmet need totaled around 102 359 632 blood product units, equal to 1849 units per 100,000 population globally. Every country in central, eastern, and western sub-Saharan Africa, Oceania, and south Asia had insufficient blood to meet their needs. So, their data proposed that the gap between need of blood and supply of blood or blood donators is large in many low-income and middle-income countries. The gap between need and supply is large in many low-income and middle-income countries, and reinforce that the WHO target of 10-20 donations per 1000 population is an underestimate for many countries. A continuous expansion and escalation of national transfusion services and implementation of evidence-based strategies for blood availability is needed globally, as is more

government support, financially, structurally, and through establishment of a regulatory oversight to ensure supply, quality, and safety in low-income and middle-income countries. <sup>(7)</sup>

In the year 2022 Joy J M, Edwin S A conducted a national level cross-sectional study in five randomly selected states from five regions of the country in India. The study result revealed the clinical demand and supply of blood in India: A National level estimation study. According to the study, the total clinical demand of 251 hospitals with 51,562 beds was 474,627 whole blood units. Based on this, the clinical demand for India was estimated at 14.6 million whole blood units, an equivalent of 36.3 percent donations per 1,000 qualified populations, which will address whole blood and component requirement. The medicine specialty accounted for 6.0 million units (41 percent), followed by surgery 4.1 million (27.9 percent), obstetrics and gynecology 3.3 million (22.4 percent) and pediatrics 1.2 million (8.5 percent) units. The supply was 93 percent which is equivalent to 33.8 donations against the demand of blood. The study also suggested that demand and supply gap of 2.5 donations per 1,000 eligible persons which is around one million units. <sup>(8)</sup>

To fulfill the adequate need of blood, the Government is now encouraging citizens to participate in volunteer health check-up and blood donation drives. <sup>(9)</sup>

Most of the time, if patient needs blood, a replacement blood donor from his/her family or friend needs to donate the blood. In some condition when 100 units of bloods are required even family members and friends cannot meet the demand for blood. This results in involvement of professional or paid donors disguised as blood donors. Blood transfusion is considered as indispensable component of health care as it saves millions of lives each year worldwide. <sup>(10)</sup>

An article published in newspaper “The sentinel; of the land for its people on July 2022. Assam is still short of nearly 29000 thousand units of blood against the annual requirement of 2,42,000 units to save the lives of people who needs bloods. <sup>(11)</sup>

Considering the various factors contributing to knowledge and attitude of blood donation among students are important and it is possible to get good amount of voluntary blood donors from younger generation. So, this study has aimed at assessing the knowledge and attitude of students regarding blood donation. It will also help the researcher understand more about the who wants to conduct a further study regarding blood donation.

## **THE STATEMENT OF PROBLEM**

“A Study to assess the Knowledge and Attitude regarding Blood Donation among students of selected Colleges of Kamrup (M), Assam.”

## **SPECIFIC OBJECTIVES**

1. To assess the knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam.

2. To assess the attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.
3. To find out the correlation between knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.
4. To find out association between knowledge of students regarding blood donation with selected demographic variables.
5. To find out association between attitude of students regarding blood donation with selected demographic variables.

-Provide informational booklet regarding blood donation.

## OPERATIONAL DEFINITIONS

**Assess-** According to Cambridge Dictionary, assess is “to judge or decide the amount, value, quality or importance of something”.<sup>(12)</sup>

In this study, assess refers to process of finding out or to evaluate about the knowledge regarding blood donation among students of selected colleges of Kamrup (M) Assam.

**Knowledge-** According to The Free Dictionary knowledge is “the state or fact of knowing.”<sup>(13)</sup>

In this study, Knowledge refers to the level of understanding of students of colleges regarding blood donation, its benefits and importance.

**Attitude-** According to the Merriam Webster, Attitude is “a mental position with regard to a fact or state”.<sup>(14)</sup>

In this study, attitude refers to the opinions among students of selected Colleges regarding Blood donation, its benefits and importance.

**Blood donation-** According to UK dictionary, blood donation is “The action or process of giving blood for transfusion; an instance of this; a quantity of blood given for this purpose”.<sup>(15)</sup>

In this study, blood donation refers to action or process of giving Blood for transfusion.

**Students-** According to Merriam Webster, student is “one who studies: an attentive and systematic observer”.<sup>(16)</sup>

In this study, students refer to general Bachelor of science 1<sup>st</sup> year and 2<sup>nd</sup> year students of selected Colleges of Kamrup (M), Assam.

**College-** According to oxford dictionary colleges refers to an educational institution or establishment, in particular one providing higher education or specialized professional or vocational training<sup>(17)</sup>.

In this study colleges refers to an institution that offers general Bachelors of science degree to the students.

**Informational booklet**-According to Collins Dictionary, informational booklet is “A booklet is a small, thin book that has a paper cover and that gives you information about something.”<sup>(18)</sup>

In this study, information booklet refers to a small book where information regarding blood donation, its benefits and importance will be given.

## HYPOTHESES

H<sub>1</sub>: There is significant correlation between knowledge and attitude regarding blood donation among students of selected colleges at 0.05 level of significance.

H<sub>2</sub>: There is significant association between knowledge of the students regarding blood donation with selected demographic variables at 0.05 level of significance.

H<sub>3</sub>: There is significant association between attitude of the students regarding blood donation with selected demographic variables at 0.05 level of significance.

## ASSUMPTIONS

- College students may have some knowledge regarding blood donation.
- College students may have varying knowledge and attitude towards blood donation.

## DELIMITATION

The study is delimited to: 1<sup>st</sup> year and 2<sup>nd</sup> year Bachelor of science students of selected colleges of Kamrup (M), Assam.

## CONCEPTUAL FRAMEWORK

Conceptual framework presents logically constructed concepts to provide a general explanation of the relationship among the concepts of the study.<sup>(19)</sup>

Miles and Huberman (1994) defined the Conceptual Framework as a written or visual presentation that explains the main things to be studied in either graphically or narrative from the key factors, concepts or variables and the presumed relationship among them.<sup>(19)</sup>

The present study is intended to assess the Knowledge and Attitude regarding Blood donation among Students of selected Colleges of Kamrup (M), Assam.

A conceptual frame work deals with the concept assembled together according to their relevance to the research problem, which provides a certain frame of reference for clinical practice, research and education. To describe the relationship of concepts the conceptual framework selected for the study is based on, Nola Pender's Health Promotion model (1996).<sup>(19)</sup>

The health promotion model regards every individual as unique with unique characteristics and experiences that affect subsequent actions. The set of variables for behavioral specific knowledge and effect have important motivational significance. These variables can be modified through nursing actions. Health-promoting behavior is the desired behavioral outcome and is the endpoint in the Health Promotion Model. Health-promoting behaviors should result in improved health, enhanced functional ability, and better quality of life at all development stages. The final behavioral demand is also influenced by the immediate competing demand and preferences, which can derail intended health-promoting actions.

The model focused on following three areas:

1. Individual characteristics and experiences
2. Behavior specific cognition and affect
3. Behavioral outcome

**Individual characteristics and experiences** (prior related behavior and personal factors).

In the study, prior behavior of college students was found to be,

- Limited knowledge regarding Blood Donation.
- Misconceptions about getting risk of infection after donating blood.

**Behavior-specific cognitions and affect** (perceived benefits of action, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences)

**Perceived benefit of action:** perceptions of the positive reinforcing consequences of undertaking a health behavior. Here, it refers to existing Knowledge and Attitude of College students regarding blood donation.

**Perceived barriers to action:** perceptions of the blocks, hurdles and personal costs of undertaking a health behavior. In this study perceived barriers to action are negligence, lack of awareness, lack of knowledge and in adequate source of information.

**Activity related affect:** Subjective feeling states or emotions occurring prior to, during and following a specific health behavior. Here, it refers to College students who have positive attitude towards Blood Donation.



**Behavioral outcome:** The desired behavioral end point or outcome of health decision making and preparation for action. It is end-result of behavior and helps to identify and assess short term and long-term outcomes. In the present study, behavioral outcome refers to self-structured questionnaires develop to assess the knowledge and 5-point Likert scale develop to assess the attitude of college students regarding Blood Donation with view to develop informational booklet on blood donation.



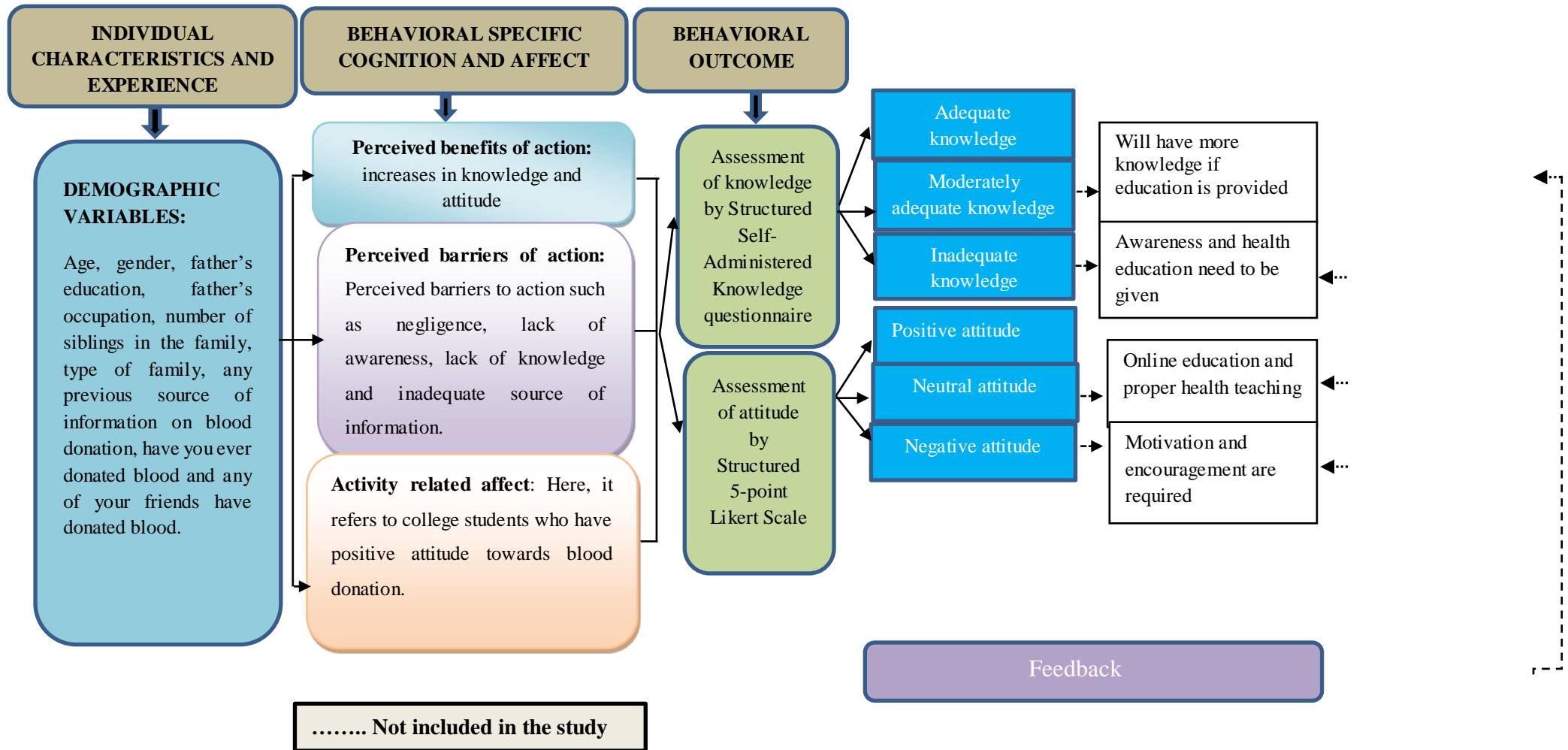


FIGURE 1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED PENDER'S HEALTH PROMOTION MODEL (1996)

## **SUMMARY**

This chapter dealt with the background of the study, need of the study, the statement of problem, objectives, operational definitions, assumption, hypotheses, delimitation and conceptual framework.

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

This chapter deals with the Review of literatures. Review of literature is an important aspect of any research project from beginning to end. It gives character insight into the problem and helps in selecting methodology, tool, and analyzing data. With these in view, an Intensive review of literature has been done. Related literatures were reviewed and studied in depth, so as to broaden the understanding of selected problem. <sup>(19)</sup>

Review of literature for this study is undertaken, under the following headings:

I: Literature related to knowledge regarding blood donation among college students in selected colleges.

II: Literature related to attitude regarding blood donation among college students in selected colleges.

**I: Literature related to knowledge regarding blood donation among college students in selected colleges.**

**Aparnathi C, Chaudhari K, Ahir P, Prajapati (2021)** conducted a quantitative research study to assess the knowledge regarding blood donation among undergraduate students of engineering college, Ahmedabad. The research design adopted was pre-experimental one group pre-test post-test. A total of 100 sample were selected by non-probability convenient sampling technique. The structure knowledge questionnaire was adopted. The study revealed that knowledge majority 83 (83%) of the students had excellent knowledge regarding blood donation, 16 (16%) study samples have good knowledge regarding blood donation and 1 (1%) study samples had average knowledge regarding blood donation. The study concluded that majority of the students had good knowledge regarding blood donation. <sup>(20)</sup>

**Jose N (2021)** conducted a study to assess the effectiveness of planned teaching programme on knowledge regarding blood donation among late adolescent students (18-20years) at Tagore college of arts and science, Chrompet, Chennai. The research approach one group pre-test and post-test design was used. Purposive sampling technique was used to select the sample for the study. The total number of study sample consisted of 30 late adolescent students. Self-administered questionnaire was used for collecting the data. The study result showed that pre-test level of knowledge majority 26 (86.7%) had inadequate knowledge, 4 (13.3%) had moderately adequate knowledge and none of them had adequate knowledge. Regarding post-test level of knowledge majority 29(96.7%) had adequate knowledge, 1 (3.3%) had moderately adequate knowledge and none of them had inadequate knowledge. It is concluded that the structured teaching programme was effective. <sup>(21)</sup>

**Tripathi PP, Kumawat V, Palidar GK (2021)** conducted a descriptive cross-sectional study to assess donor's knowledge, attitude, and perception regarding blood donation. A total 503 whole blood donors participated and convenient sampling technique was used. A structured questionnaire was used for data collection. Majority i.e., 67% of the donors had adequate knowledge towards blood donation. The study concluded that most of the donors are more than satisfied with the blood donation experience and are motivated to inform the transfusion services of any appearance of Covid-19 symptoms post donation. <sup>(22)</sup>

**Ping LK, Seu JY, Lee YM, Chan EA (2020)** conducted a study to determine the Knowledge level and motivation of Hong Kong young adults towards blood donation. In this study a cross-sectional survey research

design was used. The researcher conducted the research on the undergraduate students of a university in Hong Kong using convenience sampling technique. Questionnaire was adopted for data collection. The study revealed that Among the 542 respondents, 274(51.1%) were non-blood donors and 268 (49.9%) were blood donors. Blood donors generally had a better knowledge towards blood donation than non-blood donors. The study concluded that people are more likely to donate blood, according their willingness or own choices rather than external motivation or social influences. <sup>(23)</sup>

**Balu P (2020)** conducted a qualitative study to assess effectiveness of structured teaching programme on knowledge of blood donation among government higher secondary school students of Southupakkam, Kuchipuram district in Tamil Nadu. In this study quasi-experimental research design was used. The sample size consist of 100 students and simple random sampling technique was adopted using lottery method. It showed that among 100 students 88 (88%) had inadequate knowledge and 12(12%) had moderately adequate knowledge in the pre-test. In the post test, 65(65%) students had adequate knowledge and 35(35%) had moderately adequate knowledge. It was concluded that the teaching programme was effective. <sup>(24)</sup>

**Jeba PI, Janet A (2020)** conducted a descriptive study to assess the effectiveness of video assisted programme on the level of knowledge regarding blood donation among GNM 1<sup>st</sup> year students of AMT school, Jammu. Pre experimental research design was adopted for the study. 60 sample size were selected and purposive sampling technique was used. The data was collected by questionnaire method. The study revealed that the pre-test level of knowledge 27(54%) had inadequate knowledge and 23 (46%) had moderate knowledge. In post-test majority 42(84%) had adequate knowledge and 8(16%) had moderate knowledge. The study concluded that the video assisted teaching programme played a vital role in improving the knowledge regarding blood donation among GNM 1<sup>st</sup> year students of AMT school of nursing, Jammu. <sup>(25)</sup>

**Getie A, Bimerew, M, Gedefaw, Demis A (2020)** conducted a cross sectional descriptive research study to assess the level of knowledge about blood donation and associated factors in Ethiopia. A total of 8338 study participated. Convenient sampling technique was used to collect the samples under study. The study showed that majority of the participants i.e., 57.7% had adequate knowledgeable regarding blood donation. the study concluded that there is still a need for education on information regarding blood donation among the general population to impart adequate knowledge to all the general population which will encourage them to donate blood. <sup>(26)</sup>

**Swapna M K (2019)** conducted One group pretest post-test design to determine effectiveness of structured teaching programme on knowledge regarding blood donation among adults of selected areas of Tamil Nadu. A total of 100 samples were selected through Purposive sampling technique. A self-structured questionnaire was used to collect the sample. The study revealed that mean post-test knowledge score was higher than the mean pretest score of respondents in Knowledge regarding Blood donation. it was found that the study population has relatively good knowledge and a favorable attitude about voluntary blood donation. it was concluded that majority of the people need education, awareness and motivation towards blood donation which will encourage them to donate blood in future. <sup>(27)</sup>

**Amandeep K, Rehana A, Minashi M, Mitushu M, NavjitK, Navjot K, et.al (2019)** conducted a descriptive study to assess the effectiveness of structure teaching programme on the knowledge regarding blood donation among college going students of the selected Colleges of Ludhiana, Punjab. A single group pretest posttest design was used. A sample of 50 college student were taken and convenient sampling technique was used. Questionnaire was adopted to collect the data. The study revealed in pre-test, the majority 28 (56%) of subjects has average knowledge scores followed by 19 (38%) which were having poor knowledge scores and 2 (4%) who had very poor knowledge scores. Only 1 (2%) had good knowledge score. After administration of Structured Teaching Programme, the level of post knowledge score of subjects increased as in post-test 24 (48%) of subjects' students achieved very good knowledge scores followed by 20 (40%) who had good level of knowledge scores. Only 6 (12%) had average knowledge scores. The study concluded that after structure teaching the students' knowledge was increased comparing to pre-test which shows that the planned teaching program was effective. <sup>(28)</sup>.

**Viwattanakulvanid P (2019)** conducted a cross sectional study to assess the influencing factors and gaps of blood donation knowledge among university and college students in Yangon, Myanmar. In this study the sampling techniques adopted were both quota and convenient sampling technique. Structure d knowledge questionnaire were given to 320 students. The study revealed that in the “donors eligibility criteria” sub section, 52.5% did not know the minimum interval between two successive blood donation, in “transfusion transmitted infection” sub section nearly half of the participants (47.8%) did not know that malaria can be transmitted through blood and about half of both the non-donors(51.4%) and donors (40.6%) did not know malaria was transfusion transmitted infection., in “blood donation procedure” sub section majority, 78.1% of the participants did not know the amount of blood extracted during blood donation and in “effects of blood donation on blood donors” 59.9% believed that blood donation can make the donors acquire infected diseases. It showed that there is significantly lower knowledge in non-donors compared to donors in total as well as in all sub-section. <sup>(29)</sup>

**Cicolini G, Comparcini D, Alfieri S, Zito E, Marta E, Tomietto M, Simonetti V (2019)** conducted a quantitative research study to assess the nursing student's knowledge and attitude on blood donation in population of Italian nursing students in Italy. In this study the research design adopted was cross sectional design. The study was carried in five Italian Universities. The STROBE checklist was used to grant adequate and complete reporting of research. To collect the data self-administered questionnaires were used on 532 nurses. The overall level of knowledge among Nursing Students donors is high when compared with non-donors. The study concluded that Nursing Students could become effective motivators among students of different universities. <sup>(30)</sup>

**Raju R, Shelar P, Sakpal A, Miss, Salunke N (2018)** conducted a study to assess the knowledge regarding blood donation among the adolescents of selected Colleges in Pune City. The research approach used in this study was quantitative study. Descriptive Survey research design was used and the study was conducted at Selected Junior College of Pune. The total number of samples were 200. Purposive Sampling technique was adopted. The data was collected using self-structured Questionnaire. The study revealed that 1.5%

Adolescents had good knowledge, 79% Adolescents had average knowledge, and 19.5% Adolescents had poor knowledge regarding Blood donation. It also showed that maximum adolescents had average knowledge regarding Blood donation. The study concluded that the adolescent students' needs educations and motivation regarding blood donation to donate blood in future as they are the future of the nation <sup>(31)</sup>

**Raghuwanshi B, Pehlajani NK, Sinha MK (2016)** A cross-sectional study assess the Voluntary Blood Donation among Students - A Cross-Sectional Study on Knowledge and Practice vs. Attitude It was conducted among 399 college going students using convenience sampling from medical, nursing and engineering colleges in Bhubaneswar city. Data was collected through self-administered questionnaires. The study revealed that Knowledge regarding blood donation was adequate among 228 (57.1%) of the students and, 221 (55.4%) students had good practice regarding blood donation. The study revealed that knowledge was significantly better among female students, medical stream and in those whose parents were in non-medical jobs. The study concluded that majority of the students had adequate knowledge about blood donation and same number of percentages had donated blood. <sup>(32)</sup>

## **II: Literature related to attitude regarding Blood Donation regarding college students in selected colleges.**

**Chauhan S (2022)** conducted a descriptive study to assess the knowledge, attitude and practice regarding blood donation among the nursing students in selected nursing college of Kanpur. In this study the samples were collected by using non-probability convenience sampling. The sample size was 300. The data was collected by using self-structured knowledge questionnaire, self-structured 5-point Likert scale and self-structured checklist. Majority of the nursing students i.e., 66.67% had positive attitude and 33.33% had negative attitude. The study concluded majority of the student had positive attitude towards blood donation. <sup>(33)</sup>

**Martinez AES, Fernandez JD, Casal O L, Pazos C M, Rodriguez R (2021)** conducted a study on Blood donation attitudes and knowledge in Spanish undergraduates with roles in health-education. A structured questionnaire was used to collect the data among 1128 samples. Majority of the female students had good attitude towards blood donation The study concluded that health education-related strategies should be included in curriculum to improve the knowledge regarding blood donation which will also encourage and motivate the students in donating blood in future. <sup>(34)</sup>

**Geeta L (2020)** conducted a descriptive study to assess the knowledge and attitude regarding blood donation among undergraduate students in selected college at Gurugram, Haryana. In this study convenient sampling technique was used under non-probability technique. 60 samples were taken and the data was collected using self-administered questionnaire. Attitude regarding blood donation shows that majority (40.67%) of the undergraduate students had the positive attitude, (54.23%) had neutral attitude and (5.08%) had negative attitude regarding blood donation. It reveals that most of the undergraduate students had a neutral attitude regarding blood donation. The study concluded that the majority of the students had neutral attitude towards blood donation. <sup>(35)</sup>

**Malako D (2019)** conducted a cross sectional study for assessment of knowledge, attitude and practice and associated factors of blood donation among health care workers in Ethiopia. The sample size taken was 218. The data was collected through self-administered questionnaire. The study showed that 218 health care workers were involved in study among which 129 were males and 89 were females. Among the study participants 128 were found to have good attitude. The study concluded that the majority of the participants had negative attitude towards blood donation. <sup>(36)</sup>

**Kurian RN, Sarkar S (2019)** conducted a study to assess the knowledge and attitude regarding blood donation among the general public in a selected urban area of New Delhi. A non-experimental research approach with descriptive survey design was used to meet the objectives. 100 sample size were taken and convenience sampling technique was adopted. A structured questionnaire was used to assess the knowledge and an attitude scale to assess the attitude on blood donation. The study revealed that majority i.e., 58% had positive attitude towards blood donation. If the general public is well informed and motivated for blood donation then there is great potential of blood donors, which can meet the safe blood requirements for country. <sup>(37)</sup>

**Atif M (2019)** conducted a cross sectional study to assess the knowledge and attitude towards blood donation in educated and illiterate blood donors attending a tertiary care hospital in Lahore. In this study both qualitative and quantitative research was adopted. A total of 246 sampled was selected. The data was collected using self-administered survey questionnaire. The overall knowledge on blood donation was highest among educated blood donors (91.7%) and lowest among illiterate blood donors (73.2%). Similar results obtained for positive attitude for the blood donation of educated (97.1%) and illiterate (76.7%) blood donors. The study concluded that motivation to donate blood was higher amongst the blood donor with more knowledge and positive attitude towards blood donation. The awareness and knowledge have a significant impact on blood donation in general population. <sup>(38)</sup>

**Verma P, Thakur A, Kesar KP (2018)** conducted a cross section A cross sectional study to assess knowledge, attitude and practice regarding voluntary blood donation among medical students of Jabalpur, central India. In this study non probability sampling was adopted and under that volunteer sampling technique was used. A total of 322 sample were collected using self-administered questionnaire for assessing knowledge and Likert scale to assess the attitude. The study revealed that Students belongs to >20 years of age group has significantly more knowledge and good attitude regarding blood donation, when compared with the students belongs to the 17–20 years of age group. Whereas students belong to 17-20 years of age group has significantly more practice regarding blood donation, when compared with students >20 years of age. In this study male were 54.04% and female were 45.96%. The present study concluded that students had adequate knowledge and good attitude towards blood donation. <sup>(39)</sup>

**Al-Hindi A, Khabour OF, Alzoubi KH (2018)** conducted a cross sectional research study to assess the attitude of blood donors towards the use of their samples and information in biomedical research in Gaza. The sample size consisted of 616 blood donors from the Gaza Strip. The sample were collected using questionnaire method. Purposive sampling technique was used. It showed that the majority of participants showed a positive attitude



towards donating blood for medical research. The study concluded that Blood donors in Gaza Strip have a positive attitude toward blood donation. More awareness is required regarding blood donation to improve their attitude towards blood donation <sup>(40)</sup>

**Majdabadi HA, Kahouei M, Taslimi S, Langar M (2018)** conducted a cross-sectional study, a descriptive analytical approach was used to examine awareness of and attitude towards blood donation among students in Semnan University of Medical Sciences, Semnan, Iran. The sample size taken were 749 students. A structured knowledge questionnaire was used to collect demographic information and the participants' awareness of and attitude towards blood donation. Purposive sampling technique was used. The study concluded that training and culture building activities and programs are essential in order to increase university students' awareness and improve the attitude of students towards blood donation. <sup>(41)</sup>

**Bogdanovic S, Duric , Jovanović R, Bogdanovic J (2017)** conducted a cross-sectional survey study to examine blood donors' awareness and attitudes towards blood transfusion safety in the autonomous province of Vojvodina, Serbia. The survey included 1191 sample. The data for awareness and attitudes were collected using 5-point Likert scale. It was seen that younger age group, those who donated blood for the first time and those with a lower educational level showed the lowest awareness, and the most negative attitudes about, blood safety. The study concluded that education regarding blood transfusion safety was needed for general population to have positive attitude towards blood donation <sup>(42)</sup>

**Gazibara T, Kovacevic N, Maric G, Kurtagic I, Nurkovic S, Kistic T D, Pekmezovic T (2015)** conducted a cross sectional study to relate the factors associated with positive attitude towards blood donation among medical students. The study was conducted among 973 students and structured questionnaire was used to collect the data. Majority of the medical students had positive attitude towards blood donation which mostly included the freshers medical college students. The study concluded that the students studying in final year need more encouragement regarding blood donation to improve their attitude towards blood donation. <sup>(43)</sup>

## SUMMARY

This chapter dealt with the review of literatures. In this study the review of literature has been presented under following heading- Literature related to knowledge regarding blood donation among students in selected colleges, Literature related to attitude regarding blood donation among students in selected colleges.



## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

This chapter includes the research methodology adopted for the study which highlighted the research approach, research design, setting of the study, population, sample, sampling technique, criteria for sample selection, variables, developments of tools, validity and reliability of the tools, pilot study, ethical consideration, data collection procedure and plan for data analysis, schematic design.

Methodology is a systematic, theoretical analysis of the methods applied to a field of study. Research methodology is the general research strategy that outlines the way in which research is to be undertaken and among other things, identifies the methods to be used in it. <sup>(44)</sup>

The present study was conducted to assess the knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

## **RESEARCH APPROACH**

Research approach is an umbrella that covers the basic procedure for conducting research. The research approach tells the research what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. <sup>(43)</sup>

In view of nature of the problem under study quantitative approach was considered as suitable to assess the knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam. This method helps in identifying the existing condition by uncovering facts. Therefore, Quantitative research approach was adopted for the study.

## **RESEARCH DESIGN**

Research design implies the organization of elements into masterful work of art. A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. <sup>(19)</sup>

In this study Non-experimental descriptive research design was adopted for the present study as it describes the characteristics of the problem, phenomenon, situation, or group under study in a natural setting without imposing any control or manipulation. In this study the researcher wants to assess the knowledge and attitude regarding blood donation among college students in selected colleges of Kamrup (M), Assam.

## **RESEARCH SETTING**

According to Polit and Beck (2008) settings is the physical location and condition takes place in a study. Research settings are the specific areas from where the data are collected. <sup>(44)</sup>

The study was conducted among students of selected colleges of Kamrup (M), Assam. Kamrup Metro district has 18 Colleges that provides Bachelor of Science course according to the list of colleges/institutions updated by Government of Assam, on 29<sup>th</sup> June,2022. (Appendix I)

The total no of colleges that offering general B.Sc. courses in Kamrup (M), Assam is 18. Out of which for the present study 3 Government colleges were selected conveniently namely- SB Deorah College, Ulubari, B Barooah College, Ulubari and Guwahati College, Noonmati.

## POPULATION

Population is the aggregation of all the units in which researcher is interested. In this study population consists of all the college students

**Target population:** Target population refers to the entire population in which a researcher is interested and which he or she would like to generalize the study results. <sup>(19)</sup>

In this study the target population comprised of all the general B.Sc. college students of Kamrup (M), Assam.

**Accessible population:** The accessible population comprised of samples from the target population that are accessible to the researcher as study participants. <sup>(19)</sup>

In this study the accessible population are the general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year students studying in 3 conveniently selected Colleges i.e, SB Deorah College, Ulubari; B Barooah College, Ulubari and Guwahati College, Noonmati of Kamrup (M), Assam. The total number of students from each college were taken and calculated after interacting with the class teachers of each year i.e., 1<sup>st</sup> year and 2<sup>nd</sup> year. The class register was used for getting the total number of students.

**TABLE 1**

**SELECTION OF DESIRED SAMPLE SIZE FROM 3 SELECTED COLLEGES FROM 1<sup>st</sup> YEAR AND 2<sup>nd</sup> YEAR**

COLLEGE NAME	CLASS	NO. OF STUDENTS
B Barooah College, Ulubari	1 <sup>st</sup> year	69
	2 <sup>nd</sup> year	75
SB Deorah College, Ulubari	1 <sup>st</sup> year	60
	2 <sup>nd</sup> year	68
Guwahati College, Noonmati	1 <sup>st</sup> year	62
	2 <sup>nd</sup> year	58
Total		392

## SAMPLE AND SAMPLE SIZE

The entire set of individuals or objects having some common characteristics selected for a research study (e.g., students of colleges) sometimes referred to as the universe of the research study. <sup>(19)</sup>

In this study the sample consist of the general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year students.

Sample size was calculated using Raosoft sample size calculator, the sample consists of students from 3 conveniently selected Government colleges of Kamrup (M), Assam. The sample size was determined using Raosoft sample size calculator with 5 percent margin of error, 95 percent confidence level and response distribution of 50 percent. The total calculated sample size for this study was 196 students.

## **SAMPLING CRITERIA**

The present study was selected based on the inclusive and exclusive criteria:

### **Inclusion criteria**

- All the male, female and transgender students studying in general science stream.
- College students who are willing to participate.

### **Exclusion criteria**

- College students who are not available at the time of data collection.
- College students studying in professional courses.

## **SAMPLING TECHNIQUE**

Sampling technique defines the process of selecting a representative segment of the population under study. <sup>(19)</sup>

In this study proportionate stratified random sampling technique was adopted.

Stage I: There are 18 colleges in Kamrup (M), Assam that provides general B.Sc. degree to the students. 3 colleges were selected conveniently namely - Guwahati College, Noonmati; SB Deorah College, Ulubari; and B Borooah College, Ulubari.

Stage II: The researcher used proportionate stratified random sampling technique to collect the sample by class wise stratification. In which B Borooah College had 144 students, SB Deorah College had 128 students and Guwahati College had 120 students combining all the students the total was 392. Out of which only 50 percent of the population were taken from each college by proportionate stratification. The total sample size was 196. 72 students were selected from B Borooah, 64 students from SB Deorah and 60 students from Guwahati College through simple random sampling technique using lottery method.

Stage IV: In lottery method the number of students were selected by writing numbers in separate slips of paper. The slips were folded in similar manner. Each student was asked to pick the slip, the students who picked the slip with odd numbers written on it were selected and for those students who picked even number were eliminated. In this way every student had equal chance for participation.

**TABLE 2**  
**CLASS STRATIFICATION**

COLLEGE NAME	CLASS	NO. OF STUDENTS	PROPORTIONATE SAMPLE SIZE
B Barooah College	1 <sup>st</sup> year	69	35
	2 <sup>nd</sup> year	75	37
SB Deorah College	1 <sup>st</sup> year	60	30
	2 <sup>nd</sup> year	68	34
Guwahati College	1 <sup>st</sup> year	62	31
	2 <sup>nd</sup> year	58	29
Total		392	196

#### VARIABLES

##### Demographic

##### variables-

Demographic variables were age, gender, father's education, father's occupation,

number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood.

**Research variables-** The research variables of the study were the knowledge and attitude regarding blood donation in selected colleges of Kamrup (M), Assam.

## TOOLS AND TECHNIQUE

### Development of tool

According to Sharma KS (2019), "A research instrument is a device used to measure the concept of interest in a research project that a researcher used to collect data".<sup>(19)</sup>

The tools developed for research should be the medium by which data were best gathered for drawing conclusion pertinent to the study. Based on the objectives of the study, tools were developed in order to generate data.

**Section A:** Demographic variables were age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood.

**Section B:** Structured Self-Administered Knowledge questionnaire for assessing knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam.

**Section C:** Structured 5-point Likert scale assessing attitude regarding blood donation among students of selected Colleges of Kamrup (M), Assam.

### Description of research tool

After reviewing the literature (research and on-research) discussion with experts, a structured self-administered knowledge questionnaire, structured 5-point Likert scale was prepared. The tool consists of the following sections:

**Section A:** Demographic variables includes age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood.

**Section B:** Structured Self-Administered Knowledge questionnaire for assessing knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam.

The tool consists of 24 closed ended multiple-choice questions to assess the knowledge regarding blood donation. Each correct answer is rewarded as one (1) mark and the wrong answer carried zero (0) mark. The score is interpreted as follows:

- (Mean + Standard deviation) = Adequate knowledge (>17)
- (Mean  $\pm$  Standard deviation) = Moderately adequate knowledge (13-17)
- (Mean – Standard deviation) = Inadequate knowledge (<13)

**Section C:** Structured 5-point Likert scale for assessing attitude regarding blood donation among selected colleges of Kamrup (M), Assam.

The 5-point Rating scale (strongly agree, agree, uncertain, disagree, strongly disagree) containing the mixture of positive and negative declarative statements regarding donating blood was used.

For a positive statement:

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
5	4	3	2	1

For a negative statement:

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
1	2	3	4	5

The tool consisted of 20 items to assess the attitude of college students in selected colleges. The lowest score for every question was rewarded as 1 and the highest score was 5. The score is interpreted as follows:

- Positive attitude: (Mean + Standard Deviation) (>79)
- Neutral attitude: (Mean  $\pm$  Standard Deviation) (58-79)
- Negative attitude: (Mean – Standard Deviation) (<58)

### VALIDITY OF TOOL

The tool was prepared with the problem statement, objectives, hypotheses, demographic Performa to assess demographic variables, structured self-administered knowledge questionnaire to assess the knowledge and attitude regarding blood donation and validation certificate was given to 9 experts. Among 9 experts, 5 of them were from Medical Surgical Department followed by 2 from Community Health Nursing Department and 2 were doctors from Pathology Department. (Appendix-C)

The experts were requested to judge the tool in terms of relevancy, adequacy and appropriateness. Modifications were done as requested by the experts in the demographic variables, Structured Self-Administered Knowledge questionnaire, structured 5-point Likert scale and Informational booklet as advised by the different experts. The research tools were modified before the data collection as advised by the different experts. With 100% agreement the approved items were accepted. (Appendices B<sub>2</sub>-B<sub>10</sub>)

In demographic variables: question number 8 and 9 were added the questions were; have you ever donated blood and any of your friends have donated blood.

In Structured Self-Administered Knowledge questionnaire item number 3 and 12 were modified. Age was asked to kept open.

In structure 5-point Likert scale questionnaire, item number 12 which was changed from donating blood makes us suffer from flu and cough to HIV/AIDS.

In Informational booklet the experts had advised to put introduction regarding blood donation and age limit for blood donation.

### RELIABILITY OF THE TOOL

Reliability is the degree of consistency with which the attributes or variables are measured by an instrument. <sup>(19)</sup>

The reliability of the tool was performed among general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year students of Science Departments in Cotton University, who met the required population criteria by using Guttman split half method. Structured Self-Administered Knowledge questionnaire on the knowledge regarding blood donation which



consists of 24 items. The reliability of the tool was elicited by using split half method and the value of 'r' is found to be 0.82 which indicate that the tool was reliable and was statistically significant.

The reliability of the self-stated questionnaire on attitude regarding blood donation consists of 20 items. The reliability of the tool was elicited by using split half method and the value of 'r' is found to be 0.85 which indicate that the tool was reliable.

## PILOT STUDY

A pilot study is referred to a small-scale preliminary tryout of the method to be used in an actual large study, which acquaints the researcher with problems that can be corrected in population for the large research study or is done to provide the researcher with an opportunity to try out the procedure, methods and tools of data collection.<sup>(19)</sup>

The purpose of the Pilot study was: -

- To evaluate the tool/instrument developed.
- To find out the feasibility of conducting the final study.
- To determine the method of statistical analysis

After obtaining formal permission from the authority (Appendix- E<sub>1</sub>), the pilot study was conducted at Cotton University, Pan bazar in Science Department on the month of December from 4/12/22 to 17/12/22 for 2 weeks. The sampling technique used was stratified random sampling technique. The data was collected from students by questionnaire method. The demographic variables, Structured Self-Administered Knowledge questionnaire for assessing the knowledge and Likert scale for assessing the attitude were administered in English language. The data were analyzed by using descriptive and inferential statistics. Pilot study consisted of 10 numbers of 1<sup>st</sup> year and 2<sup>nd</sup> year students of Science Department in Cotton University, Pan bazar.

The pilot study consisted of 10 general 1<sup>st</sup> year and 2<sup>nd</sup> year B.Sc. degree college students. Majority i.e., 5 (50%) of the students belonged to the age group of 18 years. Most i.e., 6(60%) of the students were male. Regarding father's education of the college students, majority i.e., 4 (40%) were professional degree. Majority i.e., 8 (80%) of the father's occupation were professional. Majority i.e., 6 (60%) of the college students had only one sibling. Maximum i.e., 9 (90%) of the college students belonged to nuclear family. Regarding the previous source of information on blood donation 6(60%) of the college students got the knowledge from the media. When asked if any of their friends have ever donated blood, majority of the students i.e., 7 (70%) responded 'Yes'. Regarding the question if they have ever donated blood 8(80%) of the college students responded 'Yes'. Results revealed that majority 4 (40 %) of participant had inadequate knowledge and 6 (60 %) of participant had neutral attitude. Correlation between knowledge and attitude regarding blood donation among college students 'r' value was 0.36 and p value was 0.30 which indicates that there was a moderately positive correlation between knowledge and attitude among students regarding blood donation. Thus, hypothesis H<sub>1</sub> was accepted. The association of knowledge with demographic variables revealed that the chi-square values calculated for demographic variable such as any of your friends have donated blood ( $\chi^2=5.8$ ). Result showed that the college student who knows about friends that have donated blood was found to be significant at  $p>0.05$  among students of selected college.

Therefore, hypothesis H<sub>2</sub> was found significant for the selected demographic variable such as any of your friends have donated blood. Therefore, hypothesis H<sub>2</sub> for demographic variable - any of your friends have donated blood was accepted. The association of demographic variables with attitude after calculating the chi-square values showed the demographic variables such as age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood were not found significant at  $p > 0.05$ . Therefore, H<sub>3</sub> was rejected.

## ETHICAL CONSIDERATIONS

- The study was conducted after obtaining ethical approval from Institutional Ethical Committee of PEWS Group of Institutions, Guwahati-26, Assam. (Appendix - A)
- Permission was taken from the Principals of Guwahati College, SB Deorah College and B. Borooah College. (Appendices E<sub>2</sub>- E<sub>4</sub>)
- Informed written and verbal consent were obtained from the students of B. Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year. (Appendix H)
- Confidentiality was maintained during data collection.

## DATA COLLECTION PROCEDURE

Data collection is precise systematic gathering of information relevant to the research purpose or the specific objectives, questions and hypotheses of study. <sup>(19)</sup>

- Formal administrative permission was taken from the Head of the Institution to conduct the study in selected 3 Colleges.
- The data was collected in the month of May from 02/05/2023 to 27/05/23 for 4 weeks from General B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year students by using stratified random sampling technique.
- Anonymity and confidentiality were maintained.
- Written consent was taken from the participants who were indicating their willingness to participate in the study.
- After getting permission, samples were selected using stratified random sampling technique.
- The student researcher introduced herself and explained the purpose of the study.
- Samples that are fulfilling the inclusion criteria were selected. 18 Colleges that provides general B.Sc. degree were found in Kamrup (M), Assam and out of which 3 colleges were selected conveniently.
- The researcher was conducting the research using the Structured Self-Administered Knowledge questionnaire to assess the knowledge and Likert Scale was used to assess the attitude regarding blood donation among the college students.
- The questionnaires were distributed after the students were chosen randomly through lottery method.

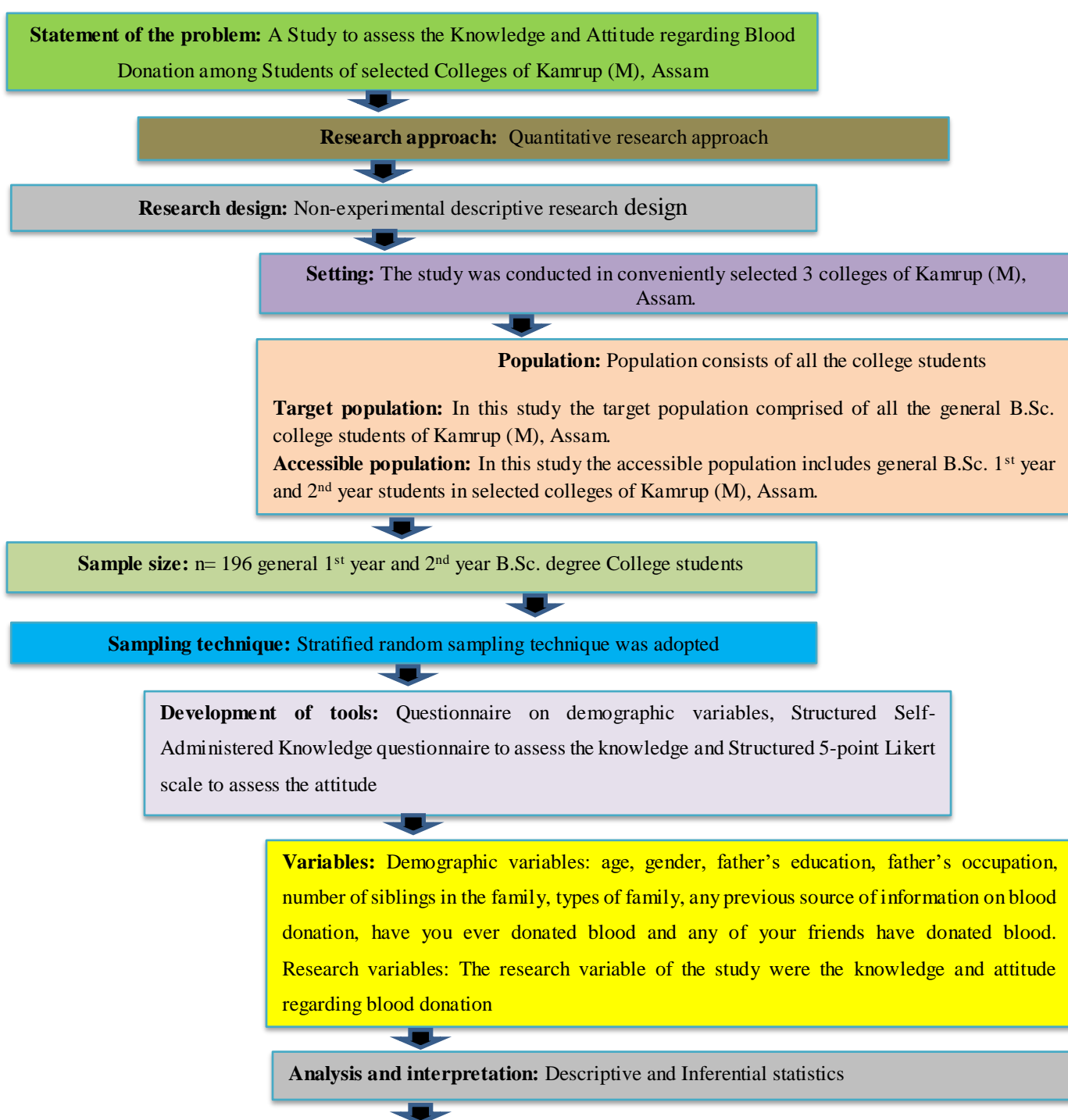
- After conducting the study an informational booklet was distributed among all the participants about the blood donation on definition of blood donation, composition of blood, ABO blood grouping, regarding the individual who needs blood, benefits of blood donation and what debars a person from donating blood.
- College I- SB Deorah College: Permission from the Principal was taken on 2<sup>nd</sup> May, 2023. The principal approved to conduct the study. Only 1<sup>st</sup> year and 2<sup>nd</sup> year students were included in the study and the data was collected on 3<sup>rd</sup> May, 2023. Total number of students in Bachelor of Science degree were 128 in 5 departments. From 128 students, 50 percent of the population were taken and the sample size under the study were 64.
- College II-B Borooah College: Permission from the Principal was taken on 8<sup>th</sup> May, 2023. The principal allowed for conducting the study. The data was collected on 11<sup>th</sup> May, 2023. Total number of students in Bachelor of Science degree were 144 in 7 departments. From 144 students, 50 percent of the population were taken and the sample size under the study were 72.
- College III-Guwahati College: Permission from the Principal was taken on 2<sup>nd</sup> May, 2023. The principal allowed for conducting the study. The data was collected on 7<sup>th</sup> May, 2023. From 120 students, 50 percent of the population were taken and the sample size under my study were 60.

## PLAN FOR DATA ANALYSIS

Analysis of the data was done by descriptive and inferential statistics based on the objectives of the study.

**Descriptive Statistics:** Frequency and percentage distribution, mean and standard deviation (SD) was used for analysis of Knowledge and Attitude with demographic variables.

**Inferential Statistics:** Karl Pearson's correlation coefficient method was used to find out the relation between knowledge and attitude regarding blood donation among students of selected colleges and Chi- square test was adopted to find out the association between the knowledge and attitude with selected demographic variables.



**FIGURE 2: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY****SUMMARY**

This chapter dealt with the research methodology adopted for the study which highlighted the research approach, research design, setting of the study, population, sample and sample size, sampling technique, criteria for sample selection, variables, development of tools, validity of tool, reliability of the tool, pilot study, ethical considerations, data collection procedure, plan for data analysis and schematic representation of the research methodology.



## ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected from 196 Students of selected Colleges of Kamrup (M), Assam. The present study aimed to assess the Knowledge and Attitude regarding Blood Donation among Students of selected colleges of Kamrup (M), Assam. Data were fitted in the master sheet and were calculated using SPSS version 20. The purpose of analysis is to reduce the data in an interpretable form, so that research problem can be studied.

According to Polit and Hungler (1999) “Data analysis is the systematic organization and synthesis of research hypothesis using those data”.<sup>(44)</sup>

### Specific objectives

The analysis and interpretation of data was done by using descriptive and inferential statistics based on the following objectives:

1. To assess the knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam.
  2. To assess the attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.
  3. To find out the correlation between knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.
  4. To find out the association between knowledge of students regarding blood donation with selected demographic variables.
  5. To find out the association between attitudes of students regarding blood donation with selected demographic variables.
- To provide informational booklet regarding blood donation.

### Hypotheses

The following hypotheses were tested at 0.05 level of significance:

H<sub>1</sub>: There is significant correlation between knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

H<sub>2</sub>: There is significant association between knowledge of students regarding blood donation with selected demographic variables.

H<sub>3</sub>: There is significant association between attitudes of students regarding blood donation with selected demographic variables.

## **ORGANIZATION AND INTERPRETATION OF DATA**

The obtained data were analyzed, tabulated and interpreted by employing descriptive and inferential statistics. The data collected were organized under the following sections:

**Section I:** Frequency and percentage distribution of demographic variables of students regarding blood donation.

**Section II:** Frequency and percentage distribution of knowledge and attitude of students regarding blood donation.

**Section III:** Correlation between knowledge and attitude of students regarding blood donation.

**Section IV:** Association between knowledge of students regarding blood donation with selected demographic variables.

**Section V:** Association between attitudes of students regarding blood donation with selected demographic variables.

### **Section I: Frequency and Percentage distribution of demographic variables of students regarding blood donation**

This section deals with descriptive analysis of demographic variables of college students with respect to age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood. Findings are presented in table 1.1-1.9 and figure 1.1-1.9.

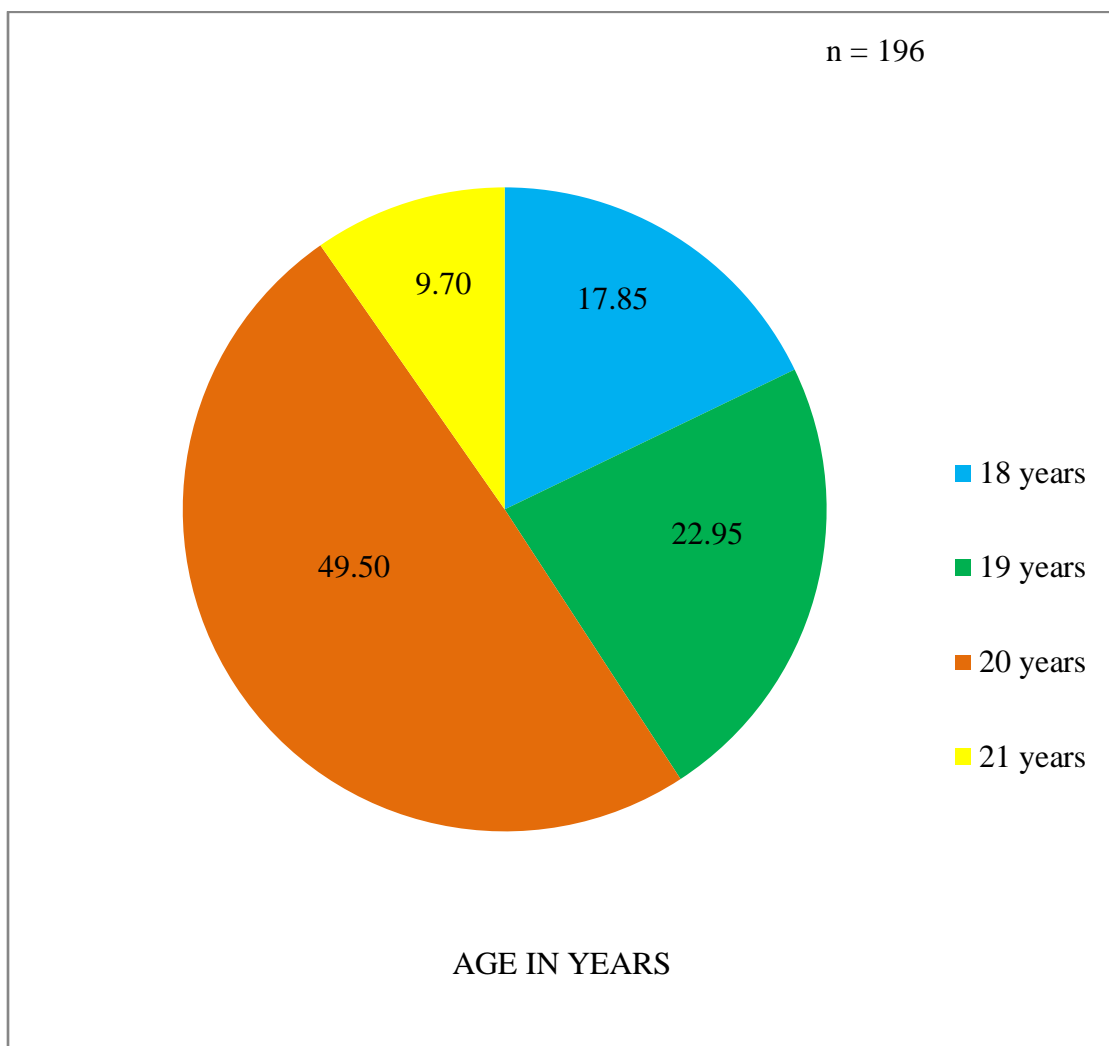
**TABLE 1.1**  
**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR AGE**

n = 196

AGE (IN YEARS)	FREQUENCY (f)	PERCENTAGE (%)
18	35	17.85
19	45	22.95
20	97	49.50
21	19	9.70
Total	196	100

The data presented in Table 1.1 shows that out of 196 students, majority i.e., 97 (49.50%) belongs to the age group of 20 years followed by 45 (22.95%) belongs to the age group of 19 years, 35 (17.85%) belongs to the age group of 18 years, and 19 (9.70%) belongs to the age group of 21 years.





**FIGURE. 1.1**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR AGE**

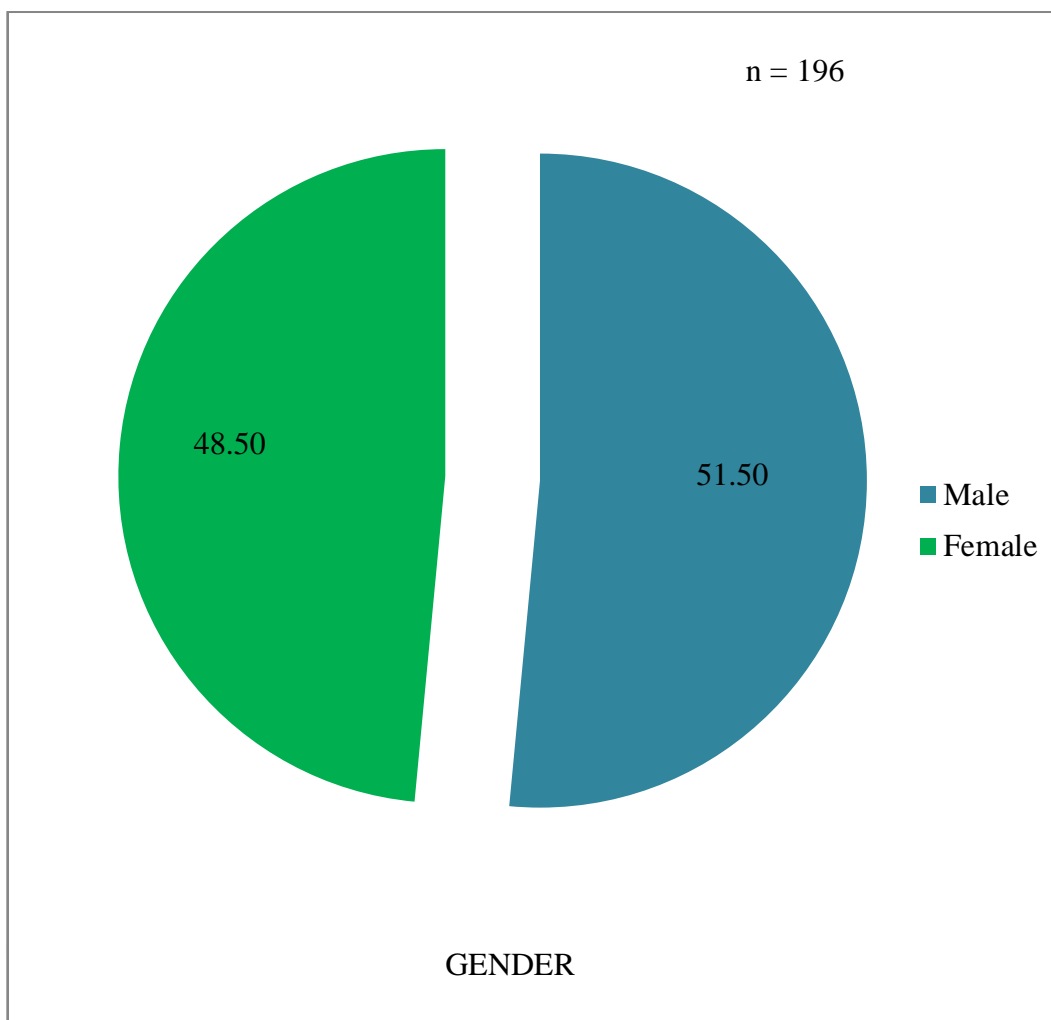
**TABLE 1.2****FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR GENDER**

n = 196

<b>GENDER</b>	<b>FREQUENCY (<i>f</i>)</b>	<b>PERCENTAGE (%)</b>
Male	101	51.5
Female	95	48.5
Transgender	-	-
Total	196	100

The data presented in Table 1.2 shows that out of 196 students, majority i.e., 101 (51.5%) students were male and 95 (48.5%) students were female. No transgender students were found among the college students.





**FIGURE.1.2**

**SPLIT PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO THEIR GENDER**



**TABLE 1.3**

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO FATHER'S EDUCATION**

n = 196

FATHER'S EDUCATION	FREQUENCY ( <i>f</i> )	PERCENTAGE (%)
Professional degree	42	21.43
Graduate	93	47.45
Intermediate	-	-
High school	51	26.02
Middle school	8	4.08
Primary school	2	1.02
Illiterate	-	-
Total	196	100

The data presented in Table 1.4 shows that out of 196 students, majority i.e. 93 (47.45%) of father's education were graduate followed by 51 (26.02%) of father's education were high school, 42 (21.43%) of father's education were professional, 8 (4.08%) of their father's education were middle school and 2 (1.02%) of father's education were primary. None of the father's education falls under the intermediate and illiterate.

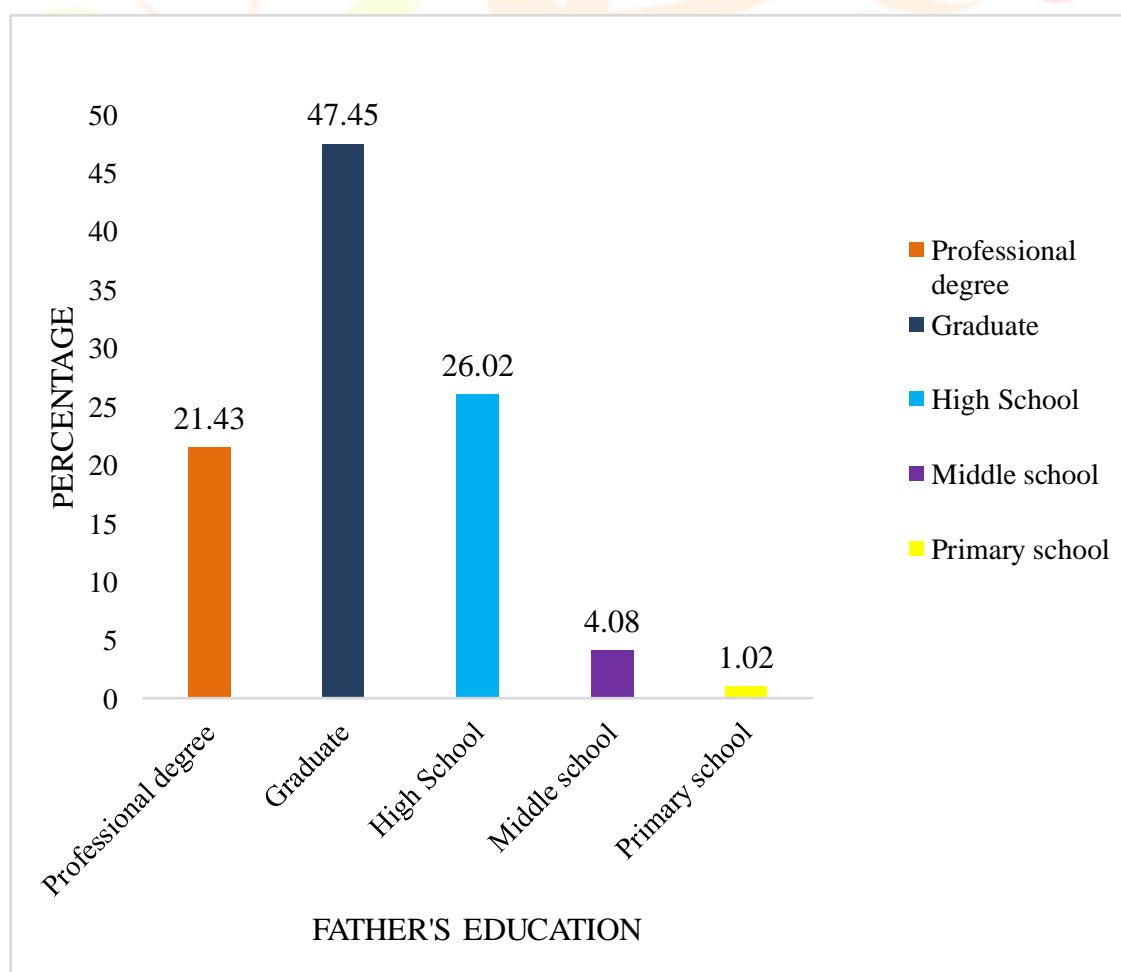


FIGURE. 1.3

## BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO FATHER'S EDUCATION

**TABLE 1.4**

### FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO FATHER'S OCCUPATION

n = 196

FATHER'S OCCUPATION	FREQUENCY ( <i>f</i> )	PERCENTAGE (%)
Professional	27	13.78
Semi-professional	56	28.57
Clerical	66	33.67
Skilled workers	26	13.27
Semiskilled	11	5.61
Unskilled	5	2.55
Unemployed	5	2.55
Total	196	100

The data presented in Table 1.4 shows that out of 196 students, majority i.e., 66 (33.67%) of father's occupation were clerical followed by 56 (28.57%) of father's occupation were semi-professional, 27 (13.78%) of father's occupation were professional, 26 (13.27%) of father's occupation were skilled workers, 11 (5.61%) of father's occupation were semi-skilled, 5 (2.55%) of father's occupation were unskilled and 5 (2.55%) of father's occupation were unemployed.

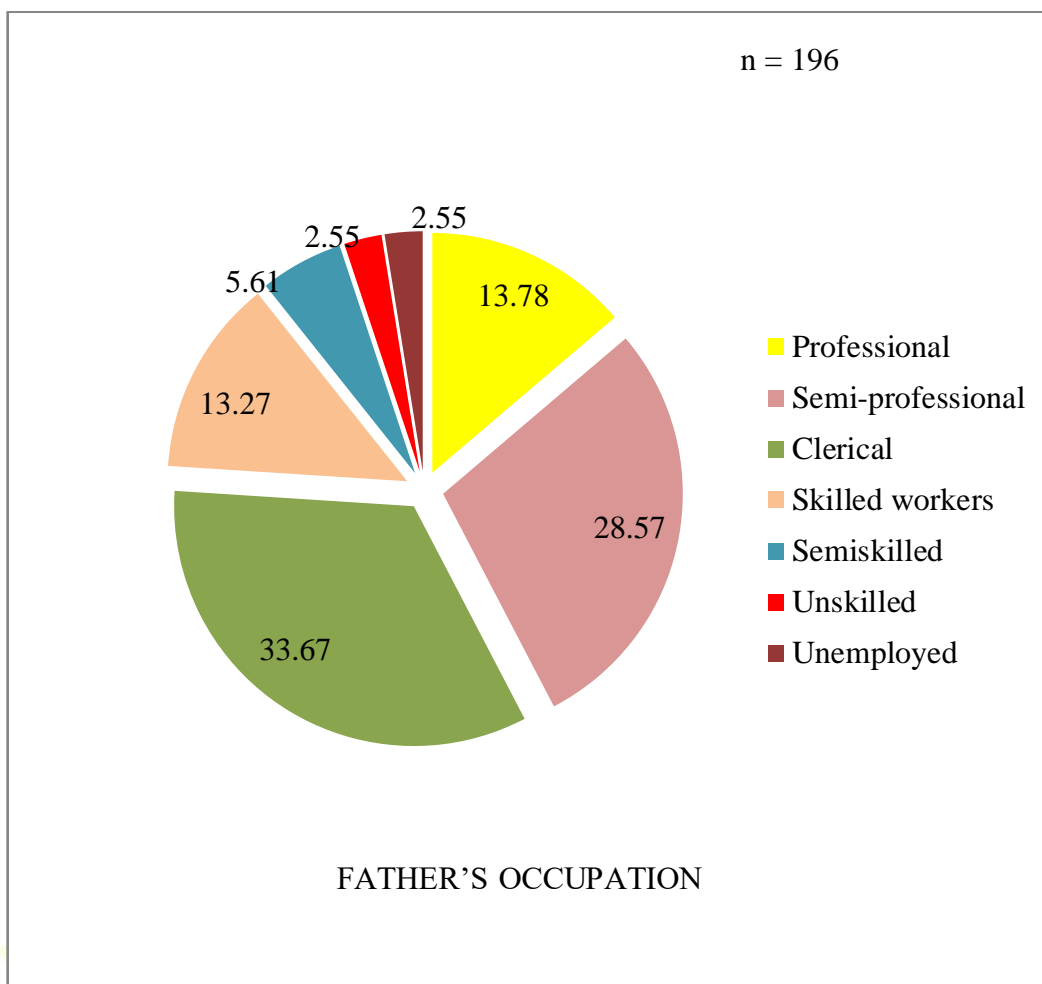


FIGURE. 1.4

**SPLIT PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO FATHER'S OCCUPATIONS**



**TABLE 1.5**  
**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO NUMBER**  
**OF SIBLINGS IN THE FAMILY**

n = 196

NUMBER OF SIBLINGS IN THE FAMILY	FREQUENCY ( <i>f</i> )	PERCENTAGE (%)
No sibling	16	8.16
One	108	55.10
Two	49	25
More than two	23	11.74
Total	196	100

The data presented in Table 1.5 shows that out of 196 students, majority i.e., 108 (55.10%) of the students had one sibling in the family followed by 49 (25%) of the students having two number of siblings in the family, 23 (11.74%) of the students having more than two number of siblings in the family and 16 (8.16%) of the students did not have any siblings in the family.

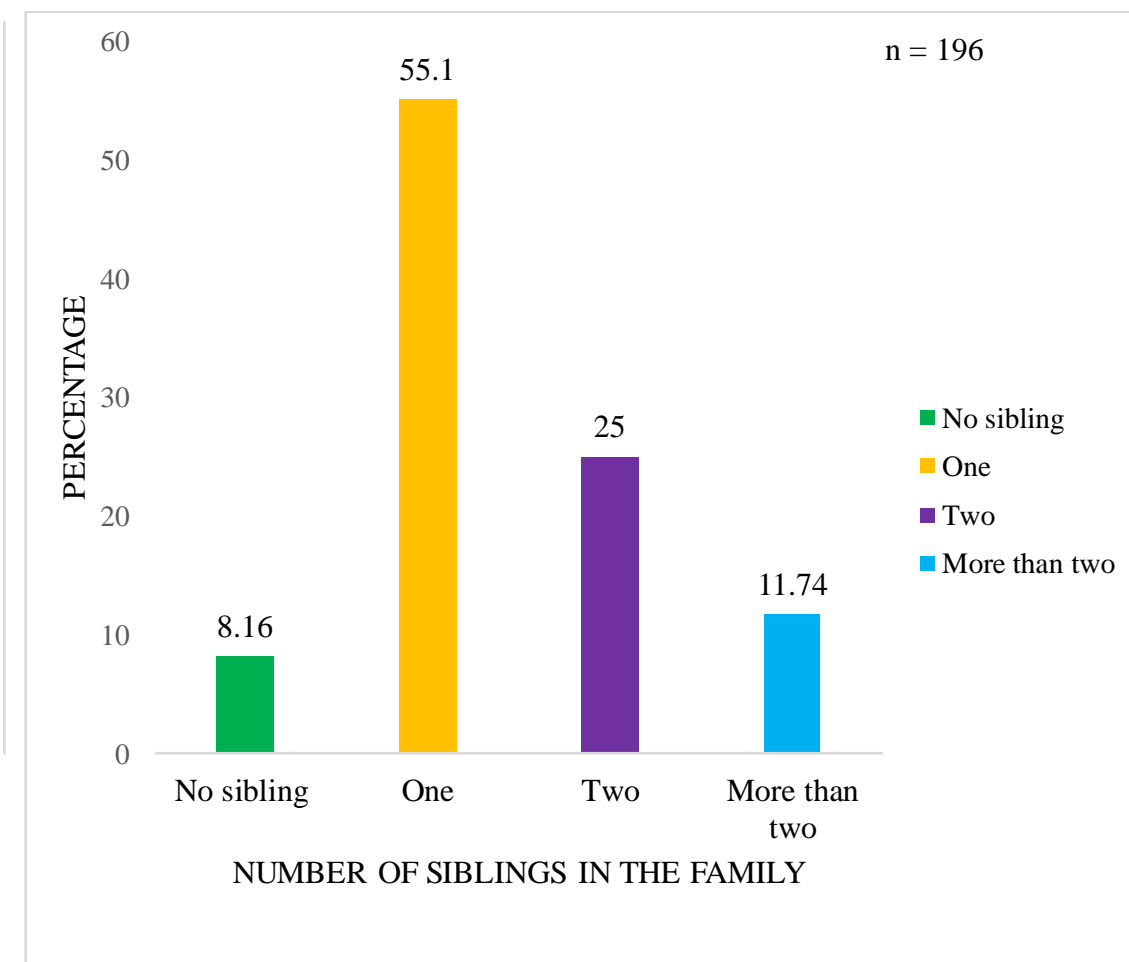


FIGURE. 1.5

BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO NUMBER OF SIBLINGS IN THE FAMILY





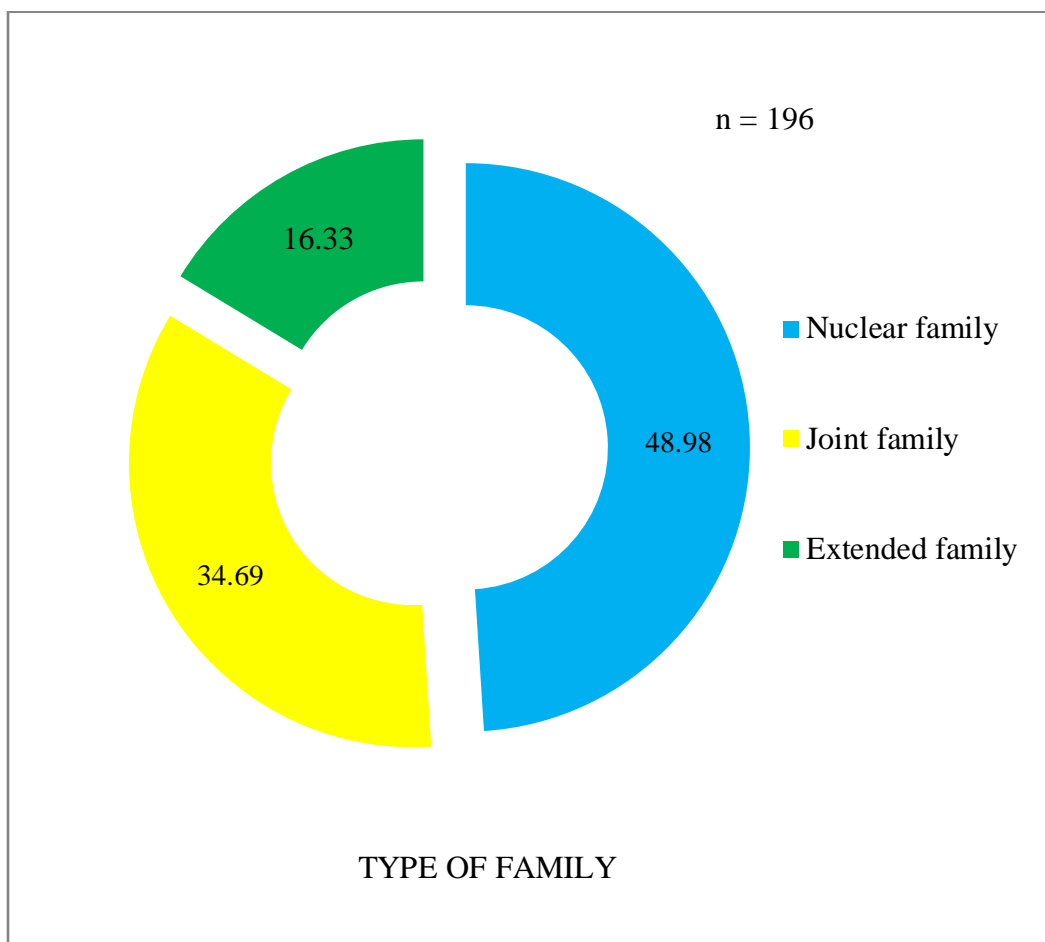
**TABLE 1.6****FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS ACCORDING TO TYPES OF FAMILY**

n = 196

<b>TYPES OF FAMILY</b>	<b>FREQUENCY (<i>f</i>)</b>	<b>PERCENTAGE (%)</b>
Nuclear family	96	48.98
Joint family	68	34.69
Extended family	32	16.33
Total	196	100

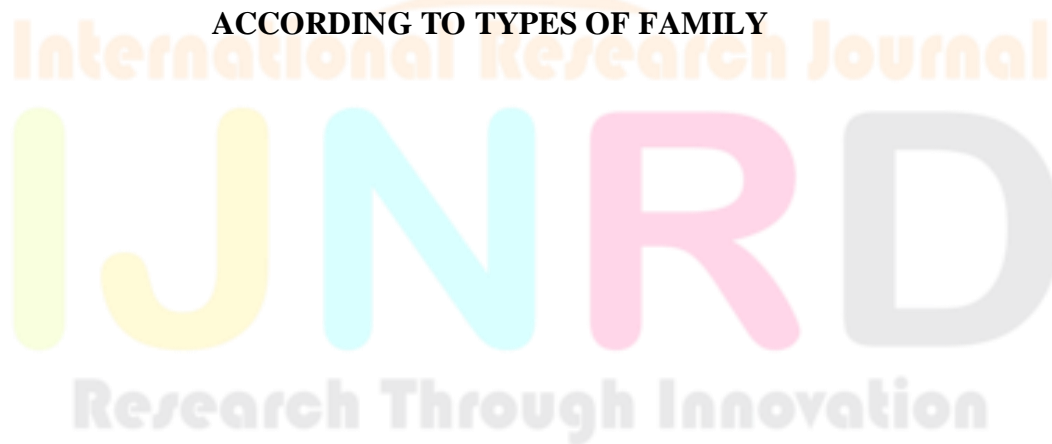
The data presented in Table 1.6 shows that out of 196 students, majority i.e., 96 (48.98%) of the students belong to nuclear family followed 68 (34.69%) of the students belong to joint family and 32 (16.33%) of the students belong to extended family.





**FIGURE. 1.6**

**DOUGHNUT DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS  
ACCORDING TO TYPES OF FAMILY**

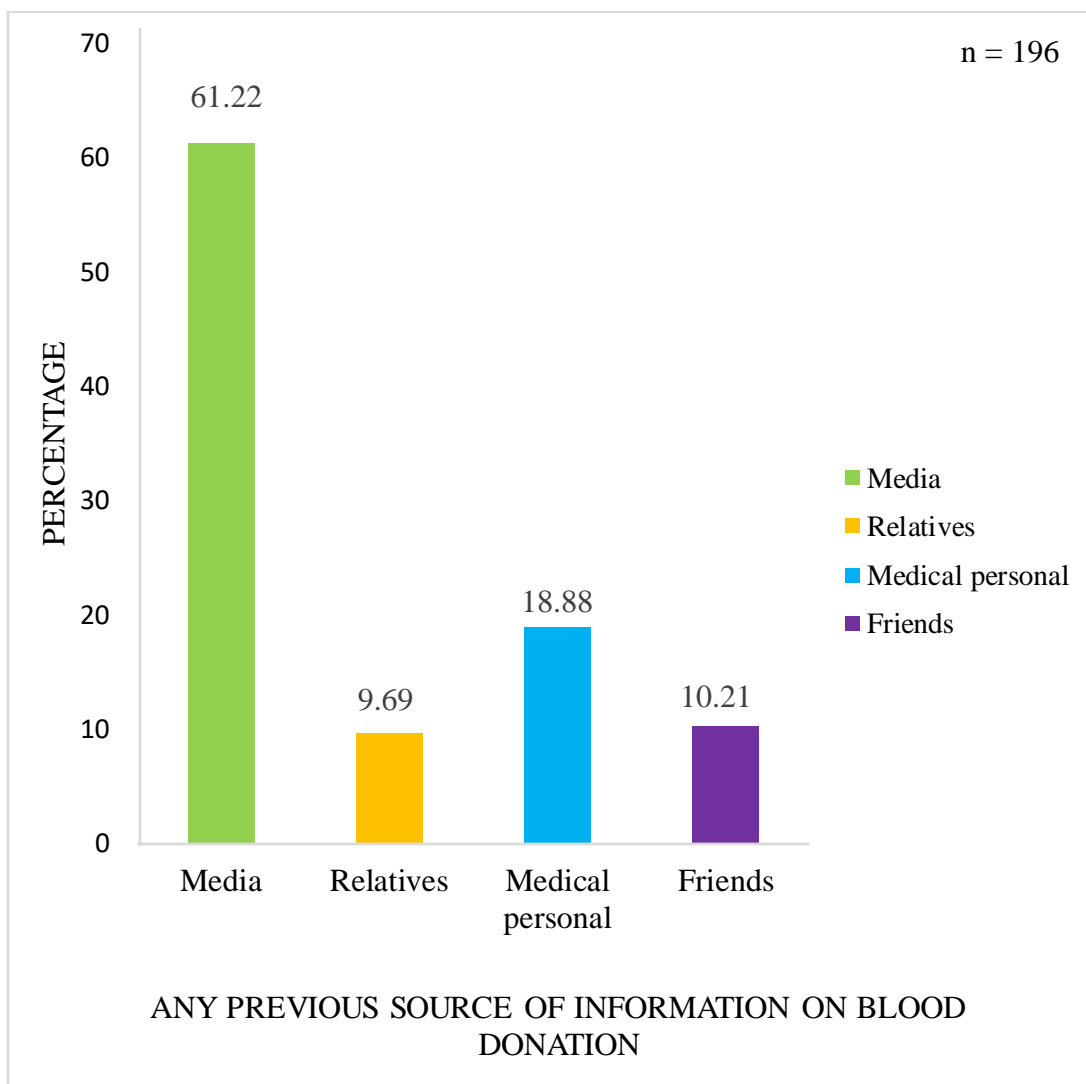


**TABLE 1.7****FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS RELATED TO ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION**

n = 196

<b>ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION</b>	<b>FREQUENCY (<i>f</i>)</b>	<b>PERCENTAGE (%)</b>
Media	120	61.22
Relatives	19	9.69
Medical Personnel	37	18.88
Friends	20	10.21
Total	196	100

The data presented in Table 1.7 shows that out of 196 students, majority i.e., 120 (61.22%) of the students have the previous source of information on blood donation from media, followed by 37 (18.88%) of the students have the previous source of information on blood donation from medical personnel, 20 (10.21%) of the students have the previous source of information on blood donation from friends and 19 (9.69%) of the students have the previous source of information on blood donation from relatives.



**FIGURE.1.7**

**PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS RELATED TO ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION**

**TABLE 1.8**

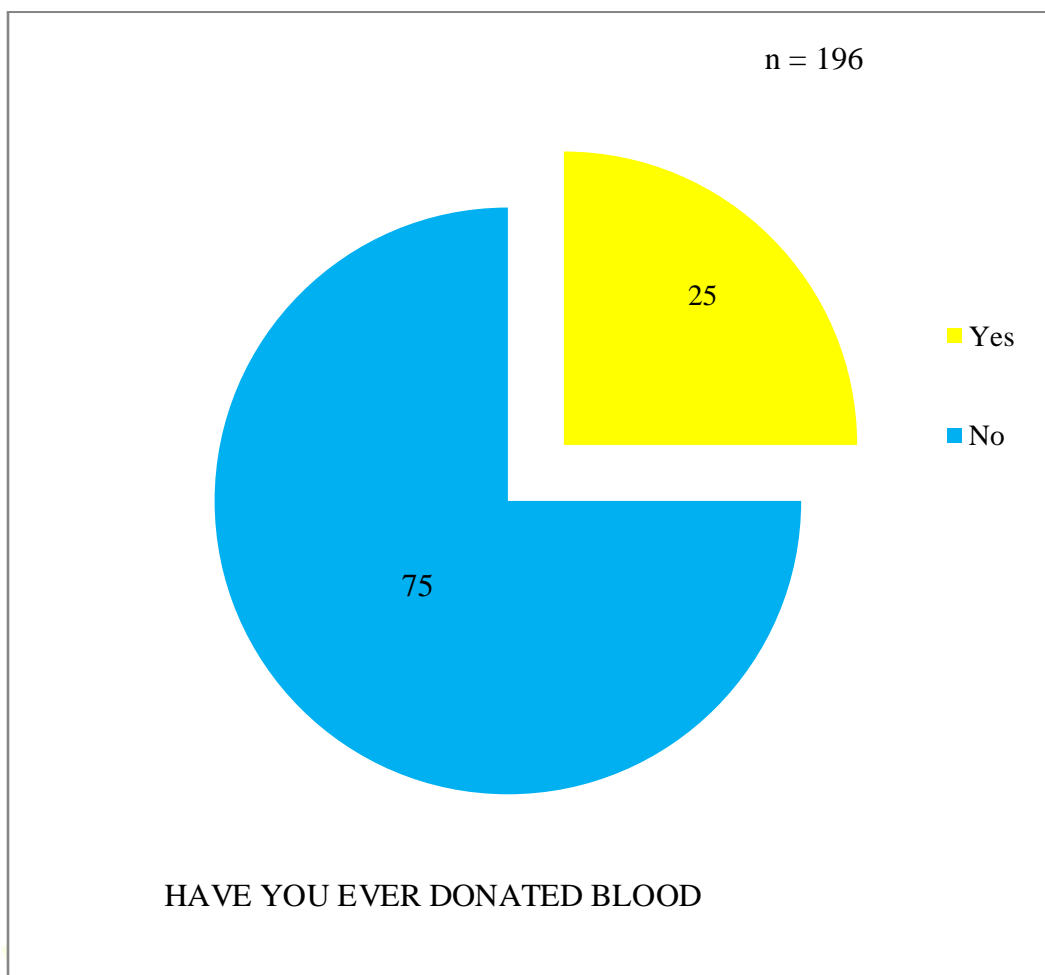
**FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS REGARDING BLOOD DONATION**

n = 196

HAVE YOU EVER DONATED BLOOD	FREQUENCY ( <i>f</i> )	PERCENTAGE %
Yes	49	25
No	147	75
Total	196	100

The data presented in Table 1.8 shows that out of 196 students, majority i.e., 147 (75%) students did not donate blood and 49 (25%) students donated blood.





**FIGURE. 1.8**

**SPLIT PIE DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS REGARDING BLOOD DONATION**



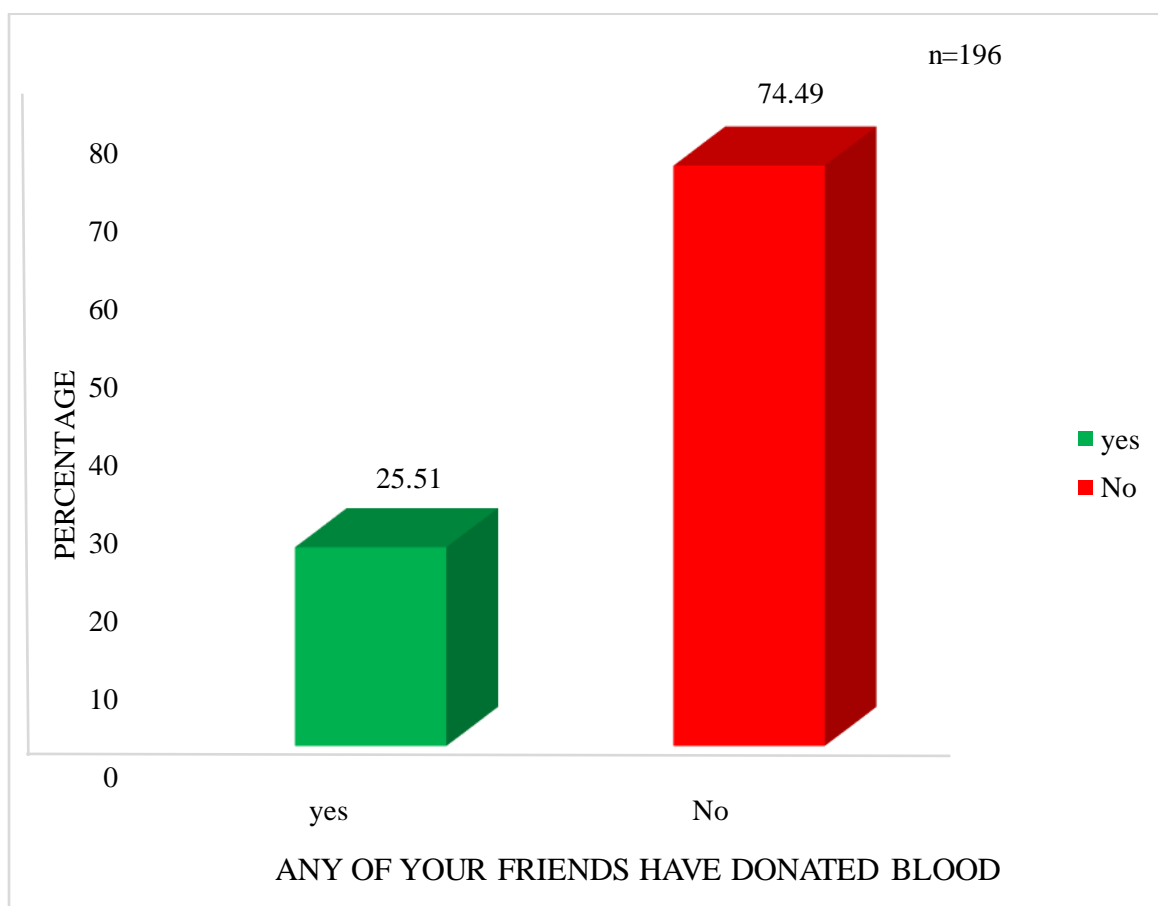
**TABLE 1.9****FREQUENCY AND PERCENTAGE DISTRIBUTION OF STUDENTS REGARDING ANY OF THEIR FRIENDS HAVE DONATED BLOOD**

n = 196

<b>ANY OF YOUR FRIENDS HAVE DONATED BLOOD</b>	<b>FREQUENCY (f)</b>	<b>PERCENTAGE (%)</b>
Yes	50	25.51
No	146	74.49
Total	196	100

The data presented in Table 1.9 shows that out of 196 students, majority i.e., 146 (74.49%) of their friends have never donated blood and 50 (25.51%) of their friends have donated blood.





**FIGURE. 1.9**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF STUDENTS REGARDING ANY**

## **Section II: Frequency and Percentage distribution of knowledge and attitude of students regarding blood donation.**

This section deals with the frequency and percentage distribution of knowledge and attitude of students regarding blood donation, here assessment of knowledge score is categorized into 3 as adequate, moderately adequate, inadequate based on Mean  $\pm$  Standard deviation. Findings are depicted in table 2.1 and Figure 2.1. Assessment of attitude score is categorized into 3 as negative attitude, neutral attitude and positive based on Mean  $\pm$  Standard deviation. Findings are depicted in table 2.2 ad Figure 2.2 respectively.



**TABLE 2.1**  
**FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE SCORE OF**  
**THE STUDENTS**

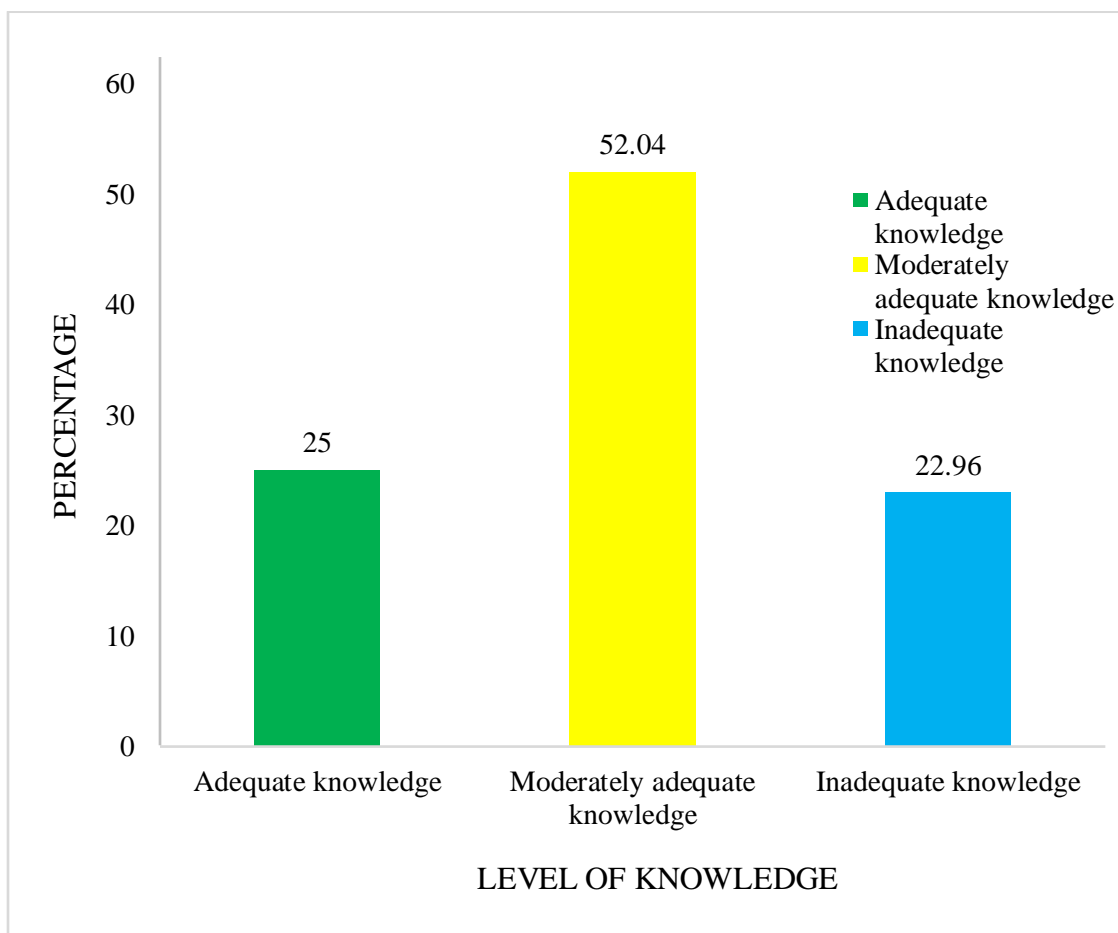
LEVEL OF KNOWLEDGE	FREQUENCY (f)	PERCENTAGE (%)
Adequate knowledge (>17)	49	25
Moderately adequate knowledge (13-17)	102	52.04
Inadequate knowledge (<13)	45	22.96
Total	196	100

n = 196

The data presented in Table 2.1 shows that out of 196 students, majority i.e., 102 (52.04%) of the students have moderately adequate knowledge followed by 49 (25%) of the students that have adequate knowledge, and 45 (22.96%) of the students have inadequate knowledge.

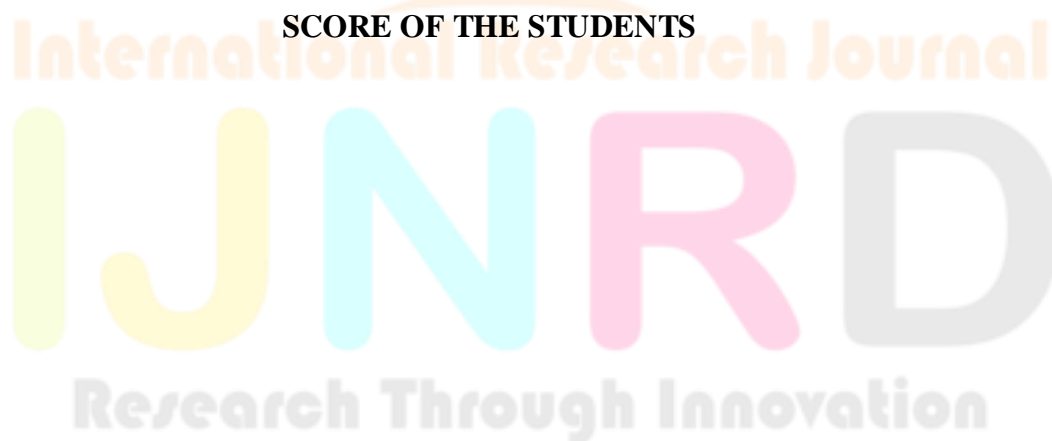


n=196



**FIGURE. 2.1**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE SCORE OF THE STUDENTS**



**TABLE 2.2**

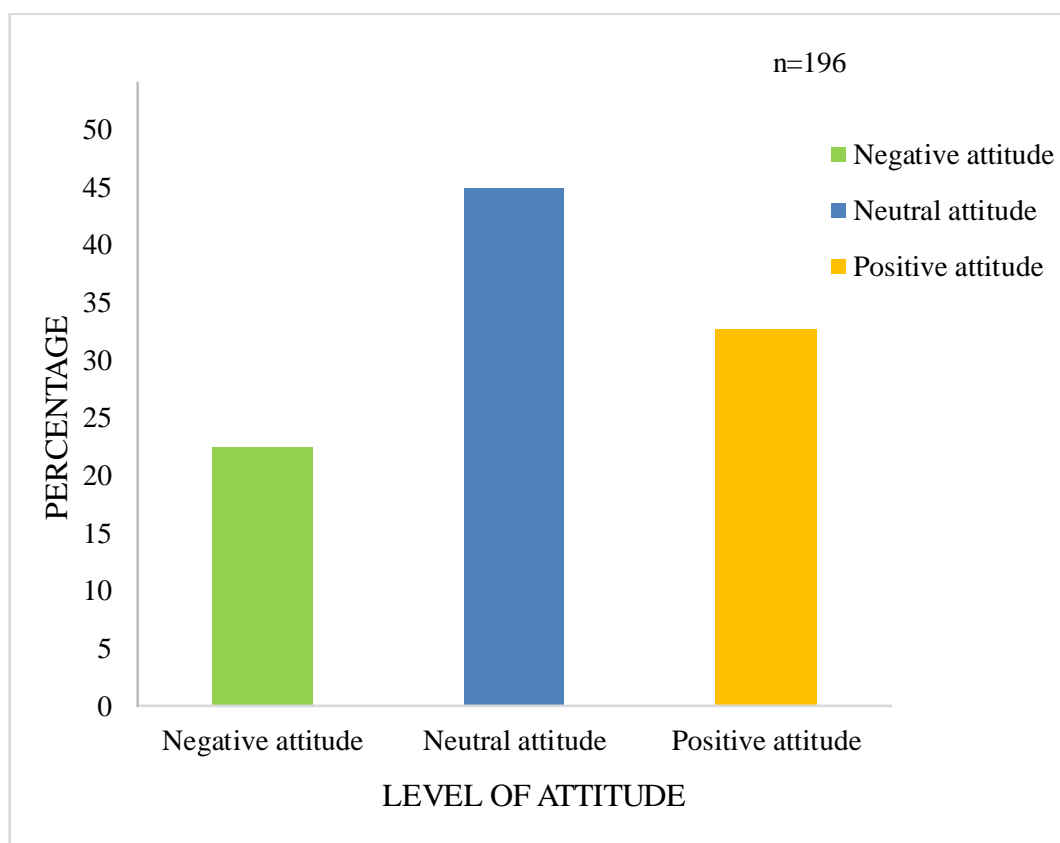
**FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF ATTITUDE SCORE OF THE STUDENTS**

n=196

LEVEL OF ATTITUDE	FREQUENCY	PERCENTAGE
	(f)	(%)
Negative attitude ( $<58$ )	44	22.45
Neutral attitude (58-79)	88	44.90
Positive attitude ( $>79$ )	64	32.65
Total	196	100

The data presented in Table 2.2 shows that out of 196 students' majority i.e., 88 (44.90%) of the students have neutral attitude and 64 (32.65%) of the students have positive attitude 44 (22.45%) of the students have negative attitude.





**FIGURE. 2.2**

**BAR DIAGRAM SHOWING PERCENTAGE DISTRIBUTION OF LEVEL OF ATTITUDE OF THE STUDENTS**

**Section III: Correlation between knowledge and attitude of students regarding blood donation**

This section deals with the correlation between knowledge and attitude of students regarding blood donation. To find out the significance of correlation between the knowledge and attitude of students regarding blood donation, the following hypothesis is stated at 0.05 level of significance, a null hypothesis is formulated against the stated research hypothesis  $H_1$ .

$H_{01}$ : There is no significant correlation between knowledge and attitude regarding blood donation among students of selected Colleges. Findings are depicted in table 3.

**TABLE 3****CORRELATION BETWEEN LEVEL OF KNOWLEDGE SCORE AND ATTITUDE SCORE OF THE STUDENTS REGARDING BLOOD DONATION**

n=196

LEVEL OF KNOWLEDGE AND ATTITUDE SCORE	MEAN	STANDARD DEVIATION	'r'- VALUE	INFERENCE
Knowledge	16.74	3.95	0.37	S
Attitude	72.13	12.22		

**S- Significant****p<0.05 level of significance**

The data presented in Table 3 shows that there is a moderately positive correlation between knowledge and attitude of the students on blood donation ( $r = 0.37$ ) which was statistically significant at 0.05 level of significance with corresponding p value  $<0.001$ . Thus, research hypothesis  $H_1$  is accepted and null hypothesis  $H_{01}$  is rejected. Therefore, it can be inferred that there is a significant correlation between knowledge and attitude.

**Section IV: Association between knowledge of students regarding blood donation among college students with selected demographic variables.**

This section deals with the association between knowledge of students regarding blood donation among students with selected demographic variables using chi square test. A null hypothesis  $H_{02}$  is formulated against the stated hypothesis  $H_2$ . The findings of this section are presented in table 4.1 to 4.9.

The following research hypothesis was stated at 0.05 level of significance.

$H_{02}$ : There is no significant association between knowledge of students regarding blood donation with selected demographic variables.

**TABLE 4.1****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH AGE.**

n = 196

AGE (IN YEARS)	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
18 years	9	15	11	11.39	6	12.59	NS
19 years	10	22	13				
20 years	28	49	20				
21 years	2	16	1				
Total	49	102	44				

**NS - Non-Significant****p < 0.05 level of significance**

The data presented in Table 4.1 shows the Chi square  $\chi^2$  value 11.39 with df =6 and tabulated value is 12.59 which is found to be more than the calculated value with corresponding *p* value 0.07. Thus, there is no significant association between knowledge of college students regarding blood donation with age.

**TABLE 4.2****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH GENDER**

n=196

GENDER	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Male	24	48	23	0.21	2	5.99	NS
Female	25	54	22				
Total	49	102	45				

**NS – Non-Significant****p<0.05 level of significance**

The data presented in Table 4.2 shows the Chi square  $\chi^2$  value 0.21 with df =2 and tabulated value is 5.99 which is found to be more than the calculated value with corresponding  $p$  value 0.31. Thus, there is no significant association between knowledge of college students regarding blood donation with gender.

**TABLE 4.3****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH FATHER'S EDUCATION**

n=196

FATHER'S EDUCATION	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Professional degree	9	22	11	10.78	8	15.51	NS
Graduate	31	41	21				
Intermediate	-	-	-				
High school	6	33	12				
Middle	2	5	1				
Primary school	1	1	-				
Illiterate	-	-	-				
Total	49	102	45				

**NS – Non-Significant****p < 0.05 level of significance**

The data presented in Table 4.3 shows the Chi square  $\chi^2$  value 10.78 with df =8 and tabulated value is 15.51 which is found to be more than the calculated value with corresponding  $p$  value 0.21. Thus, there is no significant association between knowledge regarding blood donation among college students with father's education.



**TABLE 4.4****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH FATHER'S OCCUPATION**

n =196

FATHER'S EDUCATION	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Professional degree	7	27	7	7.25	12	21.03	NS
Semi-professional	13	56	14				
Clerical/shop/farm	16	6	15				
Skilled workers	16	25	4				
Semi-skilled	6	12	4				
Unskilled workers	2	5	-				
Unemployed	2	5	1				
Total	49	102	45				

**NS – Non-Significant****p < 0.05 level of significance**

The data presented in Table 4.4 shows the Chi square  $\chi^2$  value 7.25 with df =12 and tabulated value is 21.03 which found to be more than the calculated value with corresponding *p* value 0.84. Thus, there is no significant association between knowledge of college students regarding blood donation with father's occupation.

**TABLE 4.5****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH NUMBER OF SIBLINGS IN THE FAMILY**

n = 196

GENDER	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
No sibling	3	11	2	10.21	6	12.59	NS
One	31	59	18				
Two	10	22	17				
More than two	5	10	8				
Total	49	102	45				

NS – Non-Significant

 $p < 0.05$  level of significance

The data presented in Table 4.5 shows the Chi square  $\chi^2$  value 10.12 with df =6 and tabulated value is 12.59 which is found to be more than the calculated value with corresponding  $p$  value 0.12. Thus, there is no significant association between knowledge of college students regarding blood donation with number of siblings in the family.

**TABLE 4.6****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH TYPES OF FAMILY**

n = 196

TYPE OF FAMILY	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Nuclear	26	48	22	1.84	4	9.49	NS
Joint	18	35	15				
Extended	5	19	8				
Total	49	102	45				

NS – Non-Significant

 $p < 0.05$  level of significance

The data presented in Table 4.6 shows Chi square  $\chi^2$  value 1.84 with df =4 and tabulated value is 9.49 which is found to be more than the calculated value with corresponding  $p$  value 0.76. Thus, there is no significant association between knowledge of college students

**TABLE 4.7****ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION**

n = 196

ANY PREVIOUS SOURCE OF INFORMATION	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Media	28	68	24	8.4	6	12.59	NS
Relatives	4	8	7				
Medical personal Friends	11	14	12				
Friends	6	12	2				
Total	49	102	45				

NS – Non-Significant

 $p < 0.05$  level of significance

The data presented in Table 4.6 shows the Chi square  $\chi^2$  value 8.2 with df =6 and tabulated value is 12.59 which is found to be more than the calculated value with corresponding  $p$  value 0.21. Thus, there is no significant

association between knowledge of college students regarding blood donation with any previous source of information on blood donation.

**TABLE 4.8**

**ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH HAVE YOU EVER DONATED BLOOD**

n = 196

HAVE YOU EVER DONATED BLOOD	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Yes	12	23	14	1.23	2	5.99	NS
No	37	79	31				
Total	49	102	45				

NS – Non-Significant

p < 0.05 level of significance

The data presented in Table 4.8 shows the Chi square  $\chi^2$  value 1.23 with df = 2 and tabulated value is 5.99 which is found to be more than the calculated value with corresponding p value 0.54. Thus, there is no significant association between knowledge of college students regarding blood donation with have you ever donated blood.

**TABLE 4.9**

**ASSOCIATION BETWEEN KNOWLEDGE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH ANY OF THEIR FRIENDS HAVE DONATED BLOOD**

n = 196

ANY OF YOUR FRIENDS HAVE DONATED BLOOD	LEVEL OF KNOWLEDGE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	ADEQUATE	MODERATELY ADEQUATE	INADEQUATE				
Yes	14	21	15	2.99	6	12.59	NS
No	35	81	30				
Total	49	102	45				

NS – Non-Significant

p < 0.05 level of significance

The data presented in Table 4.9 shows the Chi square  $\chi^2$  value 2.99 with  $df = 6$  and tabulated value is 12.59 which is found to be more than the calculated with corresponding  $p$  value 0.22. Thus, there is no significant association between knowledge of college students regarding blood donation with any of their friends have donated blood.

The overall statistical analysis presented in Table 4.1-4.9 shows that there is no significant association found knowledge with selected demographic variables in terms of age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood, any of your friends have donated blood. Hence, research hypothesis  $H_2$  is rejected and null hypothesis  $H_{02}$  is retained.

### Section V: Association between attitude of students regarding blood donation with selected demographic variables

This section deals with the association between attitudes of students regarding blood donation with selected demographic variables using Chi square test. A null hypothesis is formulated against the stated hypothesis  $H_3$ . The findings of this section are depicted in table 5.1 to 5.9.

The following research hypothesis were stated at 0.05 level of significance.

$H_{03}$ : There is no significant association between attitudes of students regarding blood donation with selected demographic variables.

TABLE 5.1

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

n=196

AGE (IN YEARS)	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
18 years	4	18	13	13.23	6	12.59	S
19 years	16	22	7				
20 years	18	42	37				
21 years	6	6	7				
Total	44	88	64				

S -Significant

$p < 0.05$  level of significance

The data presented in Table 5.1 shows the Chi square  $\chi^2$  value 13.23 with df =6 and tabulated value is 12.59 which is found to be lesser than calculated value with corresponding  $p$  value 0.03. Thus, there is significant association between attitude of college students regarding blood donation with age.

**TABLE 5.2**

**ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH GENDER**

n = 196

GENDER	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Male	23	44	28	0.90	2	5.99	NS
Female	21	44	36				
Total	44	88	64				

**NS – Non-Significant**

**p<0.05 level of significance**

The data presented in Table 5.2 shows the Chi square  $\chi^2$  value 0.90 with df =2 and tabulated value is 5.99 which is found to be more than calculated value with corresponding  $p$  value 0.63. Thus, there is no significant association between attitude of college students regarding blood donation with gender.

**TABLE 5.3**

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

n = 196

FATHER'S EDUCATION	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Professional degree	10	23	9	0.98	8	15.51	NS
Graduate	22	42	22				
High school	11	19	22				
Middle school	1	4	1				
Primary school	-	-	-				
Total	44	88	64				

**NS – Non-Significant**

**p<0.05 level of significance**

The data presented in Table 5.3 shows the Chi square  $\chi^2$  value 9.08 with df =8 and tabulated value is 15.51 which is found to be more than calculated value with corresponding  $p$  value 0.33. Thus, there is no significant association between attitude of college students regarding blood donation with father's education.

**TABLE 5.4****ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH FATHER'S OCCUPATION**

n = 196

FATHER'S OCCUPATION	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Professional	9	13	5	20.01	12	21.03	NS
Semi-professional	11	31	14				
Clerical/shop/farm	15	27	24				
Skilled workers	6	7	12				
Semi-skilled workers	2	8	2				
Unskilled workers	1	-	4				
Unemployed	-	2	3				
Total	44	88	64				

**NS – Non-Significant****p<0.05 level of significance**

The data presented in Table 5.4 shows the Chi square  $\chi^2$  value 20.01 with df =12 and tabulated value is 21.03 which is found to be more than calculated value with corresponding *p* value 0.06. Thus, there is no significant association between attitude of college students regarding blood donation with father's occupation.

**TABLE 5.5****THE ASSOCIATION OF ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH NUMBER OF SIBLINGS IN THE FAMILY**

n = 196

NUMBER OF SIBLINGS IN THE FAMILY	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
No Sibling	3	9	4	11.97	6	12.59	NS
1	16	55	37				
2	16	17	16				
More than two	9	7	7				
Total	44	88	64				

**NS – Non-Significant****p<0.05 level of significance**

The data presented in Table 5.5 shows the Chi square  $\chi^2$  value 11.97 with df =6 and tabulated value is 12.59 which is found to be more than calculated value with corresponding  $p$  value 0.03. Thus, there is no significant association between attitude of college students regarding blood donation with number of siblings in the family.

**TABLE 5.6**

**ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH TYPE OF FAMILY**

n = 196

TYPE OF FAMILY	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Nuclear	20	42	34	0.81	4	9.49	NS
Joint	16	32	20				
Extended	8	14	10				
Total	44	88	64				

**NS – Non-Significant****p<0.05 level of significance**

The data presented in Table 5.6 show the Chi square  $\chi^2$  value 0.81 with df =4 and tabulated value is 9.49 which is found to be more than calculated value with corresponding  $p$  value 0.93. Thus, there is no significant association between attitude of college students regarding blood donation with types of family.

**TABLE 5.7**

**ASSOCIATION BETWEEN ATTITUDE OF STUDENTS REGARDING BLOOD DONATION WITH ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION**

n = 196

ANY PREVIOUS SOURCE OF INFORMATION ON BLOOD DONATION	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Media	27	50	43	6.05	6	12.59	NS
Relatives	3	8	8				
Medical personnel	1	17	10				
Friends	4	13	3				
Total	44	88	64				

**NS – Non-Significant****p<0.05 level of significance**



The data presented in Table 5.7 shows the Chi square  $\chi^2$  6.05 with df = 6 and tabulated value is 12.59 which is found to be more than calculated value with corresponding  $p$  value 0.03. Thus, there is no significant association of students regarding blood donation with any previous source of information on blood donation.

**TABLE 5.8**

**ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH HAVE YOU EVER DONATED BLOOD**

n =196

HAVE YOU EVER DONATED BLOOD	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Yes	12	19	34	1.23	2	5.99	NS
No	32	69	30				
Total	44	88	64				

NS – Non-Significant

p<0.05 level of significance

The data presented in Table 5.8 shows the Chi square  $\chi^2$  value 1.23 with df =2 and tabulated value is 5.99 which is found to be more than calculated value with corresponding  $p$  value 0.54. Thus, there is no significant association between attitude of college students regarding blood donation with have you ever donated blood.

**TABLE 5.9**

**ASSOCIATION BETWEEN ATTITUDE OF COLLEGE STUDENTS REGARDING BLOOD DONATION WITH ANY OF THEIR FRIENDS HAVE DONATED BLOOD**

n =196

ANY OF YOUR FIREND'S HAVE DONATED BLOOD	LEVEL OF ATTITUDE			$\chi^2$	df	TABULATED VALUE	INFERENCE
	NEGATIVE	NEUTRAL	POSITIVE				
Yes	9	28	12	2.23	2	5.99	NS
No	35	60	52				
Total	44	88	64				

NS – Non-Significant

p<0.05 level of significance

The data presented in Table 5.9 shows the Chi square  $\chi^2$  value 2.23 with df =2 and tabulated value is 5.99 which is found to be more than calculated value with corresponding  $p$  value 0.54. Thus, there is no significant association between attitude of college students regarding blood donation with any of their friends have donated blood.

The overall statistical analysis presented in Table 5.1-5.9 shows that there is significant association found in age ( $\chi^2=13.23$ ,  $p$  value=0.03). Hence, null hypothesis  $H_{03}$  is rejected and research hypothesis  $H_3$  is accepted in terms of age. Whereas, there is no significant association found with regards to gender, father's education, father's

occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood, any of your friends have donated blood. Hence, research hypothesis  $H_3$  is rejected and null hypothesis  $H_{03}$  is retained.

## SUMMARY

This chapter dealt with the analysis and interpretation of the data collected from 196 Students of selected Colleges of Kamrup (M), Assam. The present study aimed to assess the knowledge and attitude regarding blood donation among Students of selected colleges of Kamrup (M), Assam. The demographic variables were dealt with frequencies and percentage. Descriptive statistics was used to find out the mean and standard deviation. Inferential statistics was used to find out the correlation and associations.

## CHAPTER V

### SUMMARY, FINDINGS, DISCUSSION, CONCLUSION LIMITATIONS AND RECOMMENDATIONS

This chapter deals with the summary, findings, discussion, conclusion, limitations implications of the study in the field of nursing education, administration, nursing practice and research and the recommendations for future research in different aspects have also been presented in this chapter.

#### SUMMARY OF THE STUDY

The investigator conducted a study to assess the knowledge and attitude regarding Blood among students of selected Colleges of Kamrup (M), Assam. The study was conducted in the selected Colleges of Kamrup (M), Assam that were Guwahati College, Noonmati, SB Deorah College, Ulubari and B Borooah College, Ulubari. 196 samples were selected by stratified random sampling, who were studying in general B.Sc. stream i.e., 1<sup>st</sup> year and 2<sup>nd</sup> year including male, female and transgender, where the investigator has used structured questionnaire for demographic variables, Structured Self-Administered knowledge questionnaire for knowledge and structure 5-point Likert Scale for collection of data from samples. The reliability of the tool was tested by Split half method and the Spearman Brown Prophecy reliability co-efficient was found to be 0.82 for the structured self-administered knowledge questionnaire and 0.85 for the Structure 5-point Likert scale, which was considered to be reliable.

The objectives of the study were to:

1. assess the knowledge regarding blood donation among students of selected colleges of Kamrup (M), Assam.
2. assess the attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

3. find out the correlation between knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.
  4. find out the association between knowledge of students regarding blood donation with selected demographic variables.
  5. find out the association between attitude of students regarding blood donation with selected demographic variables.
- provide informational booklet regarding blood donation.

### Assumption

- College students may have some knowledge regarding blood donation.
- College students may have varying Knowledge and Attitude towards blood donation.

### Hypotheses

All the hypotheses were tested at 0.05 level of significance.

- H<sub>1</sub>: There is significant correlation between knowledge and attitude regarding blood donation in selected colleges of Kamrup (M), Assam.
- H<sub>2</sub>: There is significant association between knowledge of the students regarding blood donation with selected demographic variables.
- H<sub>3</sub>: There is significant association between attitude of the students regarding blood donation with selected demographic variables.

The conceptual framework used for the study was based on “health promotion model”. The model focused on three areas which includes: individual characteristics and experiences, behavior specific cognition and affect and behavioral outcome

Quantitative research approach was used for the present study and descriptive research design was adopted for the study. The sampling technique used for the study was stratified random sampling.

Target population refers to the entire population in which a researcher is interested and which he or she would like to generalize the study results. <sup>(12)</sup>

Population were all the college students and target population comprised of all the general B.Sc. college students of Kamrup (M), Assam. In this study the accessible population were the general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year students studying in 3 conveniently selected Colleges of Kamrup (M), Assam namely- SB Deorah College, Ulubari; B Barooah College, Ulubari and Guwahati College, Noonmati.

The content validity of the tools was done by consulting 9 experts. The experts were requested to judge the tool in terms of relevancy, adequacy and appropriateness. Modifications were done as requested by the experts. The

research tools were modified before the data collection as advised by the different experts. With 100% agreement the approved items were accepted.

The formal permission was taken from the Principal of selected Colleges for conducting the study and with the cooperation of the faculty and staff member and the feasibility of conducting the study was assured. The investigator established a good rapport with the students. The investigator introduced herself and explained the purpose of the study. Informed written consent was obtained from each participant and explain the purpose of the study and also assured of confidentiality of their responds for the study.

### **A review of literature was done under the following heading**

I-Literature related to knowledge regarding blood donation among college students in selected colleges.

II-Literature related to attitude regarding blood donation among college students in selected colleges.

### **Major findings of the study**

The present study consisted of 196 College students who are studying in general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year degree Colleges.

- Majority of the College students i.e., 35 (17.85%) belongs to the age group of 18 years
- Majority of the College students i.e., 101 (51.5%) were male
- Regarding the father educational status, majority 93(47.45%) of their father's education were graduate.
- Regarding the father's occupation of college students, majority i.e., 66 (33.67%) of their father's occupation were clerical.
- Most of the college students i.e., 108 (55.10%) were having only one sibling in the family.
- Majority of the College students i.e., 96 (48.98%) belonged to nuclear family.
- Maximum number of college students i.e., 120 (61.22%) had the previous source of information on blood donation from media.
- The study result showed that majority i.e., 147 (75%) of the students did not donate blood.
- The study result showed that majority i.e.,146 (74.49%) of their friends have never donated the blood.

### **Findings related to demographic variables**

The study findings were also supported by a study conducted by Moore MB (2020) on Factors influencing blood donation practices among students of private universities in Thika Town, Kiambu County, Kenya. The cross-sectional study using both qualitative and quantitative methods was conducted at Mount Kenya University and Gretsia University. Multi-stage sampling was used with 385 samples. The questionnaire was used for collecting the data. The study revealed that majority i.e., 57.1% of the respondents received information on blood donation from high school. In addition, 60% of the students were identified as having no history of blood donation. Majority of reasons for not donating blood were: not asked to donate blood i.e., (44.3%) followed by

lack of information (28.5%), and fear of needles (23.2%). Some of the donors identified negative effects of post-blood donation such as dizziness, tiredness, and feeling weak. <sup>(45)</sup>

The study findings were also supported by a study conducted by Melku M, Asrie F, Shiferaw E, Woldu B, Yihunew Y, Asmelash D, et.al (2017) on Knowledge, Attitude and Practice Regarding Blood Donation among Graduating Undergraduate Health Science Students at the University of Gondar, Northwest Ethiopia. A descriptive cross-sectional study was conducted among graduating undergraduate Health Science students at University of Gondar using structured pre-tested self-administered questionnaire. Stratified sampling technique was adopted to select study participants. A total of 225 students participated in the study. The study findings revealed that the majority of the study participants i.e., 227 (89%), were within the age range of 20–24 years, and 211 (82.7%) of them were males. <sup>(46)</sup>

### **Discussion on the basis of the objectives of research study.**

1. To assess the knowledge regarding blood donation among students of selected Colleges of Kamrup (M), Assam.

It has been observed in the present study that majority i.e., 102 (52.04%) of the students had moderately adequate knowledge, others 49 (25%) of the students had adequate knowledge, and 45 (22.96%) of the students had inadequate knowledge.

The similar study was also conducted by Yosef T, Wondimu W, Tesfaye M, Tesfaw A (2021) conducted a cross-sectional study on Knowledge and attitude towards blood donation among college students in Southwest Ethiopia. It was conducted among 394 health science students from June 1<sup>st</sup> to 15<sup>th</sup> 2019. The data were collected using a structured self-administered questionnaire. The findings of the study reveals that majority of the participants (95.6%) had average knowledge regarding blood donation and more than half (61.2%) of the respondents were aware of blood donation through mass media respectively. <sup>(47)</sup>

2. To assess the attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

It has been observed that majority i.e., 88 (44.90%) of the students had neutral attitude followed by 64(32.65%) of the students had positive attitude and 44 (22.45%) of the students had negative attitude.

The study finding was also supported by descriptive study conducted by Geeta, Lovely (2020) to assess the knowledge and attitude regarding blood donation among undergraduate students in selected college at Gurugram, Haryana. In this study convenient sampling technique was used under non-probability technique. 60 samples were taken and the data was collected using self-administered questionnaire. Attitude regarding blood donation shows that majority i.e., 54.23%) had neutral attitude, (40.67%) of the undergraduate students had the positive attitude and (5.08%) had negative attitude regarding blood donation. It reveals that most of the undergraduate students had a neutral attitude regarding blood donation. <sup>(48)</sup>

3. To find out the correlation between knowledge and attitude regarding blood donation among students of selected colleges of Kamrup (M), Assam.

The present study reveals a moderately significant positive correlation between knowledge and attitude of the students on blood donation ( $r = 0.37$ ) which was statistically significant at 0.05 level of significance. Thus, research hypothesis  $H_1$  is accepted. Therefore, it can be inferred that there was a moderately significant correlation between knowledge and attitude.

The present study is supported by Ranjan JK (2022) conducted a study on Assessment of Knowledge and Attitude of Adolescents Regarding Blood and Organ Donation in Selected Rural Areas of Shimla, Himachal Pradesh, India". The present study aimed to assess the knowledge and attitude regarding blood and organ donation among adolescents in selected rural areas of Shimla, Himachal Pradesh, with a view to prepare a self-instructional module. The research design used for this study was Non experimental descriptive design. Non probability purposive Sampling was used to select 100 samples for the study. The tool used for the study was structured interview schedule. The study revealed that there was positive correlation ( $r=0.268$ ) between the knowledge and attitude scores of bloods and organ donation. <sup>(49)</sup>

4. To find out the association between Knowledge of students regarding Blood donation with selected demographic variables.

The present study revealed that the chi square values showed that demographic variables such age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood was found non-significant association at  $p < 0.05$  level of significance. Hence hypothesis  $H_2$  is rejected.

The present study is supported by a study conducted by Chauhan S (2022) on a study to assess knowledge, attitude and practice regarding blood donation among the nursing students in selected nursing colleges in college of Kanpur. The research design used for this study was Non experimental descriptive design. Non probability purposive Sampling was used to select 100 samples for the study. The tool used for the study was structured interview schedule. The findings of the study include 33% of adolescents had inadequate knowledge and 77% of adolescents had favorable attitude regarding blood and organ donation. The study revealed that there was no significant association of knowledge and attitude and practice score with their selected demographic variables such as age, gender, educational status, area of residence and history of blood donation. <sup>(50)</sup>

5. To find out the association between attitudes of students regarding blood donation with selected demographic variables.

The present study showed that chi square values showed that demographic variables such as age was found to be significant at  $p < 0.05$  level of significance. Hence,  $H_2$  has been accepted. But other demographic variables such as gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have

donated blood was found to be non-significant association at  $p < 0.05$  level of significance. Hence hypothesis  $H_3$  is rejected.

The study has been supported by a study conducted by Jemberu YA, Esmail A, Ahmed KY (2016) on Knowledge, attitude and practice towards blood donation and associated factors among adults in Debre Markos town, Northwest Ethiopia. Multi-stage sampling technique was employed to recruit a total of 845 study participants. Interviewer administered questionnaire was employed as a data collection tool. Binary logistic regression was applied to assess the relationship between explanatory variables and outcome variables. The study revealed that attending secondary and above education, having higher income, listening to radio broadcasts, and knowledge of blood donation were found to be the independent predictors of attitude and demographic variables such as age was found to be significant. The practice of blood donation was higher among respondents who were older, attended certificate and above education, knowledgeable, and favorable attitude groups. <sup>(51)</sup>

**The review of literature for the study has been presented under the following headings:**

I Literature related to knowledge regarding blood donation in selected colleges of Kamrup (M), Assam.

II Literature related to attitude regarding Blood donation in selected colleges of Kamrup (M), Assam.

The non-experimental research design was adopted and the researcher used non-experimental descriptive research design for the present study. The population comprised of college students who were studying in general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year in Kamrup (M), Assam. From the target population 196 general B.Sc. 1<sup>st</sup> year and 2<sup>nd</sup> year College students were selected as sample using stratified random sampling technique. The tool for collecting data was a self-structured questionnaire consisting of three -Section-A (Demographic profile), Section-B (self-structured questionnaire), section C (self-stated Likert scale). Content validity of tools was done by consulting six (9) experts who were willing to validate and give suggestions to improve the tool. Reliability was tested for self-structured questionnaire by “Split half” method to check internal consistency was found to be 0.82 and the reliability for self-stated Likert scale was 0.85 and was considered as reliable. The obtained data were organized, analyzed, tabulated, interpreted and entered into the master sheet. The interpretation and analysis of the data for the study was based on the objectives and hypotheses by using descriptive and inferential statistics.

**Findings related to level of knowledge regarding Blood donation among students of selected Colleges.**

Majority i.e., 102 (52.04%) of the students have average knowledge 49 (25%) of the students have good knowledge, and 45 (22.96%) of the students have poor knowledge.

### **Findings related to level of attitude regarding Blood donation among students of selected Colleges.**

Majority i.e., 88 (44.90%) of the students have neutral attitude 44 (22.45%) of the students have negative attitude, and 64 (32.65%) of the students have positive attitude

### **Findings related to Correlation between level of knowledge score and attitude score of the students on blood donation.**

It showed that there was a moderately significant positive correlation between knowledge and attitude of the students on blood donation ( $r = 0.37$ ) which was statistically significant at 0.05 level of significance. Thus, research hypothesis was accepted and null hypothesis was rejected. Therefore, it can be inferred that there was a moderately significant correlation between knowledge and attitude. Hence, hypothesis  $H_1$  has been accepted

### **Findings related to association between knowledge of students regarding blood donation with selected demographic variables.**

The findings related to association between knowledge of students regarding blood donation with selected demographic variables such as age, gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood and any of your friends have donated blood were not found statically significant at  $p < 0.05$  level of significance. Thus, the research hypothesis  $H_2$  is rejected and null hypothesis  $H_{02}$  is retained.

### **Findings related to association between attitude of students regarding blood donation with selected demographic variables.**

The findings shows that there is a significant association of attitude with selected demographic variable with regards to age ( $\chi^2=13.23$ ,  $p$  value=0.03). the rest of the demographic variables i.e., gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood, any of your friends have donated blood were found to be not statically significant at  $p < 0.05$  level of significance. Thus, the null hypothesis  $H_{03}$  is rejected only in terms of age. Hence, findings inferred that attitude of the students regarding blood donation depends on age.

### **LIMITATION**

- Students studying in professional courses and streams other than science stream were not included in the study. Hence the study cannot be generalized to all the students.
- Secondly, the finding is reliant on the completion of the questionnaire, which may generate false answers and introduce the possibility of bias.

### **CONCLUSION**

From findings of the present study, it can be concluded after conducting the study. Majority i.e., 102 (52.04%) of the students have average knowledge, others 49 (25%) of the students have good knowledge, and 45 (22.96%)



of the students have poor knowledge and majority i.e., 88(44.90%) of the students have neutral attitude 44(22.45%) of the students have negative attitude, and 64(32.65%) of the students have positive attitude. The findings of the association between knowledge with selected demographic variables were not found statically significant at  $p < 0.05$  level of significance. Thus, the research hypothesis  $H_2$  is rejected and null hypothesis  $H_{02}$  is retained. The association of attitude with selected demographic variable with regards to Age was found to be statically significant. The rest of the demographic variables i.e., gender, father's education, father's occupation, number of siblings in the family, types of family, any previous source of information on blood donation, have you ever donated blood, any of your friends have donated blood for attitude were found to be not statically significant at  $p < 0.05$  level of significance. Thus, the null hypothesis  $H_{02}$  is rejected only in terms of age The present study reveals a moderately significant positive correlation between knowledge and attitude of the students on blood donation ( $r = 0.37$ ) which was statistically significant at 0.05 level of significant.

It is important for health personnel to take initiatives in educating the students regarding Blood Donation to encourage them in donating blood in futures as they are the future of the nation.

## **NURSING IMPLICATIONS**

The findings of the study have an implication for Nursing Education, Nursing Practice, Nursing Administration and Nursing Research.

### **Nursing education**

The nursing staffs and students should be taught about the importance of education regarding Blood donation and practice of voluntarily donating blood. The nurse educator should create awareness regarding blood donation and its importance. The nurse educators can recommend this topic to the students for health education activities of the community for increasing awareness and for increasing the knowledge level of people regarding blood donation.

### **Nursing Practice**

Health education is one of the vital responsibilities of nurses. During school health programmes, Community visits- the students and family members should be educated about the importance and benefits of donating blood.

### **Nursing Administration**

The nurse administrators should necessarily involve in creating awareness and Programs in schools, Colleges and Community areas. The nurse administrators should take more responsibility in providing health education regarding Blood donation.

### **Nursing Research.**

Through the topic blood donation is very common one. According to many studies the students are unaware and have negative attitude towards Blood donation, it's benefits and importance. Therefore, extensive research is necessary regarding blood donation. The findings of the study will help to explore the scientific body of knowledge upon which further research can be conducted. Use of research findings should become a part of quality assurance evaluation to enhance the individual performance as a whole.

### **RECOMMENDATION**

- A replication of present study can be done with larger sample.
- A study regarding practice of Blood donation among Post Graduate students can be conducted.
- The study can be done to assess the knowledge attitude and practice.

### **SUMMARY**

This chapter explained in details about the summary of the present study, it's findings, discussions of the present study with similar studies from review of literature, limitations, conclusion, nursing implications and recommendations for the future research study.

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<https://archive/knowledge.jsmr.igmpublicationhttps://www.semanticscholar.org/paper/Attitudes-and-knowledge-in-blood-donation-among-A-Mart%C3%ADnez-SantosFernandez-De-La-Iglesia/aa31000f6cbfb34360cbacdee0df58739b94d4bf>

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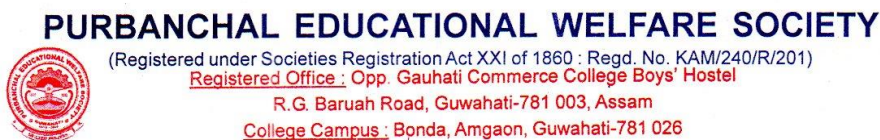
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## APPENDIX - A

### LETTER GRANTING PERMISSION TO CONDUCT RESEARCH STUDY FROM INSTITUTIONAL ETHICAL COMMITTEE



#### PURBANCHAL EDUCATIONAL WELFARE SOCIETY

(Registered under Societies Registration Act XXI of 1860 : Regd. No. KAM/240/R/201)

Registered Office : Opp. Gauhati Commerce College Boys' Hostel

R.G. Baruah Road, Guwahati-781 003, Assam

College Campus : Bonda, Amgaon, Guwahati-781 026

Phone : 8811099994

email : pewsgy@gmail.com Website : www.cpmsc.com

Ref. No. CPMS/CON/22/193

Date: JUL 2022

7 JUL 2022

To,

**Ms . Nunung Saroh**

(Child Health Nursing)

CPMS College Of Nursing

Bonda, Amgaon, Guwahati-26

**Sub.:** Study proposal submitted to the ethical committee of PEWS Group of Institutions.

Your research study proposal on **“A study to assess the Knowledge And Attitude regarding Blood Donation among students of selected colleges of Kamrup (M), Assam”** for partial fulfillment of the requirement for the degree of Master of Science in nursing had been examined by the ethical committee of PEWS Group of Institutions, Guwahati - 26 during the meeting held on 02.07.2022. The proposal had been accepted and due clearance awarded. You may proceed with your study.

Dr. Pallabi Goswami (PT)

Principal, cum Member Secretary

College Of Physiotherapy and Medical Sciences,

Institutional ethical committee

PEWS Group of Institutions

Bonda, Guwahati

PRINCIPAL

College of physiotherapy &  
Medical Sciences  
Amgaon, Bonda, Guwahati,  
Assam, India, Pin- 781026

#### Group of Institutions

- ◆ College of Physiotherapy & Medical Sciences ◆ CPMS College of Nursing
- ◆ CPMS School of Nursing ◆ CPMS College of Paramedical Sciences

## APPENDIX - B



## LETTER SEEKING EXPERT OPINION AND SUGGESTIONS FOR CONTENT VALIDITY OF THE TOOL

From,

Nunung Saroh

M.Sc Nursing CPMS College of Nursing  
Amgaon, Bonda, Assam, Guwahati – 26

To,

Subject: Request for expert opinion and suggestions to establish content of research tool. Respected Sir/Madam,

I, Ms. Nunung Saroh, 1<sup>st</sup> year M.Sc. Nursing, student of CPMS College of Nursing have selected the topic **“A Study to assess the Knowledge and Attitude regarding Blood Donation among students of selected Colleges of Kamrup (M), Assam.”** for my dissertation to be submitted to Srimanta Sankaradeva University of Health Sciences, Assam for partial fulfilment of the University requirement of Master of Science in Nursing degree.

In this connection, I have developed structured self-administered questionnaire for assessing the knowledge regarding blood donation. I have also developed a structured 5-point Likert Scale to assess the attitude of students regarding blood donation. Therefore, I humbly request you to kindly go through the item and kindly give your valuable suggestions and opinion to developed the content validity of tool. I would also request you to kindly suggest modifications, additions and deletions, if any, kindly mention the remark column.

I would alsolike to request you to kindly suggest modifications, additions and deletions, if any, kindly mention in the remark column.

Herewith I have enclosed –

1. Title and Statement of the research study
2. Objectives of the study
3. Operational definitions
4. Assumption
5. Hypothesis
6. Tools
7. Evaluation criteria check list for validation of the tool
8. Validation certificate

I shall remain highly grateful and thankful for your kind help.

Yours faithfully

Nunung Saroh

Place: Guwahati

Date:

### APPENDIX-B<sub>1</sub>

#### CRITERIA CHECKLIST FOR VALIDATION OF THE TOOL

#### Section –I: Demographic Data

ITEM	RELEVANCY		ACCURACY		APPROPRIATENESS		REMARKS
	Agree	Disagree	Agree	Disagree	Agree	Disagree	
1							

2							
3							
4							
5							
6							
7							
8							
9							



Date:

Recommendation

Signature of Expert

**Section II-Structured Self-Administered Knowledge questionnaire regarding blood donation**

ITEM	RELEVANCY		ACCURACY		APPROPRIATENESS		REMARKS
	Agree	Disagree	Agree	Disagree	Agree	Disagree	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Date:

Recommendation

Signature of Expert

**Section III – Structured 5-point Likert Scale to assess the attitude of college students regarding blood donation.**

ITEM	RELEVANCY		ACCURACY		APPROPRIATENESS		REMARKS
	Agree	Disagree	Agree	Disagree	Agree	Disagree	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Date:

Recommendation

Signature of Expert

#### Section IV-Checklist criteria for validation of the information Booklet

Please go through the criterion check list which have been formulated for evaluating the effectiveness and validation of the information booklet on adverse effects of antipsychotic drugs. There are three main response column and a remark column in the criterion check list. Please go through the content and express opinion by placing a tick mark (✓) against the specific column of the criteria check list. Your expert opinion and suggestion will be highly appreciated.

- Column I- Meet criteria fully. If you think that the content is in congruence with the specific criteria
- Column II- meet the criteria partially.
- Column III- Does not meet criteria. If content is not relevant to the criteria.



SL NO.	CRITERIA	COLUMN I	COLUMN II	COLUMN III	REMARKS
1	Information booklet				
1.1	General objectives				
1.2	Specific objectives				
2	Selection of content is the content plan for				
2.1	Appropriate				
2.2	Adequate				
2.3	Accurate				
3	Organization				
	Is the content organization in logical sequence?				
4	Language				
4.1	Is the language easy to understand?				
4.2	Is the language grammatically, correct?				
5	Presentation				
5.1	Does the cover page have an appropriate title?				
5.2	Does the cover page have relevant illustration?				
5.3	Does the information booklet have an introduction?				
6	Picture				
6.1	Are the pictures easy to follow?				
6.2	Are the pictures appropriate to the object?				
6.3	Are they attractive and applicable to the object?				
7	Illustration				

7.1	Are the illustration simple and easy to follow?				
7.2	Appropriate				
7.3	Placed in relevant to the booklet				
8	Practicability				
8.1	Will the information given in the booklet be interesting to learn?				
8.2	Does the booklet contain answers to the questions asked?				



**APPENDIX - B<sub>2</sub>**

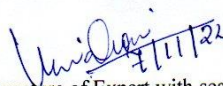
**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**



**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M), Assam”** as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

  
Signature of Expert with seal

**Associate Professor  
Rahman Institute of Nursing and  
Paramedical Sciences  
Radhanagar, Guwahati**

Date : 6/11/24

Place: Guwahati

**APPENDIX - B<sub>3</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

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*Mitah*  
(Ms. Mitali Barman)  
Associate Professor  
Asian Institute of  
Nursing Education,  
Guwahati.  
Signature of Expert with

Date : 14/11/22

Place: Guwahati

Research Through Innovation  
**APPENDIX - B<sub>4</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**



**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M) Assam”**, as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

*Dr. Hemzamani Raha*

Signature of Expert with seal

Professor & HOD  
Community Health Nursing  
Regional College of Nursing  
Guwahati- 32

Date : 05/02/22

Place: RCN

**APPENDIX - B<sub>5</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M) Assam”**, as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.



Signature of Expert with seal

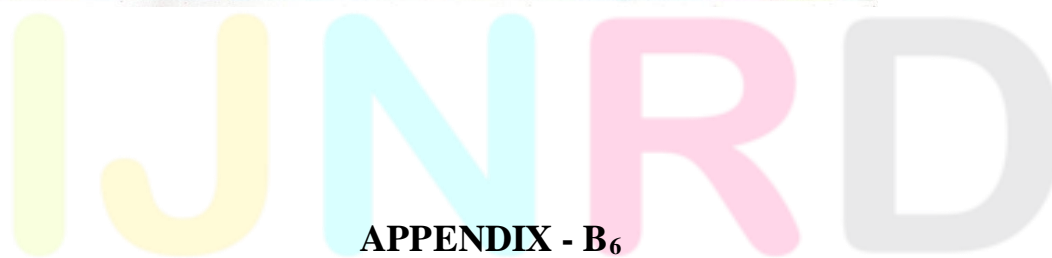
**Dr. J. P. Kalita**  
MBBS, MS, MCh (CMC Vellore)  
Director cum Senior Consultant CVS  
Health City Hospital, Guwahati  
Regd. No. 16237 (AMC)

Date :

21/02/24

Place:

Guwahati



**APPENDIX - B<sub>6</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study “**A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M) Assam**”, as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

  
DR. WASIM A. HUSSAIN  
MD, PATHOLOGY  
Reg. No.-21370 (AMC)

Signature of Expert with seal

Date :

Place:



**APPENDIX - B<sub>7</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M), Assam”** as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

Signature of Expert with seal

Faculty of Nursing  
Assam down town University  
Assistant Professor

Date : 12/11/22

Place: Guwahati


**APPENDIX - B<sub>8</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M), Assam”** as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

  
Assistant Professor  
Asian Institute of  
Nursing Education  
Guwahati, Assam  
Signature of Expert with seal

Date: 11/11/22.

Place: GUWAHATI



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IJNRD

Research Through Innovation


**APPENDIX - B<sub>9</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY**

**CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study **“A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M), Assam”** as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

  
(ANITA SONOWAL)  
Signature of Expert with seal

Associate Professor  
Rahman Institute of Nursing and  
Paramedical Sciences  
Radhanagar, Guwahati

Date: Guwahati

Place: Guwahati

**APPENDIX - B<sub>10</sub>**

**CERTIFICATE OF CONTENT VALIDATION OF THE TOOL**

**CERTIFICATE OF CONTENT VALIDITY****CERTIFICATE OF VALIDATION**

This is to certify that the research tool developed by Ms Nunung Saroh student of M.sc(N) 1<sup>st</sup> year of CPMS College Of Nursing, Guwahati to be used for her research study “A Study To Assess The Knowledge And Attitude Regarding Blood Donation Among Students of Selected Colleges Of Kamrup (M), Assam” as a partial fulfillment of M.sc Nursing Programme under Srimanta Sankaradeva University of Health Science has been validated by me and the tool is found to be appropriate.

*Geetai*  
30/11/22

Signature of Expert with seal  
Faculty of Nursing  
Assam down town University  
Assistant Professor

Date :

30/11/22

Place:

Gornahali, Assam.

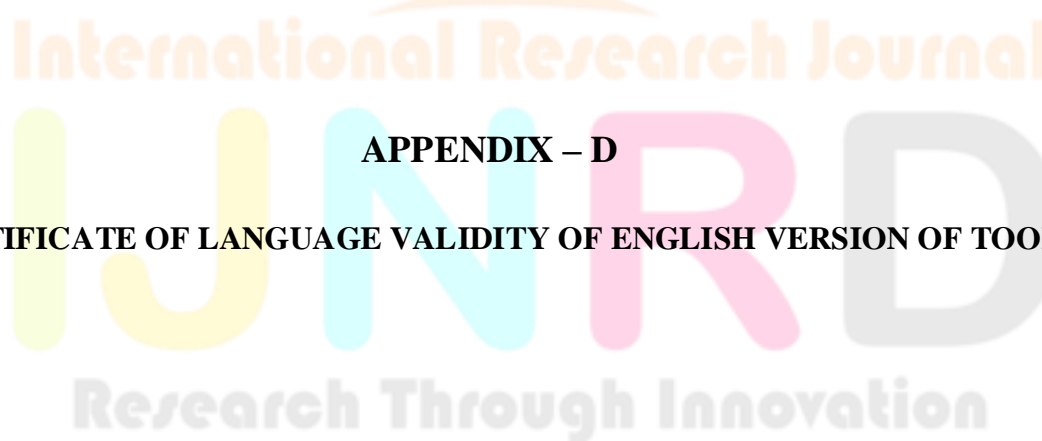
**APPENDIX - C****LIST OF EXPERTS**

SL. NO.	NAME OF EXPERTS	DESIGNATION
1	Ms. Yumnam Chanu Superior	Assistant Professor Medical Surgical Nursing Department Faculty of Nursing, ADTU

2	Ms. Anita Sonowal	Associate Professor Medical Surgical Nursing Department Rahman Institute of Nursing and Paramedical Sciences
3	Ms. Manju Chapagain	Associate Professor Medical Surgical Nursing Department Asian Institute of Nursing Education
4	Dr Wasim Akram Hussain	Senior Resident MD, Department of Pathology Pratiksha Hospital
5	Prof. Dr (Mrs.) Himeshwari Bhuyan	Professor Head of the Department Community Health Nursing Regional College of Nursing
6	Prof. (Mrs.) Mithali Barman	Associate Professor Medical Surgical Nursing Department Asian Institute of Nursing Education
7	Ms. Lakhimi Gogoi	Assistant Professor Community Health Nursing Department Down town College of Nursing
8	Mrs. Urmi Jyoti Deori Assistant Professor	Assistant Professor Medical Surgical Nursing Department Rahman Institute of Nursing and Paramedical Sciences
9	Dr JP Kalita	Senior Resident MBBS, MCH Director Senior Consultant, CTVS

### APPENDIX – D

#### CERTIFICATE OF LANGUAGE VALIDITY OF ENGLISH VERSION OF TOOL





**CERTIFICATE OF LANGUAGE EXPERT (ENGLISH)**

**TO WHOM IT MAY CONCERN**

This is to certify that research tool prepared by Ms Nunung Saroh, M.Sc, Nursing student of CPMS College of Nursing, Guwahati-26, Assam (under Srimanta Sankaradeva University of Health Science) in English was validated by undersigned and the language of the tool was found to be appropriate. She can proceed with the tool and conduct the study for dissertation entitled **“A study to Assess the Knowledge and Attitude regarding Blood Donation among students of selected colleges of Kamrup (M), Assam.”**

PLACE: **RGU**

DATE:

Signature of the Expert with Seal



**Dr. PRACHAND NARAYAN PIRAJI**  
Assistant Professor  
Department Of English  
Rajiv Gandhi University  
Rono Hills, Doimukh - 791112  
Arunachal Pradesh

NAME:

DESIGNATON:

**APPENDIX - E<sub>1</sub>**

**LETTER GRANTING PERMISSION TO CONDUCT PILOT STUDY**



# CPMS COLLEGE OF NURSING

Affiliated to Srimanta Sankaradeva University of Health Sciences  
Approved by Govt. of Assam, recognised by INC, New Delhi  
and Assam Nurses Midwives and Health Visitors Council, Guwahati, Assam  
College Campus – Bonda (Amgaon) Guwahati - 781026  
City Office : Opp. Gauhati Commerce College Boys' Hostel, R.G.B. Road, Guwahati - 781003 (Assam)  
Ph. : 8811099994  
E-mail : pewsgthy@gmail.com / Website : www.cpmsc.com

Ref. No. : CPMS/Con/22/760

Date : 01/12/22

From,  
The Principal  
CPMS College of Nursing  
Bonda, Guwahati-26, Assam

To,  
The Registrar Cotton University

Subject- Letter seeking permission to conduct pilot study.

Sir/Madam,

May I introduce Ms. Nunung Saroh undergoing M.Sc. Nursing course in this Institution. She is under taking a research "A Study to Assess the Knowledge and Attitude regarding Blood donation among Students of selected Colleges of Kamrup (M) Assam" to be submitted to Srimanta Sankaradeva University of Health Sciences, Guwahati as a partial fulfillment for the award of Masters in Nursing Degree (M.Sc Nursing). Ms. Nunung Saroh has selected your esteemed college for her reliability and pilot study. CPMS college of Nursing will remain extremely grateful to you for the accord of your permission to conduct her study in your Institution, which will enable her to work on the proposed project and contribute towards professional growth.

The student, if required will furnish further details of the proposed study personally. Anticipating your kind approval, which may kindly be communicated to us.

Yours faithfully

Principal

Prof.(Dr.) Banashri Lata Sadhanidar  
CPMS College of Nursing  
Guwahati-26, Assam.

PRINCIPAL  
CPMS COLLEGE OF NURSING  
BONDA, AMGAON  
GUWAHATI-26

HODs, Anthropology of zoology  
Please fee f do the needful to help the student.

Seen & allowed to carry out the work.

11/12/22

Seen & allowed to carry out

11/12/22

Registrar i/c  
Cotton University  
Panbazar, Guwahati-781007, Assam

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## APPENDIX - E<sub>2</sub>

### LETTER GRANTING PERMISSION TO CONDUCT MAIN RESEARCH STUDY



# CPMS COLLEGE OF NURSING

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Phone : 8811099994  
E-mail : pewsghy@gmail.com / Website : www.cpmsc.com

Ref. No.: CPMS/CON/23/141

Date: 02/05/2023

From,  
The Principal  
CPMS College of Nursing  
Bonda, Guwahati-26, Assam

To,  
The Principal, SB Deorah College

Subject: Letter seeking permission to conduct main research study

May I introduce Ms. Nunung Saroh undergoing M.Sc. Nursing course in this Institution. She is under taking a research "A Study to assess the Knowledge and Attitude regarding Blood Donation among Students of selected colleges of Kamrup (M), Assam" to be submitted to Srimanta Sankaradeva University of Health Sciences, Guwahati as a partial fulfillment for the award of Masters in Nursing Degree (M.Sc Nursing). Ms. Nunung Saroh has selected your esteemed college for her main study. CPMS college of Nursing will remain extremely grateful to you for the accord of your permission to conduct her study in your Institution, which will enable her to work on the proposed project and contribute towards professional growth.

The student, if required will furnished further details of the proposed study personally. Anticipating your kind approval, which may kindly be communicated to us.

Yours faithfully

Principal  
*Banashri Lata S. Dhanidar*  
Prof. (Dr) Banashri Lata S. Dhanidar  
CPMS College of Nursing  
Guwahati-26

*Permission granted to do the survey among the students.*  
*D. Jaisankar*  
Principal  
S.B. Deorah College  
Uthbari, Guwahati-7

CPMS COLLEGE OF NURSING  
BONDA, GUWAHATI  
GUWAHATI-26



Journal  
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## APPENDIX - E<sub>3</sub>

### LETTER GRANTING PERMISSION TO CONDUCT MAIN RESEARCH STUDY



# CPMS COLLEGE OF NURSING

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College Campus - Bonda (Amgaon) Guwahati - 781026

City Office : Opp. Gauhati Commerce College Boys' Hostel, R.G.B. Road, Guwahati-781003 (Assam)  
Phone : 8811099994  
E-mail : pewsgy@gmail.com / Website : www.cpmsc.com

V.P.  
Pl. do needful.  
11/5/23

Ref. No. CPMS/CON/23/141

Date: 02/05/2023

From,  
The Principal  
CPMS College of Nursing  
Bonda, Guwahati-26, Assam

To,  
The Principal B. Borooah College

Subject: Letter seeking permission to conduct main research study

May I introduce Ms. Nunung Saroh undergoing M.Sc. Nursing course in this Institution. She is under taking a research "A Study to assess the Knowledge and Attitude regarding Blood Donation among Students of selected colleges of Kamrup (M), Assam" to be submitted to Srimanta Sankaradeva University of Health Sciences, Guwahati as a partial fulfillment for the award of Masters in Nursing Degree (M.Sc Nursing). Ms. Nunung Saroh has selected your esteemed college for her main study. CPMS college of Nursing will remain extremely grateful to you for the accord of your permission to conduct her study in your Institution, which will enable her to work on the proposed project and contribute towards professional growth.

The student, if required will furnished further details of the proposed study personally. Anticipating your kind approval, which may kindly be communicated to us.

Yours faithfully  
Principal  
Prof. (Dr) Banashri Lata Sadhanidar  
CPMS College of Nursing  
Guwahati-26

CPMS COLLEGE OF NURSING  
BONDA, GUWAHATI-26  
GUWAHATI-26

Allowed to do  
the survey

11/5/23

V. PRINCIPAL  
B. BOROAH COLLEGE  
GUWAHATI-26

## APPENDIX - E4

### LETTER GRANTING PERMISSION TO CONDUCT MAIN RESEARCH STUDY



# CPMS COLLEGE OF NURSING

Affiliated to Srimanta Sankaradeva University of Health Sciences  
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Phone : 8811099994  
E-mail : pewsgy@gmail.com / Website : www.cpmc.com

Ref. No.: CPMS/CON/23/141

Date: 02/05/2023

From,  
The Principal  
CPMS College of Nursing  
Bonda, Guwahati-26, Assam

To,  
The Principal, Guwahati College

Subject: Letter seeking permission to conduct main research study

May I introduce Ms. Nunung Saroh undergoing M.Sc. Nursing course in this Institution. She is under taking a research "A Study to assess the Knowledge and Attitude regarding Blood Donation among Students of selected colleges of Kamrup (M), Assam" to be submitted to Srimanta Sankaradeva University of Health Sciences, Guwahati as a partial fulfillment for the award of Masters in Nursing Degree (M.Sc Nursing). Ms. Nunung Saroh has selected your esteemed college for her main study. CPMS college of Nursing will remain extremely grateful to you for the accord of your permission to conduct her study in your Institution, which will enable her to work on the proposed project and contribute towards professional growth.

The student, if required will furnished further details of the proposed study personally. Anticipating your kind approval, which may kindly be communicated to us.

Yours faithfully  
Principal  
Prof. (Dr) Banashri Lata Senghanidar  
CPMS College of Nursing  
Guwahati-26

Allowed  
02/5/23  
Principal  
Guwahati College  
Guwahati-21



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## APPENDIX - F

### CERTIFICATE OF ENGLISH EDITING

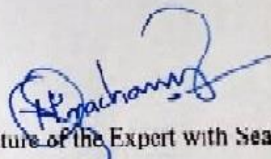
## CERTIFICATE OF ENGLISH EDITING

### TO WHOM IT MAY CONCERN

This is to certify that the thesis work done by Ms. Nunung Saroh, 2<sup>nd</sup> Year M.Sc. Nursing of CPMS College of Nursing, Guwahati-26 (under Srimanta Sankardeva University of Health Sciences) on the topic, "A study to Assess the Knowledge and Attitude regarding Blood Donation among students of selected colleges of Kamrup (M), Assam." has been edited by me and found appropriate for submission.

PLACE: RQU

DATE:

  
Signature of the Expert with Seal  
**Dr. PRACHAND NARAYAN PIRAJI**  
Assistant Professor  
Department Of English  
Rajiv Gandhi University  
Rone Hills, Doimukh - 791112  
Arunachal Pradesh

NAME:

DESIGNATION:

## APPENDIX - G

### TOOLS USED FOR THE STUDY

#### SECTION A

#### SOCIO-DEMOGRAPHIC PROFORMA

**Instruction:** Read the following questions carefully and choose the answer by encircling the option.

1. Age of students (in years) .....
2. Gender
  - a) Male
  - b) Female
  - c) Transgender
3. Father's education
  - a) Professional degree
  - b) Graduate
  - c) Intermediate
  - d) High school
  - e) Middle school
  - f) Primary school
  - g) Illiterate
4. Father's occupation
  - a) Professional
  - b) Semi-professional
  - c) Clerical/shop/farm
  - d) Skilled workers
  - e) Semi-skilled workers
  - f) Unskilled workers
  - g) Unemployed
5. Number of siblings in the family
  - a) 0
  - b) 1
  - c) 2
  - d) More than two
6. Types of family
  - a) Nuclear family
  - b) Joint family
  - c) Extended family
7. Any previous source of information on blood donation
  - a) Media
  - b) Relatives

- c) Medical personals
- d) Friends

8. Have you ever donated blood?

- a) Yes
- b) No

9. Any of your friends have donated blood?

- a) Yes
- b) No

## SECTION B

STRUCTURED SELF-ADMINISTERED KNOWLEDGE QUESTIONNAIRE ON KNOWLEDGE REGARDING BLOOD DONATION IN SELECTED COLLEGES OF KAMRUP (M) ASSAM.

### Instructions

Kindly read the following question carefully and select the best alternative from various possible alternative of each question, encircle the alphabet against the answer you choose. Please do not encircle in more than one option.

1. Blood donation means
  - a. Giving blood voluntarily
  - b. Giving blood for test
  - c. Receiving blood
  - d. Giving blood to self
  
2. The types of blood groups are
  - a. A, B, AB,
  - b. A & B
  - c. A, B, AB, O
  - d. AB&O



3. Blood group that is known as universal donor is

- a) O-ve
- b) AB+ve
- c) O+ve
- d) AB-ve

4. Blood for donation is collected from

- a) Arteries
- b) Veins
- c) From both arteries and veins
- d) From capillaries and arteries

5. The donated blood is composed of

- a) Red blood cells, platelets, plasma and granulocytes
- b) Red blood cells only
- c) Red blood cells, white blood cells, platelets
- d) Only red blood cells and white blood cells

6. World blood donor day is celebrated on

- a) 14<sup>th</sup> June
- b) 16<sup>th</sup> July
- c) 3<sup>rd</sup> August
- d) 1<sup>st</sup> September

7. A person can start donating blood from the age of

- a) 16 years
- b) 18 years
- c) 19 years
- d) 20 years

8. One who is eligible to donate blood is

- a. A fit and healthy person
- b. Children
- c. Person having disease
- d. Pregnant women

9. To donate blood, one should have hemoglobin level more than
- 9.5 gm/dl
  - 10.5 gm/dl
  - 11.5 gm/dl
  - 12.5 gm/dl
10. The acceptable Blood pressure range for blood donation is
- Minimum 70/40 mm of hg – maximum 90/60 mm of hg
  - Minimum 110/70 mm of hg – maximum 160/90 mm of hg
  - Minimum 140/90 mm of hg – maximum 180/100 mm of hg
  - Minimum 150/90 mm of Hg- maximum 200/110 mm of Hg
11. A female donor can donate blood
- During 2<sup>nd</sup> day of menstruation
  - During 3<sup>rd</sup> day of menstruation
  - After 2 days of menstruation
  - After 3 days of menstruation
12. The maximum age for donating blood is
- 50 years
  - 55 years
  - 60 years
  - 65 years
13. The amount of blood extracted normally from the body during each donation is
- 150-250 ml
  - 400-500 ml
  - 350-450 ml
  - 500-600 ml
14. Duration taken at time of blood donation
- 5-10 minutes
  - 10-20minutes

- c) 20-25 minutes
  - d) 25-30 minutes
15. After blood donation, the amount of blood in our body
- a. Decreases permanently
  - b. Gradually returns to the normal level within a month
  - c. Takes more than a year to return to normal level
  - d. Amount of blood level increases
16. After he/she donates blood one
- a. Can carry on with normal routine works after taking rest for a while
  - b. Has to take rest for a week
  - c. Can carry out rigorous physical work just after blood donation
  - d. Can carry out only light works for few weeks
17. A person can donate blood within 4 months for
- a) One time
  - b) Two times
  - c) Three times
  - d) Four times
18. Blood donation is conducted at
- a) Blood Banks
  - b) Blood donation camp
  - c) Hospitals
  - d) All of the above
19. Food to be given after blood donation
- a) Heavy diet
  - b) Soft drinks/Juice
  - c) High fiber diet
  - d) Nothing is given
20. One donation can help save life of at least
- a) 4 people
  - b) 3 people
  - c) 2 people
  - d) 1 person
21. The benefits of donating blood
- a) Can reduce the risk of developing cancer

- b) Can reduce harmful iron stores  
 c) Lowers the risk of suffering a heart attack  
 d) All of the above
22. The problems that may occur just after blood donation are  
 a) Nausea, light headedness, dizziness, arm pain, numbness.  
 b) Weakness in whole body parts, blurry vision.  
 c) Fatigue, loss of speech for a while.  
 d) Loss of bodyweight, anorexia.
23. Blood donation cannot be done permanently by  
 a) A cancer patient on medication  
 b) HIV patient  
 c) Hepatitis B and C  
 d) All of the above
24. If the donor has fever with flu on the day of donation, then  
 a) He can donate blood after consulting with the medical staffs  
 b) He can donate blood after taking antipyretics  
 c) He cannot donate blood  
 d) He can donate blood after drinking lots of fluids

### FOR STRUCTURED SELF-ADMINISTERED KNOWLEDGE QUESTIONNAIRE

#### ANSWER KEY:

QUESTION NO.	CORRECT RESPONSE
1.	A
2.	C
3.	C
4.	B
5.	A
6.	B
7.	C
8.	A
9.	D
10.	C

11.	C
12.	D
13.	A
14.	D
15.	A
16.	A
17.	A
18.	A
19.	B
20.	A
21.	D
22.	A
23.	A
24.	C

### SECTION C

#### STRUCTURED 5-POINT LIKERT SCALE TO ASSESS THE ATTITUDE REGARDING BLOOD DONATION

##### Instruction

Please read the statement carefully answer each question by placing tick mark (✓) in the appropriate box.

SL NO.	STATEMENT	STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE
1	Blood donors are true heroes					
2	Blood donation decreases the blood in our body.					
3	Blood donation makes us weak.					
4	Regular blood donations lead to obesity (weight gain).					
5	Blood donation is a safe process					

6	Blood donation helps to save life.					
7	Blood donation is the essential and integral part of health care system.					
8	Donating blood more than once is bad for health.					
9	Blood donation is a very painful procedure					
10	Blood donation does not cause any harm to our body.					
11	A healthy person can donate blood four times a year.					
12	A person cannot take part in sports and other physical exercises after donating blood					
13	Donating blood makes us suffer from HIV/AIDS.					
14	A person feels worthwhile and satisfied after donating blood.					
15	Donating blood is a good work					
16	Blood can be stored for later use					
17	Donation of blood leads to infertility and loss of vitality					
18	Donating blood decreases the					

	immune system of the body.					
<b>19</b>	Donating blood lowers cardiovascular risks					
<b>20</b>	Blood donation can cause sexual failure					

### SCORING FOR STRUCTURED 5-POINT LIKERT SCALE QUESTIONNAIRE TO ASSESS THE ATTITUDE

ITEM NO.	STATEMENT	STRONGLY DISAGREE	DISAGREE	UNCERTAIN	AGREE	STRONGLY AGREE
1	Positive statement	1	2	3	4	5
2	Negative statement	5	4	3	2	1
3	Negative statement	5	4	3	2	1
4	Negative statement	5	4	3	2	1
5	Positive statement	1	2	3	4	5
6	Positive statement	1	2	3	4	5
7	Positive statement	1	2	3	4	5
8	Negative statement	5	4	3	2	1
9	Negative statement	5	4	3	2	1
10	Positive statement	1	2	3	4	5
11	Positive statement	1	2	3	4	5
12	Negative statement	5	4	3	2	1
13	Negative statement	5	4	3	2	1
14	Positive statement	1	2	3	4	5
15	Positive statement	1	2	3	4	5
16	Positive statement	1	2	3	4	5
17	Negative statement	5	4	3	2	1
18	Negative statement	5	4	3	2	1
19	Positive statement	1	2	3	4	5
20	Negative statement	5	4	3	2	1

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## APPENDIX- H

### CONSENT CERTIFICATE FROM THE PARTICIPANT

I am giving my consent to participate in the research study of Ms. Nunung Saroh, M.sc Nursing Student of CPMS College of Nursing, Amgaon, Bonda, Guwahati, Assam on the topic “**A study to assess the Knowledge and Attitude regarding Blood Donation among students of selected colleges of Kamrup (M), Assam**”.

I have been informed that my participation is entirely voluntary and even after the study to begins, I can refuse to participate at any point of time during the study. I have been fully informed about the purpose, nature, the researcher's responsibility and likely benefit from this study.

My signature below indicates that I agree to participate in the research study

Date:

Place:

Signature of the participant



## APPENDIX - I

### LIST OF COLLEGES

NAME OF COLLEGES	ADDRESS
------------------	---------



<b>Arya Vidyapith college</b>	AK Azad road, Vidyapeeth, Tarun Nagar, Guwahati.
<b>B. Borooah College</b>	Dr. Bhubaneshwar, RG Baruah Rd, Ullubari, Guwahati.
<b>Handique Girls College</b>	GNB Rd, Dighalipukhuri, Guwahati.
<b>Guwahati College</b>	Jyoti Nagar Rd, Bamunimaidan, Guwahati.
<b>Pragjyotish College</b>	Pragjyotish Path, Santipur, Guwahati.
<b>Pandu College</b>	Pandu, Maligaon, Guwahati.
<b>College of science, Guwahati university</b>	Address: Gopinath Bordoloi Nagar ,Jalukbari, Guwahati ,Assam.
<b>Science College,ADBU</b>	
<b>LCB College</b>	TN Tower,114, Assam Trunk Rd, Maligaon, Guwahati.
<b>K R B Girl's college</b>	Bishnupu, Fatasil, Fatasil Ambari, Guwahati.
<b>RG Baruah College</b>	AK Dev Rd, Fatasil Ambari, Guwahati
<b>NERIM Group of Institutions</b>	
<b>Pachim Guwahati College</b>	Dharapur Palashbari Rd, Azara, Guwahati.
<b>S B Deorah college</b>	Bora Service, Shillong Rd, Ullubari, Guwahati.
<b>Kanya, Mahavidyalaya</b>	Geetanagar, Guwahati.
<b>Karmashree Hitewshwar Saikia, College</b>	Panjabari Rd, six Mile, Guwahati.
<b>Beltola College</b>	Beltola Tinali, Bongagaon, Guwahati.
<b>Dimora College</b>	Khetri, Kamrup, Guwahati,Assam.

## APPENDIX - I

### DATA COLLECTION PHOTOGRAPH



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