



St. Paul's Hospital, Millennium Medical College

Graduate Study Program

**Blood Donation practice and its Associated Factors among Pastoralist
Community in the Liben District, East Borena Zone, Oromia Region,
Ethiopia**

By

Abebe Tiko(Bsc)

Addis Ababa, Ethiopia

August 2024



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By: Abebe Tiko Begna (Bsc)

Advisors:

**Principal advisor: Takele Menna, PhD (Associate Professor of Public
Health)**

Co-advisor: Frehiwot Worku, MPH

**A Thesis Submitted to St. Paul's Hospital Millennium Medical College,
School of public health in Partial Fulfillment of the Requirements for a
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Addis Ababa, Ethiopia

August 2024

DECLARATION

I, the undersigned, declare that this thesis comprises my own work. In compliance with internationally accepted practices, I have acknowledged and referred to all the material used in this work. I understand that non-adherence to the principles of academic honesty and integrity and misrepresentation or fabrication of any idea, data, fact, or source will constitute sufficient grounds for disciplinary action by the college and can also evoke penal action from sources that have not been properly cited or acknowledged.

Name: Abebe Tiko (BSC) Date of submission: August 10/2024; Signature: - _____

This thesis has been submitted for examination with my fellow college advisor's approval.

Advisor's Name (primary): _____ signature _____

Advisor's Name (co-advisor): _____ signature _____

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ABSTRACT

Introduction: Blood donation is a novel act to save the lives of people who suffer from serious medical and surgical conditions. Because the demand for blood supply is too high, there is a shortage of blood, which causes significant morbidity and mortality. Donated blood plays a major role during surgery, accidents, delivery, and in many bleeding cases. To increase blood supply and maintain an adequate quantity of blood, regular and volunteer blood donation practices are needed to meet the increased demand for blood.

Objectives: To assess the magnitude of blood donation practices and their associated factors among pastoralist communities in Liben District, East Borena Zone, Oromia Region, Ethiopia, 2024,

Methods: A community-based cross-sectional study was conducted among 404 randomly selected participants from the Liben district. Structured and pretested interviewer-administered questionnaires were used to collect data. Descriptive statistics were used to describe and summarize the participants' characteristics. Bivariate and multivariate binary logistic regression analysis was carried out. Variables with p value ≤ 0.25 during the bivariable analysis were entered into the multivariable binary logistic regression analysis adjusts the potential effect of confounding variables. Degree of Association between outcome and predictor variables was calculated using adjusted odds ratio and 95% CI. The level of significance in the last model was determined based on a p-value of <0.05 .

Results: In this study, the magnitude of blood donation practices was 16.8% with 95% CI : (13.2%, 20.4%) in the district. Male and urban residents of study Participant are significant associations with blood donation practice among the study participants. Moreover, having formal education (AOR=2.5, 95% CI: (1.3,4.3), family members who ,received blood (AOR: 4.6, 95% CI (1.89, 11.6), adequate knowledge about the importance of blood donation (AOR: 3.4,95% CI (1.2, 3.6) , having a favorable attitude (AOR: 2.2, 95% CI (1.6, 3.8), and being involved in blood donation campaigns(AOR: 18,95% CI (9.4, 25.4) were positively associated with blood donation practice among the pastoralist community..

Conclusion and recommendation: As the findings of this study showed, blood donation practices were poor among the pastoralist communities in the Liben district. Sex, education status, place of residency, and knowledge and attitude toward blood donation in the community were the main factors associated with low donation practices. Thus, all concerned bodies should design a new strategy to create better awareness and organize campaigns in the pastoralist community about the significance of voluntarily donating to save many lives in outside the district.

Keywords: Blood Donation Practice, Factors associated Liben district, Pastoralist Community

Contents

Acknowledgements.....	I
Abstract	IVI
Acronyms and abbreviations	VIII
1. Introduction.....	1
1.1. Background	1
1.2. Statement of the Problem.....	2
1.3. Rationale of the Study.....	3
2. Literature Review.....	4
2.1. Blood Donation Practice	4
2.2. Factors Associated with Blood Donation practice	4
2.3. Conceptual Framework.....	9
3. Objective.....	10
3.1. General Objective	10
3.2. Specific objectives	10
4. Methods	11
4.1. Study Setting	11
4.2. Study Period	11
4.3. Study Design	11
4.4. Source population	11
4.5. Study Population.....	11
4.6. Sample Size	11
4.7. Sampling Procedures	11
4.8. Study Variables	13
4.9. Data Collection Instruments.....	14
4.10. Data Collection and Procedures	14
4.11. Operational Definitions.....	14
4.12. Data Quality Control and Management	15
4.13. Data Analysis Planning and Procedures	15
4.14. Ethical Consideration.....	16
4.15. Dissemination of Results.....	16
5. Results	17
6. Discussion.....	27
7. Strengths and limitations of the study	29
8. Conclusions and recommendations.....	30
9. References.....	31
10. Annexes	33

Acronyms and Abbreviations

AOR	Adjusted Odds Ratio
BB	Blood Bank
BD	Blood Donation
BT	BT
BTS	Blood Transfusion
CI	Confidence Interval
COR	Crude Odd Ratio
EFDR	Ethiopian Federal Democratic Republic
Epi-Info	Epidemiological-Information
HIV	Human Immune Deficiency Virus
KAP	Knowledge Attitude and Practice
RCS	Red Cross Society
SPSS	Statistical Package For Social Science
SSA	Sub Saharan Africa
SPHMMC	St. Paul's Hospital Millennium Medical College
VBD	Voluntary Blood Donor
WHO	World Health Organization

Tables and figures

Tables

Table 1: Sample size determination for studying the blood donation practice and its associated factors among pastoralist community of Liben district , Ethiopia,2024.....	12
Table 2:. Socio-demographic characteristics of the study participants of BD Practice and its Associated Factors among Community of Liben District, Oromia, Ethiopia, 2024.....	18
Table 3: Practice towards blood donation among of the study participants of Liben District, Oromia , Ethiopia, 2024.	19
Table 4: Knowledge of the study participants towards blood donation among Community of Liben District, Oromia , Ethiopia, 2024.....	21
Table 5. Altitude towards blood donation among Community of Liben District, Oromia , Ethiopia, 2024.....	23
Table 6:. Communication and service related factors of blood donation among Community of Liben District, Oromia , Ethiopia, 2024.....	25
Table 7. Multivariable logistic regression analysis for factors associated with practice of blood donation practice among Community of Liben District, Oromia , Ethiopia, 2024.....	26

Figures

Figure 1 : Shows a conceptual framework on blood donation practice and its associated factors among pastoralist community of Liben district 2024.....	9
Figure 2 . Schematic Presentation of sampling Technique of the study for blood donation practice and its associated factors among pastoralist community of Liben district 2024	13
Figure 3: reasons for not donating blood in the past among of the study participants of Liben District, Oromia Regional State, Ethiopia, 2024.	20
Figure 4 : Over all Knowledge status of the study participants towards blood donation among study part pant of Liben District, Oromia regional State, Ethiopia, 2024.....	21
Figure 5 : Over all attitude status of the study participants towards blood donation among community of Liben District, Oromia , Ethiopia, 2024	24
Figure 6 : source of information of blood donation among Community of Liben District, Oromia Regional State, Ethiopia, 2024.....	24

1. Introduction

1.1. Background

Blood transfusion is essential and life-saving support within the healthcare system and it saves millions of lives each year. Although blood transfusion saves lives and improves health, many patients requiring transfusion do not have timely access to safe blood. Providing safe and adequate blood samples should be an integral part of every country's national healthcare policy and infrastructure. The WHO recommends that all activities related to blood collection, testing, processing, storage and distribution should be coordinated at the national level through effective organization and integrated blood supply networks(1, 2).

Blood donation is the process of collecting blood from voluntary donors who are at low risk of infection and unlikely to jeopardize their health by blood donation(2). Donated blood plays an important role in surgery, accidents, childbirth and bleeding(3). The need for equitable and timely access to safe blood is universal but it is not available to many patients requiring transfusion as part of their clinical management(4).

Potential donors must be in good health, age 18-65 years old, weight at least 45 Kg, hemoglobin level of 12.5 mg/dl and above, pulse rate between 60 and 100 per minute, Systolic blood pressure 100 to 180 mm Hg and diastolic 50 to 100 mmHg and not have donated in the last 12 weeks. A person can donate whole blood every 56 days(2). Donors can benefit from blood donation, alongside personal satisfaction and pride, it can stimulate new blood cell production, burn 650 Cal per donation, and reduces iron levels which can interfere with their normal function in excess amount, and can undergo simple physical examination and blood testing which can help to identify unknown health concerns(1).

The World Health Organization (WHO) advocates annual blood donation by 1% of the healthy population to maintain a continuous supply of blood(5). However, adequate and safe blood supply remains a challenge in developing countries like Ethiopia. In Ethiopia, there has been gross inadequacy and inequity in access to blood(3). The national requirement for blood in Ethiopia is between 80,000 and 120,000 units per year, but only 43% is collected (6).

Blood banks must provide adequate and reliable blood to the community. In most cases blood donors could be categorized into three categories: voluntary non-remunerated, family or replacement, and remunerated or paid(7). The WHO recommended that countries focus on

young people to achieve 100% non-remunerated voluntary blood donation(8). Therefore, to ensure that everyone who needs safe blood has access to it, all countries need voluntary, unpaid donors who give blood regularly. Young blood donors are the current target population because young people can supply blood regularly for long time and can also advocate for and influence other young people to donate blood(9).

1.2. Statement of the Problem

The rise in human life expectancy and implementation of new and aggressive surgical and therapeutic methods have increased the demand for blood and blood products in most countries(10). Contemporary blood transfusion is an extremely desirable component of health care delivery system. Each year, millions of lives are saved through safe blood donation and transfusion throughout the globe(2).

In spite of extensive efforts and a number of blood donation programs being organized worldwide, the availability of adequate and safe blood still remains short to meet the increased demand(2).WHO advocates that 3%-5% of the population should donate blood every year; this would be the ideal rate for maintaining a country's stock of blood and blood products at an acceptable level, particularly in developing nations(8). Universally, 80 million units of blood are provided each year, but only two million units are donated in sub-Saharan Africa where the need is extremely high(11).

An adequate and reliable supply of safe blood can be ensured by a stable base of regular, voluntary and, unpaid blood donors. It is crucial for individuals to donate blood voluntarily and do so regularly, hence, there is a need to motivate more people to donate blood and encourage them to become repeat donors. Because the demand for blood supply is extremely high, blood shortage causes significant mortality and morbidity. To increase blood supply and maintain an adequate quantity of blood, regular and volunteer blood donation practices are needed. Ethiopia is one of the lowest annual donation rates which is 0.8/1000 population(6, 7).

Despite an increment seen regarding the total number of units of blood collected and the proportion of voluntary blood donation for the last decade, the percentage of blood collected from voluntary blood donors and the average annual blood collection rate are extremely low in Ethiopia(3).Various studies were conducted elsewhere have shown that the magnitude of the practice of blood donation were low in Ethiopia (3, 4, 6, 12). Several Studies in different parts of the world have identified factors that hinder willingness to donate blood. Such perceptions

include being not fitted to give blood, fear of anemia, fear of different health risks, and lack of information about blood donation, which result in significant morbidity and mortality (12-14). Furthermore, socio-demographic, organizational, physiological, and psychological factors may affect people's willingness to donate blood(6, 12).

To meet the demand for blood in the country, mobilization and sensitization activities have been initiated to recruit new and retain current blood donors. Because only a small proportion of eligible donors donate and an even smaller percentage return to give blood a second time or more; a better understanding of what motivates donors to give blood more than once is needed. Despite an increment in the total number of units of blood collected and the proportion of voluntary blood donations over the last decade, to achieve the WHO regional target of 80% voluntary blood donation (2). The percentage of blood collected from voluntary blood donors and the average annual blood collection rate are extremely low in Ethiopia, especially in the pastoralist community (3). Even though some pieces of evidence are available at the national level, as to my knowledge, very few studies have been carried out to show the level of practice toward voluntary blood donation and its associated factors among pastoralist communities in Ethiopia. These previous studies are not sufficient to provide to show full picture of the phenomenon. Furthermore, the figure on factors associated with voluntary blood donation in the pastoralist communities in Liben District is unknown. The implementation of educational programs on voluntary blood donation in the district is new and emerging aspect of public health practice that requires the need for evidence based knowledge and robust research findings. The current study aimed to provide insight and opportunity to assess factors affecting voluntary blood donation in the district.

1.3. Rationale of the Study

Finding of this research will help plan and implement alternative strategies for collecting blood by identifying factors hindering blood donation in the pastoralist community. The data will also used by the zonal health department to improve and strengthen strategies for blood donation programs in the Liben district. It will also help local Healthcare provider to manage and minimize unnecessary blood transfusions. The results would help the Negele- Borena blood bank, health Planners, and policy makers; use it to provide appropriate strategies to enhance VBD practices and other blood donation activities.

Finally, the study will provide baseline information that can be used as a guide for future research on related subjects and valuable for other studies in the field that will be shared with the stakeholders in charge of the interventions.

2. Literature Review

A literature review discusses published information in a particular subject area, and some information is collected in a particular subject area within a certain period. An extensive review of the literature was conducted by the investigator by reviewing published articles regarding willingness to donation, blood donation practice, and factors associated by using different search engines like Pub-Med, MEDLINE, Lancet, and Google scholar.

2.1. Blood Donation Practice

Blood can only be obtained from generous donors. Despite extensive efforts and many blood donation programs, there is a shortage of safe blood to meet the demands in sub-Saharan countries (11). The blood donation rates vary significantly in different countries. High-income countries have a blood donation rate per 1000 person that is six times higher than that of low-income countries(15). From an estimated 80,000,000 units of blood donated annually worldwide, only 38% is collected in developing countries where over 80% of populations live(3). The World Health Organization (WHO) recommends that; by 2020 countries should achieve 100% anonymous nonpaid voluntary blood donation, focusing on young people. This is because young people are healthy, active, self-motivated, and open and, constitute a greater proportion of the population(1).

Various studies conducted elsewhere have shown the magnitude of the low incidence of blood donation worldwide. Studies conducted in Asia showed that the prevalence of blood donation practices was ranged between 10% - 18%(16). A cross-sectional study in Nepal showed that from 177 participants, 18% had donated before, of which 20, had donated only once and only one student had donated three times before. The Portugal University of Coimbra cross-sectional study was conducted with 491 individuals (53% female). The prevalence of donation is 16.5%. The odds of donation are 76% lower among students who expressed fear of needles. A traditional barrier, lack of time, was not statistically significant in this study(17).

The prevalence of blood donation was less than satisfactory due to misconceptions, poor knowledge, and unfavorable attitudes. prevalence of adequate knowledge regarding blood donation was 60% in developing countries, and the blood donation rate in low-income countries

was considerably lower than that in middle- and high-income countries(8). According to studies conducted in Africa, the prevalence of blood donation ranges from 10.64% to 66.7%, in which the prevalence of blood donation practice is lower than 30% (5). A cross-sectional study among university students of the Kilimanjaro region in Tanzania showed that, out of 422 participants, 30% had ever donated blood, and more than half had donated twice or more. A similar facility-based cross-sectional study conducted at Hargeisa University showed that only 11.3% of the respondents have ever donated blood. 65.7% donated once and 34.3% donated more than once(18).

Despite an increase the total number of units of blood collected and the proportion of voluntary blood donations for the last decade, the percentage of blood collected from voluntary blood donors and the average annual blood collection rate are extremely low in Ethiopia(3).

A cross-sectional study conducted in Awassa showed that among the total study participants, 77.4% were willing to donate blood in the future; however, only, and 22.9% had blood donation practices in the past. The most prominent factors affecting blood donation choices were unfit to donate, fear of injection, and lack of awareness about blood donation(6). Similarly, another cross-sectional study conducted in the Somali region jijiga town showed that the blood donation practice was 18.9% and. Participants' sex, education, and occupational status were significantly associated with the practice of blood donation (25).

Met analysis studies conducted in Ethiopia revealed that the pooled prevalence of blood donation practices in Ethiopia was 25.82%. Good knowledge of blood donation (AOR = 2.85; 95% CI: 2.33-3.48) and favorable attitude (AOR = 4.35; 95% CI: 2.93-6.45) were factors associated with blood donation practice in Ethiopia(3).

An institution-based cross-sectional study conducted in Bale robe among 601 civil servants showed that the lifetime voluntary blood donation practice among civil servants was 27%, and the major reason for not donating blood was fear related to blood donation(5). Similarly , a cross-sectional study on blood donation practices and associated factors among patient caregivers at the University of Gondar Comprehensive Specialized Hospital showed that the magnitude of blood donation practices was as low as 18.4%(12).

2.2. Factors Associated with Blood Donation practice

2.2.1. Socio-demographic Factors

An online survey conducted on blood donation practices in Germany showed that significantly influencing blood donor status were age, health related quality of life, and conditions (10).

Another study conducted in Hargessa, Somaliland, has shown that blood donation practices were associated with socio-demographic characteristics respondents such education back ground(18).

Individuals from rural or urban areas differ in their blood donation practices due to different reasons. A cross-sectional study conducted at Arba Minch General Hospital in Gamo Gofa Zone showed that respondents from rural areas were 79.6% less likely than urban residents to donate blood previously. Study conducted in Axum showed that the sex of the participants was the major determinate for blood donation. Male participants were 3 times more likely to donate blood compared with female participants, and participants aged >30 years old were about 2 times more likely to donate blood than those who were less than 30 years old(19). 2.2.2. Knowledge, perception and attitude towards blood donation

Numerous investigations have been led to determine people's Knowledge, attitude and practice of blood donation. Notwithstanding, to be roused or disheartened about blood donation is as yet challenging

Study conducted in Hargessa has showed that favorable attitude towards blood donation (AOR = 4.94; 95% CI: 2.62, 9.28), adequate knowledge of blood donation (AOR = 2.49; 95% CI: 1.18, 5.22), and ever donated blood (AOR = 3.95; 95% CI: 1.13, 13.84) were identified as significantly associated with willingness to donate blood(18). A study conducted in Tigiry region revealed that knowledge of blood donation (AOR=3.403 95% CI 2.296–5.044), and attitude towards blood donation (AOR=3.41 95% CI 2.320–5.041) were significantly associated with blood donation behavior of health professionals(20). Similarly, study conducted in Easter Ethiopia Harar showed that adequate knowledge of blood donation significantly associated with donation practice of blood(15). In Ambo, a participant who had good knowledge was 2.96 times more likely to donate than their counterparts(21). Furthermore, the motive for first time donors participating in this activity varies, and includes: experiencing something new, peer pressure, pursuing personal benefits, such as free health check-ups(22). A case control study conducted among Admas university students showed that , mass media, social media, and attitude towards voluntary blood donation, and trust on blood transfusion services were significantly associated

with voluntary blood donation(23). Study conducted in Axum showed that Participants who have a family members or relatives received blood were 6 times more likely to donate blood when compared with those who have no family members or relatives who had received blood(19).

2.2.2. Knowledge, perception, and attitude toward blood donation

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2.2.3. Blood Donation Services and deterrent factors.

Blood transfusion services should be trusted by the community regarding their integrity, efficiency, and safety unless few people choose to donate their blood or may lose the existing donor's(8). There is a need for adequate public education and regular blood donation awareness campaigns in society at large. The aim of such campaigns that should emphasize the benefits of

blood donation would be to target those who are willing to donate blood in the future, as they could be the mainstay of blood donation, if properly motivated, especially in developing countries(7). As we know, health workers are too few in number, but they are vital to mobilize the community toward voluntary blood donation, and they have to be front line to practice(19).

Another study conducted in Bahardar showed that lack of information, convenience, and, fear of opportunity were determinant factors of blood donation practices(24). The main anxieties regarding avoiding blood donation were fear of physical consequences and, fear of the injection needle. A study conducted in Axum showed that Participants who have family members or relatives who had received blood were 6 times more likely to donate blood compared with those who had no family members or relatives who had received blood, which was significantly associated with the practice of blood donation (19).

A study conducted by Adama on Blood donation practice revealed that voluntary blood donation was significantly associated with exposure to mass media (AOR=9.80, 95% CI: 1.79, 53.80) and social media (AOR=1.70, 95% CI: 1.06, 2.79) as well as trust in blood transfusion services (AOR=0.03, 95% CI: 0.01, 0.29) (23).

2.3. Conceptual Framework

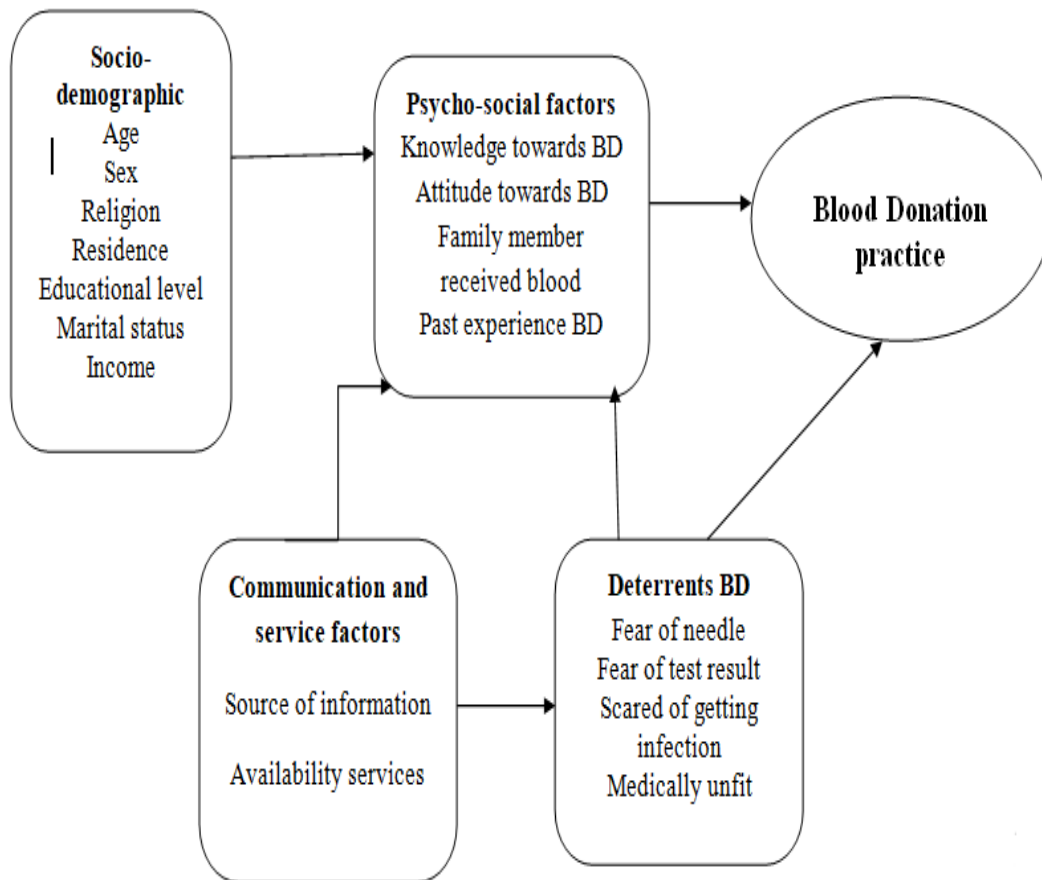


Figure 1 : Shows a conceptual framework on blood donation practice and its associated factors among pastoralist communities of Liben district 2024.(Developed by researcher by reviewing various literature).

3. Objective

3.1. General Objective

- To assess the magnitude of blood donation practices and their associated factors among pastoralist communities in Liben District, East Borena Zone, Oromia Regional State, Ethiopia.

3.2. Specific objective

- To assess the magnitude of blood donation practices among pastoralist communities in the Liben District, Oromia Region, 2024.
- To identify factors associated with blood donation practices among pastoralist communities in Liben District, Oromia region, 2024.

4. Methods

4.1. Study Setting

The study was conducted in the Liben district of the East Borena zone, located in the Oromia region. It is located 595 kilometers away from the capital city of the Federal Democratic Republic of Ethiopia. The district is structured into 17 rural kebeles (the lowest administrative unit). The majority of the population in the area belongs to the Oromo ethnic group and adheres to Islamic religions. According to Liben's district administration report, in 2023, there were 77,493 people in the district, and of these (48.5%), 37,646 were women. Most people in the districts are pastoralists. There is only one public hospital and six healthcare centers. The Negele Borena blood bank is located in the Liben district and actively engages in the collection of blood from donors in the catchment areas.

4.2. Study Period

The study was conducted from April 13 to May 31, 2024.

4.3. Study Design

A community-based cross-sectional quantitative study was conducted among the adult population of the Liben district.

4.4. Source population

All 18–65-year old adults who had lived in the Liben district for at least six months were the source population.

4.5. Study Population

All randomly selected adult population aged between 18 and 65 years old (both male and female) who were willing to participate in this study and permanent residents of the Liben district were included in the study. A study participant with a serious illness during the data collection period and who could not answer the questionnaire was excluded from the study.

4.6. Sample Size

Sample Size for First Objective

The sample size was determined using the single population proportion formula. The following assumptions were made while calculating the sample size. The degree of precision or margin of error (d^2) was chosen to be 0.04 with a reliability coefficient of 1.96% certainties ($Z=1.96$). $P=$ considering the estimated magnitude of blood donation in the Somali region Jijiga was 18.9%(25).

$$n = \frac{Z_{\alpha}^2 \times p(1-p)}{d^2}$$

Hence, after adding 10% non-response rate, the sample size was 404.

Sample Size for second Objective

Sample size was also calculated for factors associated with blood donation practice, (table-1) by considering various factors that were significantly associated with outcome variables with the following assumptions, two-sided confidence level of 95% and power of 80%. Using Epi

Info 7 Stat Calc software for the double population proportion formula, 10% for non-response.

Table 1: Sample size determination for studying blood donation practices and associated factors among pastoralist communities in the Liben district of Oromia region Ethiopia, 2024.

S.n	Variable	Exposed	Unexposed	AOR	Sample size+10% non-res. Rate(Ref.no)
1	Sex	32.7	67.3	5.2	50(25)
2	Education	35	63.9	3.29	88(25)
3	Attitude (+)	42.3	59.6	2.01	233(23)

Ultimately, the required sample size was the largest, 404, and it was taken as the final sample size for this study.

4.6. Sampling Procedures

In this study, Participants for the study were selected by using the following steps. First, six rural kebeles (the smallest administrative unit) were selected from 17 kebeles of the district by using simple random sampling technique. Then, based on the total number of each selected Kebele households, proportional distribution of the sample size were made for study kebeles. Finally, the study participants were selected by systematic random sampling method. The sampling interval (K^{th} value) was determined by dividing the total estimated households of each selected kebeles by their calculated sample size (figure 2). During data collection, in the case of more than one adults found in the households, one adult was taken by lottery method.

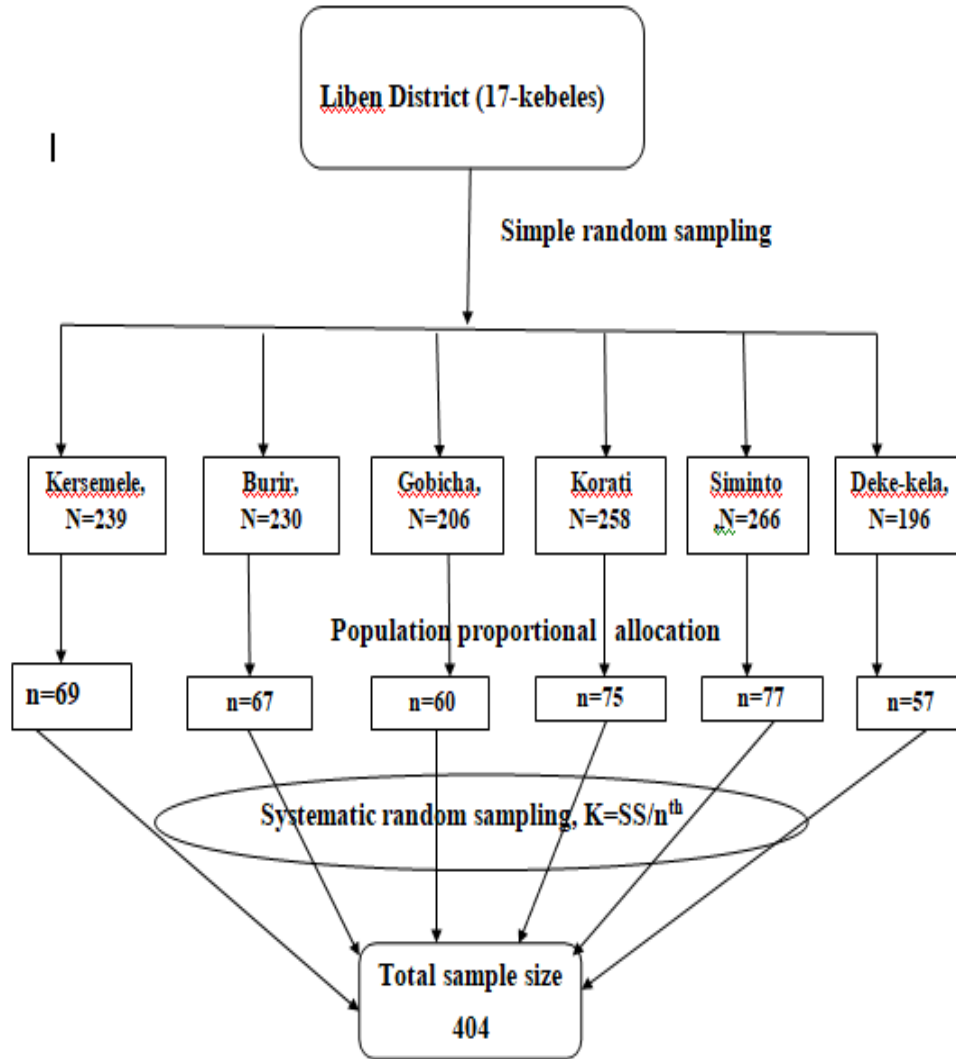


Figure 2: Schematic Presentation of sampling Technique of Liben district.

4.8. Study Variables:

4.8.1. Dependant variable

- The dependant variable of the study was blood donation practice.

4.8.2. Independent variable

- Socio-demographic variables(age , religion, ethnicity, marital status, occupation, education)

- Psycho-social factors(Knowledge, attitude for blood donation, Family member received blood)
- Previous experience or blood donation
- Blood Donation and Transfusion Services
- Communication factors

4.9. Data Collection Instruments

The questionnaire was adopted after reviewing different published literature on similar studies. The questionnaire items were categorized as demographic data, psychosocial factors, communication, deferent factor, communication, and blood donation services. Furthermore, valuable suggestions and comments were taken from advisors and other individuals to improve the instrument during developments of questionnaire.

The questionnaire was first prepared in English and then translate into afaan oromo and back to English by different individuals to check consistency

4.10. Data Collection and Procedures

Data were collected using a structured questionnaire through face to face interview. Six BSc Nursing holders were recruited for data collection. Intensive training was given for one day for supervisor and the data collectors about the objectives of the study and ways of data collection. The data collection procedures were supervised closely. Every day at the end of data collection, the supervisors were reviewed the filled questionnaires for completion, clarity, and proper identification of the respondents. Every morning, the principal investigator and supervisors were conducted morning session to solve problems and correct errors as early as possible.

4.11. Operational Definitions

Blood donation practice: Implies whether a particular participant has experienced blood donation in his/her life or not. The practice was assessed by yes or no question of ever donation(5).

Knowledge about blood donation: Knowledge of blood donors were assessed by summing up the response of each individual among 10 questions. Those who scored mean and less than mean value were categorized as having inadequate knowledge and those who scored above mean were categorized as having adequate knowledge(12).

Attitude towards blood donation: The attitudes were assessed by asking seven questions. After computing, the attitude scores from individual questions' mean values were used as the cut point. Respondents who scored less than the mean were categorized as having an unfavorable attitude toward blood donation while those who above were labeled as having a favorable attitude toward voluntary blood donation(12).

4.12. Data Quality Control and Management

Data quality was ensured during instrument development, collection, coding, entry and analysis. Training was given for both the supervisors and the data collectors. The session of training were included the objective of the study, relevance of the study, confidentiality of information, respondent's rights, informed consent, pre-testing, and interview techniques and how to approach the respondents. The pretest of the instrument was carried out in 5% of the total sample size at Wadera district that located 60k.ms away from the study area which had similar socio-demographic characteristics with the study population before actual data collection. The computed questionnaires were reviewed and checked for completeness and relevance by the supervisors and principal investigator and the necessary feedback were offered to data collectors in the next morning before the actual procedure. Finally, the data were thoroughly cleaned before analyses.

4.13. Data Analysis Plan and Procedures

Data were be first checked manually for completeness and then coded and entered in to Epi-data 3, statistical packages. The entered data were transferred to SPSS version 25 computer program for further analysis. The data were cleaned by visualizing, calculating frequencies and sorting. Any errors identified at this stage were corrected after revision of the original data using the code numbers and statistical commands.

The data were described using percentages and distributions of the respondents by socio-demographic characteristics and other relevant variables in the study. Logistic regression was employed to identify factors associated with practices blood donation among the study participants. All explanatory variables associated with the outcome variable in bivariate analysis with P -values of ≤ 0.25 were a candidate in multivariable logistic regression analysis.

Backward-stepwise logistic regression models of multivariable analysis were employed in order to control confounders and also the problem of multi-co linearity was checked with VIF (< 10). Model fitness was checked by the Hosmer-Lemeshow goodness of-fit test which was $PV= 0.357$. Variables that show significant association with the outcome variable were selected as a full

model of outcome-variable predictors. Finally, the crude odds ratio (COR) and adjusted odd ratio (AOR), together with their corresponding 95% confidence intervals (CIs) and P-value, were computed and presented in a tables. Statistical significance was declared at $P < 0.05$.

4.14. Ethical Consideration

Officially written approval letter from ethical committee of institutional review board /IRB/of St. Paul Hospital Millennium Medical College was obtained prior to the study. A letter was obtained from St. Paul Hospital Millennium Medical College, school of public health to Liben district administrative office. Accordingly; administrative bodies of Liben district were communicated for their permission. Before informed consent obtained, clear and adequate information was provided to the respondents about the research and their right of participation. Privacy and confidentiality were kept in all data collection procedures.

Each study participant was asked to participate voluntarily, after they had been informed about the objective of the study. They had also been informed that the participation was voluntary in which the participants had full right to withdraw at any time. When they agreed to participate, informed consent was obtained. Confidentiality of the participants' information was kept throughout the research processes.

4.15. Dissemination of Results

Though the primary objective of this thesis would be a requirement for master in public health at St. Paul Hospital Millennium Medical College Graduate Study Program and a short report will be communicated to Liben district health office, Negele- Borena blood bank and East Borena zone health administration office. Presentations at professional, local, and national meetings and publication in peer reviewed national or international journals will be attempted.

5. Results

5.1. Sociodemographic characteristics of the respondents

A total of 386 study participants were included in the analysis response rate 95.5%. The mean age of the study participants was 32.7 years old (± 7.38 SD), and the majority (63%) were aged above 25 years. Slightly more than half (54.4%) of the study subjects were men. Two hundred four (52.8%) of the respondents were Muslim-related followers. The majority (90.9%) of the study participants were Oromo.

From the total respondents, above-third (77.7%) were rural residents, while 22.3% were from urban areas. Most of the study participants (72.3%) were married, whereas 89(23%) were single.

Regarding educational status and monthly income of respondents, nearly half of the study participants 181(47%) attended formal education and approximately 205(53%) did not attend primary school. Of the total study participants, 232 (60%) were pastoralists and farmers. The study participants also reported that the estimated mean monthly income of the study participant was 3807 ± 1940.7 ETB with the minimum income of 1500 birr and a maximum income of 9000 birr (table 2).

Table 2: Socio-demographic characteristics of the study participants of BD Practice, and its Associated Factors among Community of Liben District, Oromia, Ethiopia, 2024.

Variable	Frequency(n=386)	Percent (100%)
Sex		
Male	210	54.4
Female	176	45.6
Age of respondents		
18 -25year	143	37
Above 25 year	243	63
Religion		
Muslim	204	52.8
Wake-feta(traditional)	113	29.3
Protestant	46	11.9
Orthodox	23	6
Ethnicity		
Oromo	351	90.9
Somali	23	6
Other	12	3.1
Educational status		
Not formally educated	205	53
Formal education	181	47
Marital status		
Single	89	23.1
Married	279	72.3
Divorced and widowed	18	4.6
Occupation		
Pastoralist/ farmers	232	60
Merchant	43	11.1
Student	41	10.6
Government employees	19	4.9
House wife	38	9.8
Others	13	3.4
Residence		
Urban	86	22.3
Rural	300	77.7
Monthly income		
Less than 2500 birr	103	26.7
b/n 2500- 5000 birr	228	59
Above 5000 birr	55	14.3

5.2. Blood donation practice and its related characteristics of the study participants

About sixty-five (16.8%) with 95% CI (13.2%, 20.4%) of the respondents were reported that they had ever donated blood at least once. Among donors, forty (61.5.6%) and nigh teen (29%) had donated voluntarily and on friendly/ family basis respectively. A total of thirty (46%) study

participants have donated one times, and eleven (17%) study participants have donated more than three times. The majority, three-hundred twenty one (83.2%), of the study participants had never donated blood before. Their reasons mentioned were fear of infection 16 (4.9%), afraid of needle prick (11.1%), never thought it (48.4%), feeling of medical unfitness (8.8 %), had no an opportunity to donate blood (21.5%) and others (4.3%) (Figure: 2). Most of the respondents (64%) were motivated or willing to donate blood for the reason of desire to prevent other. The remaining thirty-six percent of the study participants were not willing to donate blood in the future. The most frequent affecting factors for not willing to donate blood in the future were fear of needle prick and infection, no interest at all and medical unfitness (78%,13%and 8.7%) respectively(table-3)

Table 3: Practice towards blood donation among of the study participants of Liben District, Oromia Regional State, Ethiopia, 2024.

Variable	Frequency	Percent (100%)
Have you ever donated blood in your life time	N=386	
Yes	65	16.8
No	321	83.2
Reason to donate blood in the past	N=65	
Voluntarily	40	61.5
A family / friend need	19	29
To get money	6	9.5
How many times have donated blood in the past	N= 65	
Only once time	30	46
Twice time	24	37
Three times and more	11	17
Frequency of your blood donation	N= 65	
Every three months	20	30.7
Not every three months	46	69.3
History of blood transfusion in a family member	N= 360	
Yes	38	9.8
No	346	89.6
Willingness to donate blood in the future	N=321	
Yes	207	64
No	114	36
Reason for not Willingness to donate blood in the future	N= 114	
Medical unfitness	10	8.7
Fear of needle and infection	89	78
No interest at all to donate	15	13.3

Percentage

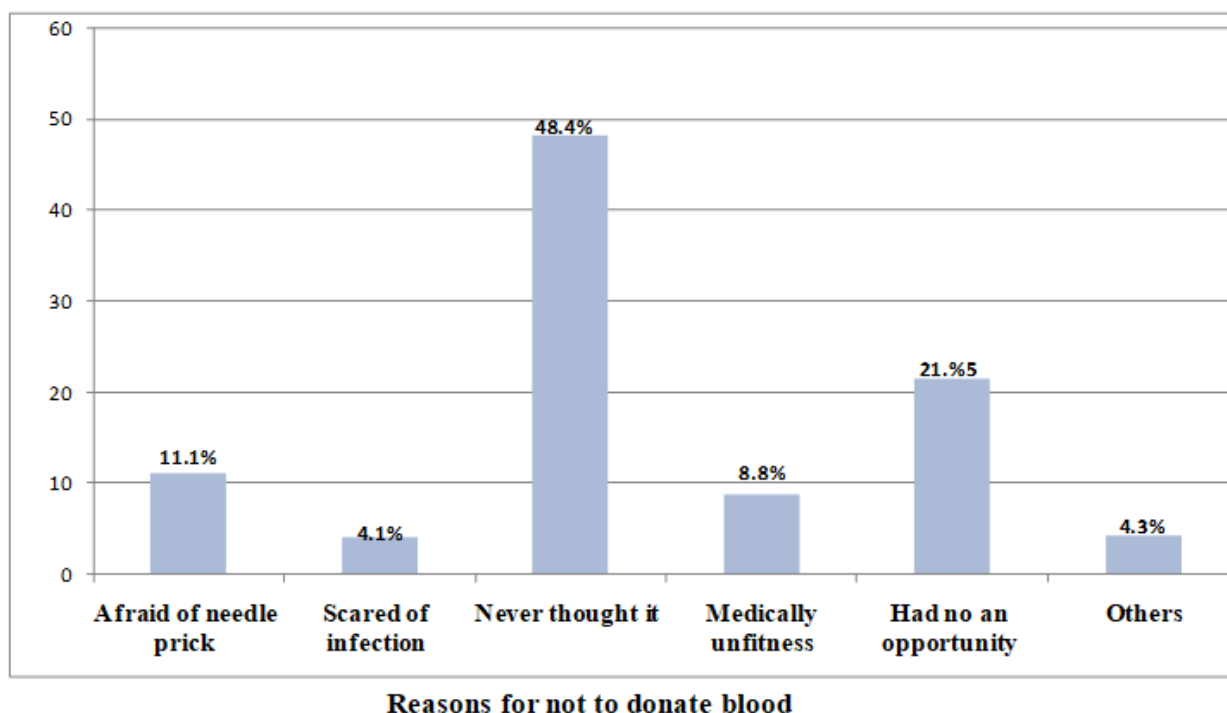


Figure 3: Reasons for not donating blood in the past among of the study participants of Liben District, Oromia Regional State, Ethiopia, 2024.

5.3. A Knowledge and attitude of the study participants towards donation practice

Among the study participants, 71(18.4%) aware about the common type of blood group and below one fourth (22.8%) of the respondents knew their own blood groups. On the other hand, the study participants recognized that blood donation can transmit infection. Most of the respondents were mentioned of the risk of transmission of HIV/AIDS 217(56%), Hepatitis 99(25%), Syphilis 38(11%), and Malaria 32(8%) respectively during blood donation.

Regarding to time interval between each donation , only 107(27.7%) study participants were know Time interval between each donation every one , and the remaining 279(72.3%) had no knowledge of this. On knowledge of volume of blood collected in each process, majority the study participants (63.5%) expressed no knowledge of it. Around 97 (25.1%) of respondents know the medical benefit of blood donation. The majority, 288(74.5%) of the study participants did not know the minimum weight to donate , moreover forty-eight (12.4%) study participants did not know minimum age to start blood donation (table: 4).

The overall Knowledge status of study participants about blood donation were assessed by summing up the correct response of 10 questions which adapted from different literature (14,15, 25). Those who scored mean and less than mean value were categorized as having inadequate knowledge and those who scored above mean were categorized as having adequate knowledge. From study participants, 71 (18.4%) of them had adequate knowledge about blood donation knowledge whereas 315 (81.6%) were with inadequate knowledge of it (figure: 3).

A total of 227 (58.8%) respondents agreed and accepted that blood donation is good and noble act and the remaining participants were not agreed of it. Majority of the study participants 218(56.5%) agreed that payment is required for blood donation. Two hundred thirty three (76.7%) of respondents were agreed that blood donation should be the habit of every citizen. Majority of the study participants 234(60.6%) stated that as they are willing to encourage anyone to donate blood (table: 5).

The overall Attitudes towards blood donation of the study participants were assessed by summing up response of 7 questions which adapted from different literature (14, 15, 25). Respondents who scored less than the mean were categorized as having an unfavorable attitude. Respondents who scored less than the mean were categorized as having an unfavorable attitude toward blood donation while those who above were labeled as having a favorable attitude toward blood donation. Therefore, from study participants, only 156 (40.4%) of them had favorable attitude towards blood donation whereas 230 (59.6%) had unfavorable attitude unfavorable attitude (figure: 4).

Percentage

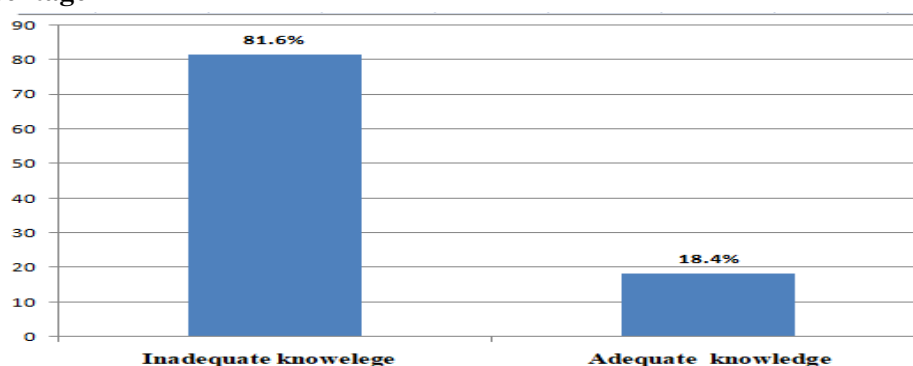


Figure 4 : Over all Knowledge status of the study participants towards blood donation among study part pant of Liben District, Oromia Regional State, Ethiopia, 2024

Table 4: Knowledge of the study participants towards blood donation practices among Community of Liben District, Oromia Regional State, Ethiopia, 2024.

Variable	Frequency(n=386)	Percent (100%)
Have you heard about the four type of the blood group		
Yes	71	18.4
No	315	81.6
Do you know your blood group		
Yes	88	22.8
No	298	77.2
Can a person be infected during blood donation		
Yes	45	11.7
No	340	88.1
Know disease can transmit for blood donation		
HIV/AIDS	217	56
Hepatitis	99	25
Syphilis	38	11
Malaria	32	8
Do you Know age to start blood donation		
Yes	338	87.6
No	48	12.4
Do you Know the minimum weight to donate		
Yes	98	25.4
No	288	74.6
Do you Know the benefit blood donation		
yes	97	25.1
No	289	74.9
Know not eligible person to donate blood		
Individuals with Blood borne ds	99	25.6
Anaemic person	81	21
old age people	69	17.9
Pregnant and lactating mothers	95	24.6
Others	42	10.9
Do Know the amount blood required for blood donation		
Yes	141	38.5
No	245	63.5
Do Know Time between each donation		
Yes	107	27.7
No	279	72.3

Table 5: Altitude towards blood donation practices among Community of Liben District, Oromia, Ethiopia, 2024.

Variable	N=(386)	Per. (100%)
Voluntary blood donation is a good and noble act		
Strongly disagree	31	8
Disagree	104	26.9
Neutral	24	6.2
Agree	194	50.3
Strongly agree	33	8.5
There should not be payment for blood donors		
Strongly disagree	36	9.3
Disagree	97	25
Neutral	35	9.1
Agree	196	50.8
Strongly agree	22	5.7
Blood donation should be the habit of every citizen		
Strongly disagree	29	7.5
Disagree	97	25.2
Neutral	27	7
Agree	200	58.8
Strongly agree	33	8.5
Are you willing to receive blood when needed		
Strongly disagree	25	6.5
Disagree	100	25.9
Neutral	26	6.7
Agree	219	56.7
Strongly agree	16	4.1
Are you willing to donate blood to someone you do not know		
Strongly disagree	29	7.5
Disagree	95	24.6
Neutral	28	7.3
Agree	210	54.4
Strongly agree	24	6.2
Are you willing to encourage anyone to donate blood		
Strongly disagree	32	8.3
Disagree	101	26.2
Neutral	120	33
Agree	114	30
Strongly agree	19	5.5
Your parents support your blood donation		
Strongly disagree	30	7.8
Disagree	102	26.8
Neutral	173	45.6
Agree	56	14.7
Strongly agree	19	5.5

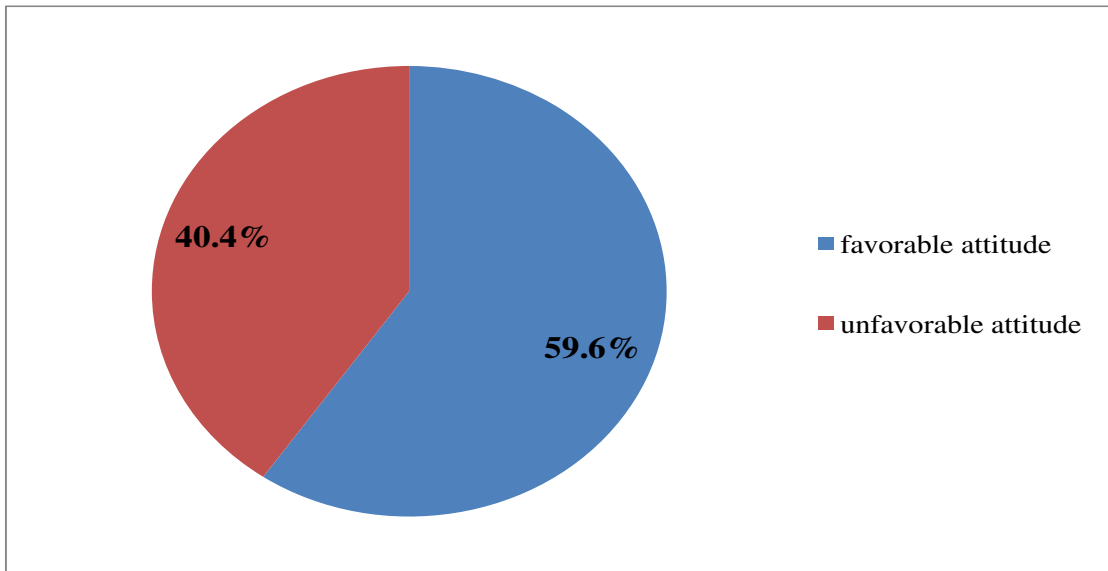


Figure 5 : Over all attitude status of the study participants towards blood donation among community of Liben District, Oromia , Ethiopia, 2024

5.4. Communication and Service-related factors

Most of, 246(64%) respondents heard about blood donation before. Majority of participants (38%) got information about blood donation from Mass media. Among blood donors in the past, Fifty-four (83%) study participants reported that Questions asked at donation site clear to understand and sixty-one(94%)were told the truth about health status during donation. From the total study participants, seventy-one (18.4%) have heard promotional campaign on Blood donation (Table: 6).

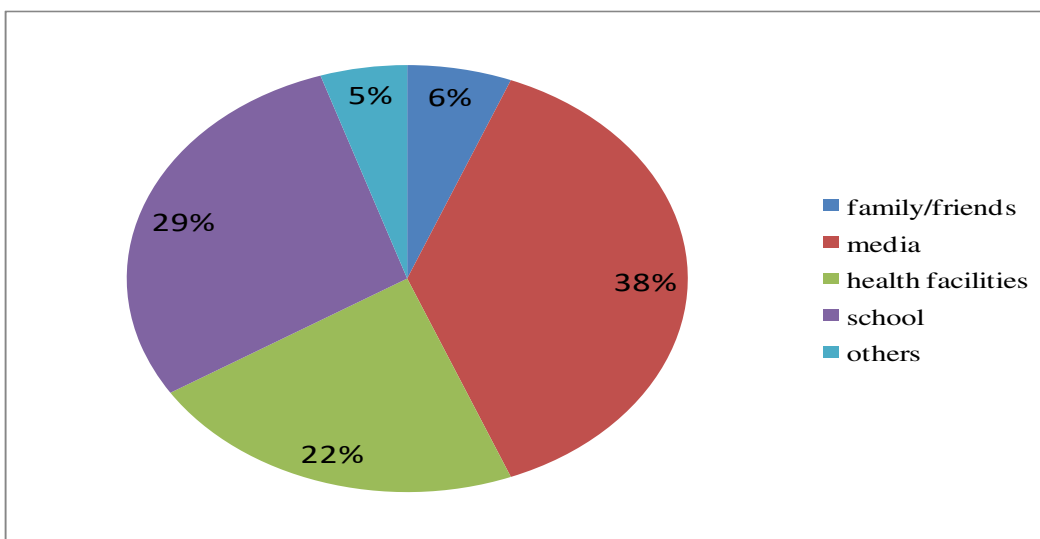


Figure 6 : Source of information of blood donation among Community of Liben District, Oromia Regional State, Ethiopia, 2024.

Table 6: Communication and service related factors of blood donation among Community of Liben District, Oromia Regional State, Ethiopia, 2024.

Variable	Frequency	Percent 100%)
Have heard information about blood donation	N=386	
Yes	246	64
No	140	36
Questions asked at donation site clear to understand	N=65	
Yes	54	83
No	11	17
Tell the truth about health status during donation	N= 65	
Yes	61	94
No	4	6
Heard promotional campaign on Blood donation	N=386	
Yes	71	18.4
No	315	81.6
Advised by others to donate blood	N=65	
Yes	54	83
No	11	17

5.5. Factors associated with blood donation practice

During bi-variable logistic regression analysis: variable such as study participant Age , Sex, residence, educational status, Family history of blood transfusion , monthly income, heard about blood donation, level of knowledge towards blood donation , attitude towards blood donation and being involved in blood donation campaign were had PV less than 0.25 on bivariate analysis and therefore, included in multivariate analysis. Multivariate logistic regression analysis was used to control confounding variables and to identify independent predictors of blood donation among the study population. In the multivariable logistic regression analysis, variables such , Sex, residence, educational status, Family history of blood transfusion , level of knowledge towards blood donation , attitude towards blood donation and being involved in blood donation campaign were significantly associated factors with blood donation practice of the study area

With this study, sex of study of participant has a significant association with blood donation practice. Male participants were 1.78 times more likely to donate blood than their counterparts (AOR = 1.78; 95% CI: 0.82, 3.82). Furthermore, the odds of blood donating practice is 2.5 times higher in urban study participants (AOR= 2.5, 95% CI: 1.09-5.79) than rural study participants. (Table: 7). This study also revealed that education status and family history of blood donation were significantly associated with practices towards blood donation. Those respondents who are attended formal education were 2.5times more likely to donate blood than respondents who are not attended formal educated (AOR=2.5(1.3-4.3)). Moreover, Participants who have a family

members or relatives received or donated blood before were 4.6 times more likely to donate blood when compared with those who have no family members or relatives who had received or donate before (AOR:4.6, 95% CI :(1.89-11.6)).

The study result also showed that participants' level of knowledge and attitude status towards blood donation are a determinant factors for blood donation practices. Accordingly, the Odds of blood donating practice among respondents who had adequate knowledge of blood donation was 3.4 times more than their counterparts (AOR:3.4, 95% CI (1.23, 3.61). On the other hand, participant who had a favorable attitude towards blood donation were increased their odd of blood donating by 2.2 times more than their counter part, (AOR: 2.2, 95% CI (1.6-3.8)). Similarly, The odds of blood donation among the study participants who heard and involved in voluntary blood donation campaign were 18.2 times more than the odds of those who did not heard and involved the blood donation campaign,(AOR: 18.2, 95% CI (9.4-25.4)). (Table: 7).

Table: 7. Multivariable logistic regression analysis for factors associated with practice of blood donation practice among Community of Liben District, Oromia Regional State, Ethiopia, 2024

Variables	Category	blood donation practice		COR (95%CI)	AOR (95%CI)
		Yes N=(65)	No N=(321)		
Sex	Male	46	164	2.3(1.30,4.12)	1.78(1.82,3.82) *
	Female	19	157	1	1
Residence,	Urban	31	55	4.05(2.30,7.14)	2.51(1.09,5.79) *
	Rural	34	266	1	1
Educational status	Not educated	17	188	1	1
	Formally educated	48	133	3.9(2.2,7.2)	2.5(1.3,4.5) *
Family member donated before	Yes	22	16	9.75(4.7,20)	4.6(1.89,11.6) *
	No	43	305	1	1
Level of knowledge towards BD	Inadequate	37	278	1	1
	Adequate	28	43	4.8(2.7,8.8)	3.4(1.2,3.6) *
Attitude towards BD	Favorable	43	187	1.4(0.80,2.45)	2.2(1.6,3.8) *
	Unfavorable	22	134	1	1
Involved in blood donation campaign	Yes	46	25	12(7.8,18.2)	18.2(9.4,25.4) *
	No	19	296	1	1

Note: * <0.05, AOR: adjusted odd ratio, CRO: crude odd ratio 1: reference

6. Discussion

Blood donation practice is part of a lifesaving activity that millions need during different emergencies and medical conditions. The availability of safe blood is highly needed due to an increase in conditions like, anemia, malaria, pregnancy-related conditions, and road traffic accidents (1). Therefore, this cross-sectional study was aimed at assessing the prevalence of blood donation practice and its associated factors in the pastoralist community of Liben district.

The study revealed that only 16.8% with 95% CI (13.2%, 20.4%) of the respondents reported that they had ever donated blood at least once. The finding is supported by the study conducted in Gondor and Jijiga town that showed a prevalence of blood donation practice were 18.9% and 18% respectively (12,26). This finding is also relatively lower than other research findings in Ethiopia. Study done conducted in Awassa town revealed that blood donation practices was 22.9% (7), another a pooled study conducted in Ethiopia showed that a prevalence of blood donation practice was 25.82% and study conducted in Bale robe town showed a prevalence of blood donation was 26%(6). This difference might be due promotional effect of the blood banks and other social institutions working on blood donation. Furthermore, such discrepancy could be due to the time gap between these studies, variation in study settings, and socio-demographic characteristics of the study area.

The study also attempts to examine the associations between various explanatory variables and blood donation practices in the study area. Accordingly, the study identified that blood donation practices has a significant association with participants Sex, residence, educational status, Family history of blood transfusion, level of knowledge and attitude towards blood donation, and being involved in blood donation campaign.

Respondents who are originally from the urban residence were 2.5 times more likely odds of blood donation compare to rural residents. Similar report with Arba Minch (19) showed respondents from rural areas were less likely to donate blood compared to the urban. This might be due to study participants who came from urban were got more information about the benefit blood donation from different Mass Medias which is less available at the rural side of the country.

In this study, sex of study participants had a significant association with blood donation practice. Male participants were 1.78 times more likely to donate blood than their counterparts. A similar

finding was reported from a study conducted at Gamo-Gofa zone male participants were 3 times more likely to donate blood when compared with female participants and participants (19).

The study also showed that knowledge and attitude about blood donation were significant determinant factors for blood donation practices. Those study participants with adequate knowledge of blood donation and favorable attitude towards blood donation were more likely to donate blood compared to with their counter parts. This finding was in line with a study conducted in a different part of Ethiopia (15, 18, 20, 21, and 23) where the participants' knowledge and attitude towards blood donation showed significant positive association with blood donation. This can be explained by the fact that those who had inadequate knowledge and unfavorable attitude about blood donation could not understand the benefit of blood donation for those in need. Moreover, those who had unfavorable attitude might perceive that they are unfit, fear to give blood related to culture.

Having a family member(s) received blood in the past is another factor which has significant associated with blood donation. The result of the study showed that Participants who have a family members or relatives received blood were 4 times more likely to donate blood when compared with those who have no family members or relatives who had received blood. This finding was similar with a study from Gondor and Axum town (12, 19). This could be because of those study participants whose family member(s) were in need of blood might have practiced to save the life of their family. Being a victim of the problem and once practicing it may help them to appreciate that saving life overwhelms the reason held by individuals previously so that they would have repeated the donation

Participation in a blood donation campaign was significantly associated with blood donation Practices. The odds of blood donation among participants who heard and involved in blood donation campaign were 18 times the odds of those who did not heard and involved in blood donation campaign. Similarly, the study conducted in Bale Robe town revealed that voluntary blood donation was significantly associated with blood donation practices (6). This might be due to those who have higher access and better information about blood donation may have better understanding and practices. The aim of such campaigns which should emphasize the benefits of blood donation would be to target those who are willing to donate blood in the future as they could be the mainstay of blood donation.

7. Limitations of the study

- This study used only quantitative data; the behavioral related information might be missed.
- Another limitation is the use of cross sectional data and this makes it difficult to establish true causality.
- The response might have been liable to reporting bias.
- It has to be noted that the finding of this study mainly reflects the situation at pastoralist community at Liben district. Therefore, the findings should be interpreted with caution.

8. Conclusions and recommendation

8.1. Conclusions

This finding showed that the magnitude of blood donation practices in this study area was low. About sixty-five (16.8%) of the respondents reported that they had ever donated blood at least once. The majority study participants had never donated blood before. Their reasons mentioned for not donating were fear of infection, afraid of needle prick, feeling of medical unfitness, had no an opportunity to donate blood and others.

This study identified blood donation practice has a significant association with study participants Sex, residence, educational status, Family history of blood transfusion , level of knowledge towards blood donation , attitude towards blood donation and being involved in blood donation campaign.

8.2. Recommendation

- The national and regional blood bank should work hard to increase the awareness of the public regarding voluntary blood donation at the district.
- Zonal and district health department are better to prepare regular blood donation campaigns to give near access for young people.
- Blood bank should Encourage, recruit and motivate potential donors in order to have a pool of eligible donors.
- More studies need to be conducted by using qualitative method to identify more factors.

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10. Annexes

Annex I - Consent Form and Information Sheet (English language version)

Consent form to assessment of to assess the magnitude of blood donation practice and its associated factors among pastoralist Community of Liben District, East Borena zone, Oromia national state, Ethiopia.

Greeting!

Hello! My name is_____ I am from St. Paul's Hospital Millennium Medical College and now am here for studying about of to assess the magnitude of blood donation practice and its associated factors among pastoralist Community in Liben District.

This is a study to be conducted with the objective of assessing and identifying associated factors of blood donation practice. We believe this study will help to improve blood donation practice in the district. We would very much appreciate your participation in this survey. Therefore, you are kindly requested to participate in this study and provide information required from you. I am going to ask you some questions. Your participation in this study is completely on voluntary bases and you have a right to refuse, to take part or to interrupt the interview at any time. But the information that you will give us is quite useful to improve blood donation services in the district.

We would like to assure that your name will not be mentioned in anywhere. The information that you will give us will be kept confidential and only be used for the research purpose.

Are you willing to participate in this study?

If the answer is yes, thanks! Conduct the interview.

If the answer is no, thanks! Don't force them to participate in the study.

Annex II- Questionnaire in English version

Direction to interviewer

Read the questions carefully and make sure the respondents understand the question. Write the response given by the respondents in the space provided. According to the questions the respondents can select one option, more than one option, or give a word/words or numbers.

S.No	I. Socio-demographic Data	Alternative	Cod e	Skip
101	Age	_____		
102	Sex	1. Male 2. Female		
103	Religion	1. Muslim 2. Protestant 3. Orthodox 4. Others (Specify)___		
104	Ethnicity	1. Oromo 2. Somali 3. Amahara 4. Other, specify___		
105	Residence	1. Urban 2. Rural		
106	Education status	1. Unable to read and write 2. Able Read and write 3. Primary education 4. Secondary education 5. College and university		
107	Marital status	1. Single 2. Married		

		3. Divorced 4. Widowed		
108	Monthly income	_____		
109	Occupation	_____		
S.No	II. Related to blood donation practice	Alternative	Code	Skip
201	Have you ever donated Blood	1. Yes 2. No		If No 203 →
202	If yes for question no 201, what was your reason to donate blood in the past?	1. Voluntarily 2. Family/friend needed 3. To get money 4. Health check up 5. Media appeal 6. Other, specify_____		
203	If no for question no 201, what is your reason not to donate in the past?	1. Afraid of needle prick 2. Scared of testing positive result 3. Scared of getting infections 4. Never thought about Donation 5. Medically unfit 6. Never had an opportunity 7. Religion does not allow		

		8. Parent rejection 9. Other reason if any_____		
204	If yes for question no 201, How many times have you donated blood?	1. Only once 2. Two times 3. Three times and more		
205	If yes for question no 201,How often do you donate blood?	1. Every three month 2. Not every three month		
206	If you had never donated blood in past, are you willing to donate in the future?	1. Yes 2. No		
207	If your answer is no for Q. 206, What is your reasons?	_____		
208	Any of your family members got blood Transfusion in the past?	1. Yes 2. No		
S.no	III. Knowledge towards blood donation	Alternatives	Cod e	Skip
301	Have you ever heard about blood donation?	1. Yes 2. No		
302	Do you know the common blood groups?	1. Yes 2. No		
303304	How many common blood groups are there?	1. Yes 2. No		
305	Do you know your blood group?	1. Yes 2. No		
306	Can a person be infected by donating blood?	1. Yes 2. No		
307	What is the age limit to start blood donation?	_____		
308	What is the minimum weight to donate	_____		

	blood?		–			
309	Do you Know Time between each donation		1. Yes 2. No			
310	What is the benefit of blood donation? More than one answer is possible		1. Free health check up 2. Satisfaction 3. Burn calorie and control 4. body weight 5. Reduction of heart 6. attack 7. Low risk of cancer			
311	Do you know any infection transmitted through blood transfusion		1. Yes 2. No			
312	If yes, which of the following? More than one answer is possible		1. HIV/AIDS 2. Hepatitis 3. Syphilis 4. Malari			
313	Who are not eligible to donate blood? More than one answer is possible		1. Individuals with Blood borne 2. Anaemic person 3. Person age above 65 yrs 4. History of surgery			
314	Do you know the amount of blood required to donate?		1.yes 2. no			
S.No	V: Attitude related questions	Strongly disagree(0)	Disagree(1)	Neutral (2)	Agree(3)	Strongly agree(4)
401	Voluntary blood donation					

	is a good and noble act					
402	There should not be payment for blood donors					
403	Blood donation should be the habit of every citizen					
404	Are you willing to receive blood when needed					
405	Are you willing to donate blood to someone I do not know					
406	Are you willing to encourage anyone to donate blood					
407	Your parents support your blood donation					
	VI: Communication and service related questions	Alternatives		Code		skip
501	Have you heard about voluntary blood donation before?	1. Yes 2. No				If No→ 506
502	From where did you get information about blood donation(more than one option is possible)	1. Education 2. Family/ friends 3. Media(TV, Radio. Social media) 4. Religious leader 5. Health worker 6. Other/specify__				
503	Are questions asked at donation site before donation are clear to Understand?	1. Yes 2. No				

504	Do you tell the truth when answering those questions asked before donating blood?	1.yes 2. no		
506	Have you ever been heard about blood donation promotion campaigns?	1. Yes 2. No		
507	Have you ever been advised by others to donate blood?	1. Yes 2. No		
506	Staff warm and welcoming	1. Yes 2. No		

Thank you for your cooperation.

Annex III - Questionnaire in afan oromo Oromifa language version

Dabalata III- GaaffiileewaayeeDhiigaarjoomuufaanooromootiin.

**Gaaffiileegaafatamansirriittidubbisiitideebiikennitoonnigaaffichaakkahubatanmirka
neessi.Deebiitokko,tokkoolisdeebisuunnidanda’ama.**

I. Odeeffannoobu’uuraHawaasummaa (socio demographic data)

101. Umurii-----

102. Saala 1.Dhiira 2.Dubartii

103. Amantaa 1.Muslima 2.Protestantii 3. Ortodoksii 4.Kanneen biroo (Ibsi)-----

104. Sabummaa1.Oromoo2. Somali 3.Amahara 4.Kanneen biroo (Ibsi)_ __

105. Iddojireenyaa1. Magaalaa 2. Baadiyyaa

106. Haalabarnootaa1.Dubbisuu fi barreessuukanhindandeene

2.Dubbisuufbarreessuukandanda'u3.Barnootasadarkaatokkoffaa

4.Barnootasadarkaalamaffaa5.Kolleejjii fi yunivarsiitii

107. Haalagaa’elaa

1.Kanhinfudhiin/herumin2.Kangaayeelaqabu/qabdu

3.kanhiikee/hiikte4. Kandhirsirraadu’e/dute

108. Galijji’aa_____

109. Hojii_____

II. BeekumsawaayeeDhiigaarjoomuu(knowledge)

201. Waa'eedhiigaarjoomuudhageessaniibeektuu? 1. Eeyyee 2. Lakki

202. Gareendhiigaameeqaakkata’ebeektaa? 1. Eeyyee 2. Lakki

203. Gareendhiigaameeqatujira?1. Tokko 2. Lama 3.Sadii 4. Afuur

204. Gareedhiigakeetibeektaa?1. Eeyyee 2. Lakki

205. Namnitokkodhiigaarjoomuuisaatiindhibeedhaanqabamuudanda'aa?

1. Eeyyee 2. Lakki

206. DhiigaarjoomuujalqabuufUmriinmeeqata’uqaba ?_____

207. Dhiigaarjoomuufulfaatnixiqqaanmeeqqa?_____

208. Arjoomnidhiigaaarjoomtootanifayyadaa?1. Eeyyee 2. Lakki

209. Yoodeebiinkee “eeyyee” ta’efaayidaandhiigaarjoomuumaali ?

(Deebiintokkooldebisunnidanda’ama) 1. bilisaanqorannoogochuuf 2. Ittigammaduuf

3. kaaloriqaamakeenyaagubuufiulfaatinakeenyato’achuuf

4. dhiibeeonneetiinsaaxiilamuhirrisuuf

5. saaxiilamuukaansariihir’isuuf

210. Dhiibeeyeroodhiigafuudhatannamaanamatidarbubeeketaa? 1. Eeyyee 2. Lakki

211. Yoodeebiinkee “eeyyee” ta’edhiibeewankaniinkeessaakamtudarba

?deebiintokkoolnidandayama 1. HIV/AIDS 2. DhibeeTiiruu

3. Dhiibeedhiiraa 4. Busaa

212. Namnidhiigakeenuhindandeenye Enyuudha ? Deebiintokkoolnidandayama

1. Namadhiibeedadarbaaqabu

2. Dubartiulfaatifikanhosiistu

3. Yeroodarbeekeessatidubartiyaaliibaqaqsaniihodhutaasifte

4. warrahiiddadhiigatiinqorichafudhatu

III. GochaaleDhigaarjomuunwal-qabaatan (practice)

301. Dhiigaarjoomtaniibeektuu? 1. Eeyyee 2. Lakki

302. Gaaffiilakk .301f deebiinkeeyooeeyyeta’e, kanaan dura

sababnidhiigaarjoomtaniifmaalifture? 1. Fedhiidhaan 2. Maatii/hiriyaabarbaachisnaan

3. Maallaqaargachuuf 4. Fayyaasakatta’uuf

5. Xiyyeefannoomiidiyaatiif 6. Kanbiroo, ibsi _____

303. Gaaffiilakk . 301tiif deebiinkeeyoolakkita’e, yeroodarbesababnidhiigahinarjominiifmaali? 1.

SodaaLilmeenwaraanamu 2. bu’aanqorannoopozaatiiwiita’uusodaachuu

3. Dhibeedhaanqabamusodaadheeti 4. Gonkumaaittiyaadeehinbeeku

5. Sababarakkoofayyaawaananqabuuf 6. Carraaargadheehinbeeku

7. Amannaanhinhayyamu 8. warrididuu

9. Sababnibiraayoota’e ._(ibsi)_____

304. Gaaffiilakk .301tiif deebiinkeeyooeeyyeta’e, Dhiigayeroomeeqaarjoomte?

1. Al tokkoqofa 2. Yeroolama 3. Yeroosadii fi isaaol

305. Gaaffiilakk .301f deebiinkeeyooeeyyeta’e, Yeroomeeqameeqandhiigaarjoomtu?

1. Ji’asadiitti 2. Ji’asadiittimiti

306. Yeroodarbedhiigaarjoomteehinbeektutaanaangarafuulduraattidhiigaarjoomuuffedhiiqabdaa?

1. Eeyyee 2. Lakki

307. Deebiinke G., 306f lakkiyoota'eSababnikeemaali? -

308. Miseensamaatiikeessaniikeessaayeroodarbedhiiganamnifudhatejira?

1. Eeyyee 2. Lakki

S.No	V: Gaaffiiwwanilaalchaanwalqabat	Cimsee waliihin galu(0)	Waliihing alu(1) .	Neutral (2)	Waliin gala (3) .	Cimseew alii gala (4)
401	Tolaooltummaadhaandhiigaarjoomuungochagaarii fi kabajamaadha					
402	Namootadhiigaarjoomaniifkaffaltiinjiraachuuhinqabu.					
403	Dhiigaarjoomuunamalalammiihundaata'uuqaba.					
404	Yeroobarbaachisaata'ettidhiiga fudhachuuqabina.					
405	Nama hinbeekneefdhiigaarjoomuuffedhiiqabachuuqabna.					
406	Namnikamiyyuudhiigaakkaarjoomujajjabeessuuffedhiinjirachuqaba.					
407	Warriikedhiigaarjoomuukeedeeggarruuqabu.					

VI: Gaaffiiwanqunnamtii fi tajaajilanwaliinwalqabatan

501.Kana dura waa'eedhiigatolaooltummaadhaanarjoomuudhageessanijirtu?

1. Eeyyee2. Lakki

502. Waa'eedhiigaarjoomuodeeffannooeessaaargatte(filannootokkooolnidanda'ama)

1.Barnootaan

2. Maatii/ hiriyoota

3. Miidiyaa(TV, Raadiyoo. Miidiyaahawaasaa)

4. Hogganaaamantaa

5. Hojjetaafayyaa 6. Kan biroo/ ibsi _____

503. Dhiigaarjoomukeetiin durabakkaarjoomaattigaaffiiwwangaafatamanhubatee?

1. Eeyyee 2. Lakki

504. Dhiigaarjoomuukeetiin

duragaaffiiwwangaafatamansanayommudeebiikennitudhugaadubbattaa? 1. Eeyyee 2. Lakki

505. Armaan dura Waa'eeduulaarjoomadhiigaadhageessaniibeektuu?

1. Eeyyee 2. Lakki

506. Dhiigaakkaarjoomtunamootabirootiingorfamteebeektaa?

1. Eeyyee 2. Lakki

507. Giddugaleessaaniddoonarjoomaa mana keeirraahangamfagaata?

Galatoomaa