WOLKITE UNIVERSITY COLLEGE OF MEDICINE AND HEALTH SCIENCE
DEPARTMENT OF MEDICINE

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF VOLUNTARY BLOOD DONATION AMONG RESIDENTS OF GUBRYE SUBCITY, WOLKITE TOWN, GURAGE ZONE, CENTRAL ETHIOPIA IN NOVEMBER, 2017E.C

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NOVEMBER, 2017E.C.

WOLKITE, ETHIOPIA.

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A STUDENT RESEARCH REPORT TO BE SUBMITED TO THE DEPARMENT OF PUBLIC HEALTH, WOLKITE UNIVERSITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENS FOR THE DEGREE OF DOCTOR OF MEDICINE

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ACRONYM

WHO	World Health Organization
EU	European Union
SPSS	Statistical Package for Social Science
WKU	Wolkite University
FMOH	Federal Ministry of Health
HBV	Hepatitis B Virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
CMV	Cytomegalovirus

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ABSTRACT

Background

Blood is a scarce and yet essential part of human life with no substitute and blood transfusion is a core service within health care system. The demand for blood transfusion is rising in relation to increased life expectancy, accidents, severe anemia, cancer, chronic diseases, pregnancy-related complication and technological advancements in the healthcare delivery system yet it outweighs its supply. There is a constant effort made to increase voluntary blood donation practice. Voluntary unpaid donors are the safest group who gives blood regularly. The average number of blood donations per 1,000populations is 10 times higher in high-income countries than in low-income countries. It is generally recommended that the equivalent of 1% of the population should donate blood to meet a country's needs. In many countries, the development of blood transfusion services has been largely restricted to major cities and universal access is still not guaranteed for those in most critical need for safe blood for their survival. (1)So willingness to donate blood without expecting financial reward is one major factor to influence blood availability. The outcome of this study is essential to provides valuable insight that can lead to better education, policies, and practices to ensure safe adequate and sustainable blood supply.

Objective: this study aims to assess the knowledge, attitude, and practice of voluntary blood donation in Gubrye subcity, Wolkite town, Gurage zone, Central Ethiopia.

Methods: A descriptive cross-sectional study design was conducted in Gubrye subcity, Wolkite town, Gurage zone, Central Ethiopia in November 2017 with a sample size of 279 residents of the town. Afterwe chose Buchach kebele by simple random sampling technique from 2 kebeles found in Gubrye subcity, sample was taken using systematic sampling method and data was collected using interviewer administered questionnaire. After data is collected, it was entered into acomputer and analyzed using SPSS version 27 statistical software and graphs,frequency, tables wereused to display the result.

Result: The response rate was 100%. In our study out of the 279 respondents 58.8%(164) were male. Regarding their educational level shows 27.2%(76) of respondents have degree. In our study about 101(36.2%) have good knowledge towards blood donation. Most 215 (77.1%) think that a person can be infected due to blood transfusion and the commonly responded disease to be transmitted being HIV 159 (57%).In our study 157(56.3%) of respondents have positive attitude towards blood donation. 161(57.7%) of respondents do not want to donate blood nevertheless, 100% of the respondents believe that blood donation can save lives. Majority 254(91.1%) do not want to be a regular donor. 160(57.3%) believe it is bad for health. In our study 75 (26.9%) of respondents have donated blood and from these 65(23.3%) were voluntary donors. 204(73.1%) respondents have never donated blood. From these 76(27.2%) stated that they were not approached.

Conclusion: From our assessment residents in Buchach kebele, Gubrye subcity, Wolkite town, Central Ethiopia have poor knowledge and practice towards blood donation despite relatively better attitude.. Even if all believe that blood donation can save lives they don't want to donate blood with the most common reason being not being approached.
Therefore the nearby health facilities and Red Cross and red crescent organizations in collaboration with community establishments and religious organization expected to create awareness in the community about blood donation.

1. INTRODUCTION

1.1 Background of the study

Blood is a scarce and yet essential part of human life with no substitute. Blood transfusion is a core service within health care system and individuals who donate blood provide unique contribution to the health and survival of others. Every country faces an ongoing challenge to collect sufficient blood from safe donor to meet national requirement; its demand far outweighs its supply. While the need for blood is universal, millions of patients requiring transfusion do not have timely access to safe blood and there is a major imbalance between developing and industrialized countries in access to safe blood. (1)

Developed countries with well structured health system and blood transfusion service based on voluntary blood donation are able to meet their demand of blood and blood products. In contrast in developing countries there is chronic blood shortage particularly in rural areas with limited access to health service in which blood transfusion is unavailable or unsafe. WHO estimates that blood donation by 1%of the population is generally the minimum to meet nation's most basic requirement of blood however the average donation rate is 15 times lower in developing countries. WHO African region blood requirement were estimated at about 8million units in 2006 but only 3.2 units were collected; only 41.5% of the demand. (1)

The demand for the blood transfusion is rising in relation to increased life expectancy, accidents, severe anemia, cancer, chronic diseases, pregnancy-related complication and technological advancements in the healthcare delivery system demanding blood transfusion. Especially in developing counties majority of transfusions are prescribed for obstetric complication which accounts for over 25% of maternal death per year, childhood anemia especially in malarious areas often exacerbated by malnutrition and road traffic accident over 90% of deaths in these countries.(1)

The World Health Organization (WHO) policy is to achieve 100% not-paid blood donation practice. (2)Among the different types of blood donors, the safest blood comes from voluntary blood donors. Median blood donation rate in high-income countries is 39.2 donations per 1000 population compared with 12.6 donations in middle-income countries and 4.0 donations in low-income countries. (3)

Worldwide blood donation practices are increasing day by day, yet it is a big concern for many countries. There is a constant effort made to increase voluntary blood donation practice. Donor eligibility, negative attitude, misconception and lack of education lead tothe development of positive attitude towards blood donation in the society should be the goal in designing an efficient strategy for sustaining a safe and adequate blood provision.Willingness to donate blood without expecting financial reward is one major factor to influence blood donation practice.(4)

There is a need to establish a global and a nationwide organization in initiating and leading the practice of blood donation. WHO in association with Red Cross and Red Crescent society

are institutions working in developing countries to address the blood donation. There is a need to motivate to meet 100% voluntary not-paid blood donation.(2)

1.2. Statement of the problem

While the need for blood is universal, millions of patients requiring transfusion do not have timely access to safe blood and there is a major imbalance between supply and demand and big difference when comparing developing and industrialized countries in access to safe blood. WHO estimates that blood donation by 1%of the population is generally the minimum to meet nation's most basic requirement of blood however the average donation rate is 15 times lower in developing countries. WHO African region blood requirement were estimated at about 8million units in 2006 but only 3.2 units were collected; only 41.5% of the demand.

Safe blood prevents blood borne infections from the donor to the recipient. Furthermore, it saves millions of lives each year. Blood donation is included as the main aspect of the preventive and therapeutic component of the health care delivery system (5). Blood is a scarce product (1) In developing countries the community accessed around 40% of the blood banks supply and from this, 60% is collected from paid blood donation (6). This is associated with the hesitation to donate blood. People assume that they may develop complication from donating. This is a major misconception the practice (7).There is a need to establish a global and a nationwide organization in initiating and leading the practice of blood donation.

Worldwide people from all age groups require a blood donation to support continuity of life and improve the life quality (8). This relates to the sophisticated medical surgical procedures requiring blood transfusion (9). There is a growing need for blood. This is related to the advancement in the healthcare delivery (5). WHO reported that 38% of voluntarily donated blood comes from those young people aged less than 25,There is a need to motivate young generations to meet 100% voluntary not-paid blood donation (10). Young students are healthy, active, dynamic, resourceful and receptive; they constitute a greater proportion of the population so that those young students need encouragement and motivation to donate blood voluntarily.

All these are attributed to problems related to donor eligibility, negative attitude, misconception and lack of education of potential donors. On the other hand, in many countries, the development of blood transfusion services has been largely restricted to major cities and universal access is still not guaranteed for those in most critical need for safe blood for their survival in rural areas. The development of positive attitude towards blood donation in the society should be the goal in designing an efficient strategy for sustaining a safe and adequate blood provision. Willingness to donate blood without expecting financial reward is one major factor to influence blood donation practice.

Residents of the certain area should have been a readily available pool of voluntary and regular blood donors for the health care institutes in the area and help tide away some of the scarcity. However there is a concern and gap on the matter which should be studied and

addressed. This survey will be conducted to identify fill the gap associated with the knowledge attitude and practice of voluntary blood donation in our catchment area.

1.3 significance of the study

Since blood is gift of life blood donation is crucial to reinforce the spirit of compassion sense of social responsibility and save many lives. As long as the human beings exist there is always a need for a safe blood demand as there should be adequate supply which is attained by blood donation. The principal aim of this study is assessing residents' understanding about the matter to identify gaps, misconceptions or negative attitudes, logistical or practical barriers such as convenience and access to donation centre. Moreover the outcome of this study is essential to provides valuable insight that can lead to better education, policies, and practices to ensure safe adequate and sustainable blood supply.

2. Literature review

2.1 Global situations

Blood Donation Process

The blood donation process is where the goals of health educators and blood collection facility managers merge. Efforts (such as promotion, education, and awareness) to increase blood donation behaviours all combine once a prospective donor enters a blood collection facility (11).

It is important to acknowledge the history of blood donation and examine how the blood donation process works to help better understand why individuals do and do not donate blood. Transfusion, defined as the transfer of blood from one individual to another, has been evolving for thousands of years throughout human history. The human fascination with blood dates back to 2,500 B.C. when Egyptians were drawing blood out of the body in attempt to cleanse the body of disease. In 500 B.C. the Ancient Greeks pioneered human dissection in order to understand how the blood flows 9 throughout the body. Although early practices related to blood donation seem barbaric, those early advancements paved the way for future blood transfusion experimentation (12).

Before the 17th century, attempts at transfusing blood were closer to legend or myth than applied therapy and treatment. In modern history, British physician William Harvey discovered how blood circulated throughout the body in 1628, and soon after, the first blood transfusion was attempted. In 1665 the first recorded successful blood transfusion occurred in England, where Physician
Richard Lower kept a dog alive by transfusing blood from other dogs. It wasn't until 1818 that British obstetrician James Blundell performed the first successful transfusion of human blood to a patient for the treatment of a postpartum haemorrhage. These historical advancements helped formulate ideas for early 20th century blood donation innovators (13).

The 1900's brought advancements such as blood typing, the establishment of a national blood collection agency, disease testing on collected blood units, and blood separation through plasmapheresis. In 1970 every United States blood bank switched to all volunteer donors (13).

These new advancements made donating blood and receiving blood transfusions much safer, increasing the tendency of people to voluntarily donate blood. Today, the blood donation process relies heavily on technology related to blood testing due to the voluntary characteristic of blood donation. Each individual must be qualified in order to donate blood, which is the beginning of the blood donation process. 10 From start to finish, a prospective blood donor can expect to spend about an hour at the blood collection facility. However, the donor must be aware that the expected donation time can vary significantly among collection facilities. This variation in time stems from facility efficiency, organization, management, and availability of employees (14).

The donor retention rate at a facility can largely depend on the blood donation process and its efficiency. This reason alone makes the blood donation process itself important. The more positive experience a donor has, the more likely he or she will come back and become a repeat donor (12). The blood donation process has four basic phases. The first phase includes donor registration.

During this time the blood collection facilities staff and volunteers will sign the donor in and go over basic eligibility and donor information. Educational material will then be given to the donor about the donation process, and the donor will be asked to show a valid form of identification (13). The second phase involves a medical history questionnaire and a miniphysical examination. The health history questionnaire helps determine donor eligibility and requires donors to reveal private health information, as well as places they have travelled. This is all

done to ensure the integrity and safety of the blood being donated. The mini-physical will include a temperature check, pulse check, blood pressure check, and finally, a blood sample will be gathered to determine hemoglobin levels. These measures are all done to not only ensure the safety of the blood, but to ensure the safety of the donor. The third phase involves the direct collection of the blood unit (1 pint). This is done if all the donor safety and eligibility requirements are met. A small sample of blood 11 is drawn first, and then one pint of blood is drawn over a time period of about 8-10 minutes. Once the blood is collected, the needle entry site is bandaged and the donor is sent onto the final stage of the blood donation process (13).

The final stage involves a recovery period of about 10-15 minutes. This time allows the staff to observe any physical reactions the donor may have. The recovery stage also allows the donors to receive refreshments in order to rehydrate their bodies due to the fluid lost to the blood donation (13).Knowing how the donation process works can help individuals understand what happens at a blood collection facility. The donors may feel more comfortable knowing what to expect, possibly positively increasing donor attitudes and future donating behavior.

In a study done in Region institute medical science, India, The proportion of students having adequate knowledge was 33.1% with the mean score of 12.2±2. 89.8% intended to donate blood in future, but only 13.9% had ever donated blood and out of which, 64.8% of donors were first timers. They concluded that Knowledge on blood safety and donation was significantly associated with blood donation status. Regular CMEs and seminars should be conducted to increase awareness about blood safety and donation and to increase the number of voluntary blood donation.

2.2. African situation

Study done in Congo, to assess the knowledge, attitudes and practices regarding blood donation in the general population found that blood was considered as a fuel of the body in 44.6% and as a source of life in 44.1%. Sixty one percent of the population did not know the practice of blood donation. 67.1% of people knew that the blood had negative effects and 27.4% did not know where the blood bags were stored. Channels of knowledge about blood donation practices were associations of blood donors (30.9%), awareness campaigns(18.2%),

school (17.3%) and media (15.5%), churches (10%), and friends (8.1%).Approximately 85% of subjects who knew blood donation agreed with blood donation and
blood transfusion but only 54.9% had donated blood in their lifetime, with a proportion of loyalty to blood donation (31.8%). In the population 59.4% were willing to donate blood. Motivation to donate blood most common (66%) was volunteerism while 19.1% were willing to donate blood for a family member and 12.6% willing to donate blood against money. The reasons for refusal to donate blood identified were fear of contracting diseases especially HIV, lack of information, religious beliefs, the sale of the collected blood by medical staff, and fear of test result for HIV. They concluded that factors of refusal to donate blood were identified. Efforts and new strategies tailored to these factors must be developed and implemented to increase blood donation (15).

Study done in Nigeria to assess Knowledge, Attitude, and Practice of Voluntary Blood Donation among Healthcare Workers at the University of Benin Teaching Hospital, Benin City, Nigeria found that the majority has good knowledge and positive attitude towards donation; however, only 22.1% have donated blood with 41.7% (16) of these being voluntary. Male workers were more likely to donate .There is no significant association between blood donation and level of education. The study concluded that there is a strong disparity between the knowledge, attitude, and practice of voluntary donation amongst healthcare workers (16).

2.3 Ethiopian studies

In research done to assess knowledge of blood donation and associated factors in Ethiopia shows that the prevalence of good knowledge about blood donation is 56.57%(95% CI50.30 to 62.84).which indicates that there is a lack of adequate knowledge about blood donation in the country this might be due to absence of regular blood donation programs, less media coverage , limited campaign and limited educational access with regard to blood donation in the country a subgroup analysis was done and the highest pooled prevalence of level of knowledge about blood donation was reported by health workers (65.28%, 95% CI 55.16 to 75.4) similarly the level of knowledge about blood donation was higher among studies done in institutions (institution based) (60.45, 95% CI 51.05 to 69.83) than studies conducted in community.(15)

Study done in Harar to assess Knowledge, attitude, and practice regarding voluntary blood donation among adult residents of Harar town, Eastern Ethiopia: a community based study found that knowledge of the study participants toward voluntary blood donation was 43.5%. A total of 278 (32.9%) study participants had positive attitude toward voluntary blood d College graduates (AOR = 13.05, 95% CI: 4.12–41.29) were significantly associated with positive attitude toward voluntary blood donation. Only 191 (22.6%) subjects had ever

donated blood. The study concluded that there is an inauspicious attitude toward blood donation and poor blood donation practice.

In study done in Gonder university northwest Ethiopia to assess knowledge, attitude, and practice regarding voluntary blood donation among 255 under graduating health science students found that 48.2% and 79.2% of participants had adequate knowledge about and positive attitude regarding blood donation respectively. The majority (91.8%) and 73.75%of study participants didn't know the maximum age and the minimum weight to be eligible for blood donation respectively. Also about 12.5% of the respondents reported that they had ever donated blood at least once, 87.5% of the participants who ever donated blood reported that they achieved satisfaction after donation .around 87.5% of study participants had never donated blood before. The reasons were fear of pain (31.8%), feeling of medical unfitness(24.3%) and not having been asked to donate blood(22.8%).(17)

In research done on Voluntary blood donation knowledge, attitude, and practice among adult populations of Hosanna Town, South Ethiopia: a community-based cross-sectional study shows that in a total of 422 participants enrolled with a response rate of 96.6%. Of the total respondents, 204 (48.3%), 209 (49.5%), and 123 (29.15%) study participants had good knowledge, favourable attitude, and experience of blood donation, respectively. Participants' sex being male and having favourable attitudes were found to have significant associations with blood donation practice. Furthermore, it was found that male participants were more than two and a half times more likely to donate blood than female participants (AOR: 2.53; 95% CI: 1.54, 4.15). Those who had favourable attitudes were found more than three and a half times more likely to donate blood than those having unfavourable attitudes (AOR: 3.54; 95% CI: 1.32, 9.46).According to this study, (51.7%) Cl: (46.8–56.5%) of adult populations had inadequate awareness about blood donation. Out of the 422 participants, 389 (92.18%) had information about blood donation. All the study participants knew good health as the criteria for blood donation. Only 138 (32.70%) participants knew their blood type. Furthermore, only 198 (46.9%) of the participants were aware that they may donate blood every 3 months. Nearly half, 204 (48.3%), of the study participants had good knowledge about blood donation. And Only 123 (29.15%) (Cl: 24.9–33.7%) of the study participants had ever donated blood. (18)

3. Objectives of study

3.1. General objectives

To assess the knowledge, attitude, and practice of voluntary blood donation of residents in Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017.

3.2. Specific objectives

- To assess the knowledge about voluntary blood donation among residents in Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017.
- To assess the attitude towards voluntary blood donation among residents in Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017.
- To assess the practice of voluntary blood donation among residents in Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017.

4. Methods and materials

4.1 . Study design - community based descriptive cross sectional study was conducted to assess knowledge, attitude and practice of voluntary blood donation in Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017.

4.2. Study area– the study was conducted in Gubrye subcity, Wolkite town located 168km from Addis Ababa, the capital city of Ethiopia and approximately 10 kms from Wolkite town, the capital city of Gurage zone, Central Ethiopia.

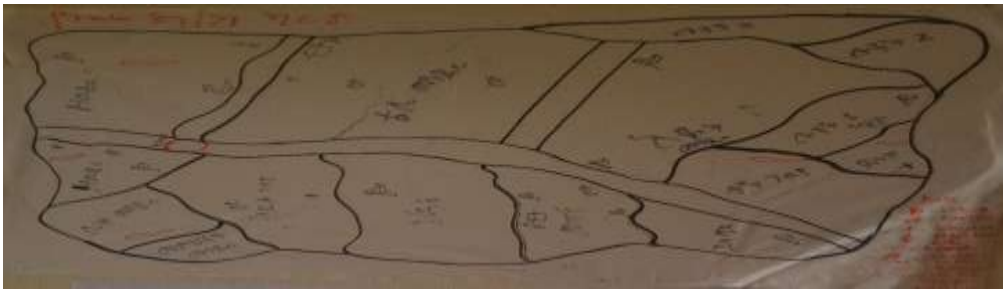

Figure 1. *Gubrye sub city, Wolkite town located 168km from Addis Ababa, the capital city of Ethiopia map*

4.3. Sample

Target population– the target population in this study were all residents who live in Gubrye subcity.

Study population- residents of Buchach kebele, gubrye sub city.

Study unit– the representative of the household on which the data is collected.

Sampling unit-all representatives of the selected households found in Buchach kebele.

4.4. Inclusion and exclusion criteria

Inclusion criteria

- Age 18-65 years old.
- Households in Buchach kebele which are occupied for at least 6 month

Exclusion criteria

- People who are critically ill
- People who have chronic and mental illness

4.5. Sample size determination and sampling technique and method

The sample size was determined using the single population proportion formula.

- By taking p value of 0.48 which is a community based study that assess knowledge of study participants towards voluntary blood donation in hosanna city with 95% confidence level and 0.05 of margin of error.

[n = (Z α/2)2 p (1-p) / d2],

Where

Z=standard normal variable at 95% confidence level (1.96)

P=proportion taken as 0.48

d=margin of error (5%)

n= (1.96)2(0.48)(0.52)/(0.05)2=**383**

Considering 10% non response rate, 383 + 38.3 = 421. The total sample size is 421

- By taking p value of 0.49 which is study participants who had positive attitude towards voluntary blood donation in harar city . with 95% confidence level and 0.05 margin of error

[n = (Z α/2)2 p (1-p) / d2],

Where

Z=standard normal variable at 95% confidence level (1.96)

P=proportion taken as 0.49

d=margin of error (5%)

n=(1.96)2(0.49)(0.51)/(0.05)2=**384**

- By taking p value of 0.29 which is the proportion of study participants who had practice on voluntary blood donation in harar city. With 95% confidence level and 0.05 margin of error

[n = (Z α/2)2 p (1-p) / d2],

Where

Z=standard normal variable at 95% confidence level (1.96)

P=proportion taken as 0.29

d=margin of error (5%)

n=(1.96)2(0.29)(0.71)/(0.05)2=316

Considering 10% non response rate,316+31.6= 347 The total sample size is **347**.

- So by taking the largest value which is 384 and using correction formula the finite population correction will be calculated as

N adj= n/(1+(n/N)=384/(1+(384/750)=254

Considering 10% non response rate,254+25.4=279. The total sample size is **279.**

Sampling method

-First we chose buchach kebele by simple random sampling technique from 2 kebeles found in Gubre sub city, buchach and Gubre kebeles then we selected households using systematic random sampling.

-Since the number of total households in Buchach kebele is 750, to determine our interval we divided the number of households to our calculated sample size 279

K=750/279=2.7~3 therefore our interval will be 3.

The first household is selected using lottery method which is household number 3 and proceeded accordingly with an interval of 3.

4.6. Data collection instrument and procedure

Standard interviewer administered questionnaire was used for data collection. The questionnaire contains four parts which are socio demographic status of the individuals, knowledge, attitude, and practice towards blood donation**.** The data was collected by us from November 16-19 using interviewer administered questionnaire which was prepared in English and taken from previous study (12). The data collection was carried out by four medical interns by verbally translating it in to Amharic and using face to face interview technique.

4.7. Study variable

Study variables

Sociodemographic status of the individuals which includes age, gender, educational status, religion and ethnicity**.**

Knowledge towards blood donation (knowledge on blood groups, if yes their blood group, whether they could be infected during blood transfusion, what diseases could be transmitted, the minimum age and weight for donation and the volume of blood to be collected at once)

Attitude towards blood donation (whether they believe that blood donation saves lives, its impact on health, their want to be a regular donor, whether it is moral responsibility and religious act).

Practice of blood donation (whether they donated blood, how often, why they donated, and reasons for not donating).

4.8. Data processing and analysis

The completed questionnaire was checked for completeness and consistency. Code was given to the completed questionnaire and was entered on SPSS version 27 for simple descriptive analysis. Categorical variables were described in frequency and percentage finally result was expressed in table and graph.

4.9. Data quality assurance

The objective was explained to the respondents and oral consent was taken. We were neutral to the respondents answers and didn't influence their response. We were guided by our adviser on questionnaire development.

4.10. Dissemination of Results

The findings of this study will be presented to Wolkite University College of medicine and health science and will be disseminated to Gubrye sub city health units and other concerned bodies and will fill gaps and serve as guide for future research.

4.11. Operational definitions

Safe blood: Means blood that is free from transfusion transmissible diseases.
Health care professional: A qualified medical personal who gives medical service to the people.
Health Institutions: A place where someone can get health related service.
Knowledge: level of understanding individuals have regarding blood donation. Those who answered 4 and above questions out of the 8 questions used to assess knowledge on the questionnaire were considered to have good knowledge. The rest were categorized as having poor knowledge. (12)
Attitude: is defined as the participants' intentions towards voluntary blood donation practice. Respondents who answered at least 3 questions correctly out of the 5 questions used to assess attitude towards blood donation on the questionnaire were considered as positive attitude. Those individuals who gave a correct answer of two or less were considered as having negative attitude towards blood donation. (12)
Practice: Denotes if individuals experienced blood donation activity at least once in their lifetime. (12)
Voluntary donors: those individuals who donate blood without receiving, neither payment nor a replacement for family or friends.

4.12. Ethical clearance

Support letter was obtained from Wolkite University College of medicine and health science.
The necessary explanation about the purpose of the study and about its procedure, assurance of confidentiality, the right not to participate on the study without any consequences was given and an oral consent was obtained from the respondents.

Result and discussion

5. Result

5.1. Sociodemographic characteristics

A total of 279 residents participated with response rate of 100%. In our study among 279 respondents 58.8%(164) were male and regarding their educational level 27.2%(76) of respondents have degree. About 185 (66.3%) of respondents are gurage and 200 (71.7%) are married.

Table 1*sociodemographic representation of residents of Buchach kebele, Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia 2017EC.*

Variable	Character	Frequency	Percentage
Gender	Male	164	58.8%
	Female	115	41.2%
Ethnic group	Gurage	185	66.3%
	Amhara	76	27.2%
	Oromo	17	6.1%
	Tigre	1	0.4%
	Other	-	-
Religion	Orthodox	112	40.1%
	Islam	138	49.5%
	Protestant	17	6.1%
	Catholic	12	4.3%
	Other	-	-
Marital status	Single	77	27.6%
	Married	200	71.7%
	Divorced	2	0.7%
Educational level	No formal education	30	10.8%
	Elementary	62	22.2%
	High school	93	33.3%
	Diploma	18	6.5%
	Degree	76	27.2%

5.2. Knowledge towards blood donation

In our study about 178(63.8%) have poor knowledge abo0ut blood donation. 186(66.7%) don't know the appropriate age to donate blood while 183(65.6%) don't know the minimum weight to donate blood. Most 215 (77.1%) think that a person can be infected due to blood transfusion and the commonly responded disease to be transmitted being HIV 159 (57%). 157(56.3%) and 186(66.7%) respondents do not know the volume of blood that can be donated at once and how often one can

donate blood respectively. About 192(68.8%) don't know how long a blood donation lasts. The knowledge towards blood donation has been shown in the table below.

Table 2*Knowledge assessment about blood donation among residents of Buchach kebele, Gubryesubcity, Wolkite town, Gurage zone Central Ethiopia 2017EC.*

Variable	Character	Frequency	Percentage
What is the appropriate age to donate blood	18-65 years old	57	20.4%
	≥65years old	36	12.9%
	Don't know	186	66.7%
What is the minimum weight to donate blood	<50kg	55	19.7%
	≥50kg	41	14.7%
	Don't know	183	65.6%
Can a person be infected by receiving blood transfusion	Yes	215	77.1%
	No	64	22.9%
What diseases are transmitted by blood transfusion	HIV	159	57%
	Hepatitis	48	17.2%
	Other	4	1.4%
	Don't know	68	24.4%
What volume of blood is collected during blood donation	<500ml	52	18.6%
	500-1000ml	70	25.1%
	Don't know	157	56.3%
On average how long would you expect the blood collection lasts	<20mins	41	14.7%
	20-60mins	46	16.5%
	Don't know	192	68.8%
How often can an individual donate	Weekly	1	4%
	3monthly	42	15.1%
	6monthly	45	16.1%
	Annually	5	1.8%
	Don't know	186	66.7%
Knowledge towards blood donation	Good knowledge	101	36.2%
	Poorknowledge	178	63.8%

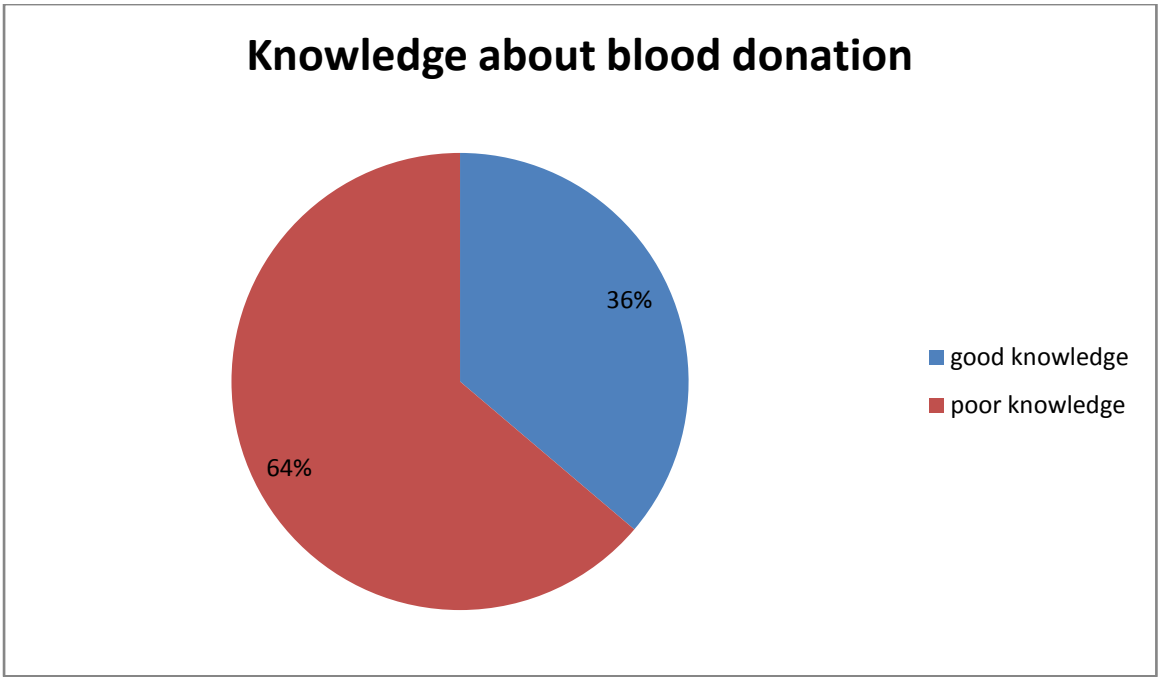

Figure 2 knowledge about blood donation.

5.3. Attitude towards blood donation

In our study 157(56.3%) of respondents have positive attitude towards blood donation. 118(42.3%) want to donate blood. 100% of the respondents believe that blood donation can save lives. Majority 254(91.1%) do not want to be a regular donor. 165(59.1%) respondents believe blood donation is a moral responsibility and 160(57.3%) believe it is bad for health. The attitude towards blood donation has been shown in the table below.

Table 3*attitude assessment towards blood donation among residents of Buchach kebele, Gubre subcity, Wolkite town, Gurage zone central Ethiopia 2017EC.*

Variable	Characters	Frequency	Percentage
Do you want to donate blood	Yes	118	42.3%
	No	161	57.7%
Does blood donation save lives	Yes	279	100%
	No		
Is blood donation bad for health	Yes	160	57.3%
	No	119	42.7%
Do you want to be a regular donor	Yes	25	8.9%
	No	254	91.1%
Do u think blood donation is a moral responsibility	Yes	114	40.9%
	No	165	59.1%
Attitude towards blood donation	Positive attitude	157	56.3%
	Negative attitude	122	43.7%

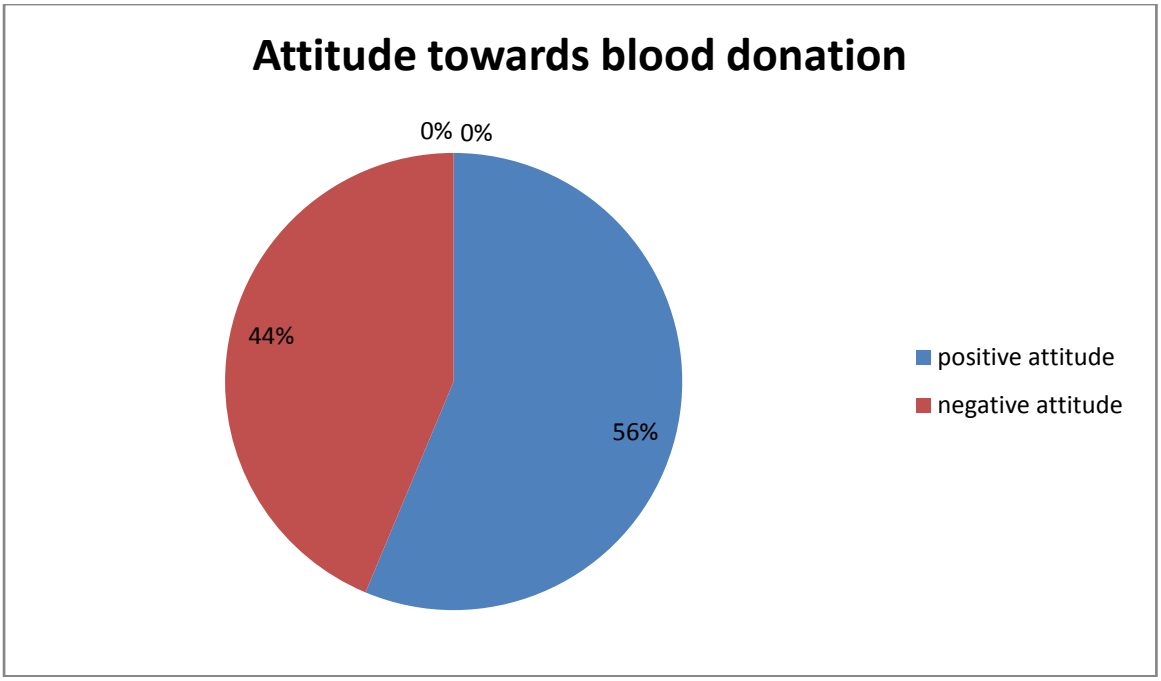

Figure 3 *Attitude towards blood donation.*

5.4. Practice towards blood donation

In our study 75 (26.9%) of respondents have donated blood and from these 65(23.3%) were voluntary donors. 204(73.1%) respondents have never donated blood. From these 76(27.2%) stated that they were not approached. The practice towards blood donation has been shown in the table below.

Table 4*practice assessment towards blood donation among residents of Buchach kebele, Gubre sub city, Wolkite town, Gurage zone Central Ethiopia 2017EC.*

Variables	Character	Frequency	Percentage
Have you ever donated blood	Yes	75	26.9%
	No	204	73.1%
How often do you donate	1 times per year	71	25.4%
	1-3 times per year	4	1.4%
	≥3 times per year	-	-
Why did you donate	A friend or relative needed blood	10	3.6%
	Voluntary	65	23.3%
	Remuneration	-	-
	To know my screening status	-	-
Will you donate if called up on r reminded to do so	Yes	88	31.5%
	No	191	68.5%
Reasons for not	Not approached	76	27.2%

donating	Unfit to do so	13	4.7%
	Need to donate for friend or family in the future	102	36.6%
	Fear of needle	12	4.3%
	Fear of knowing my status	_	_

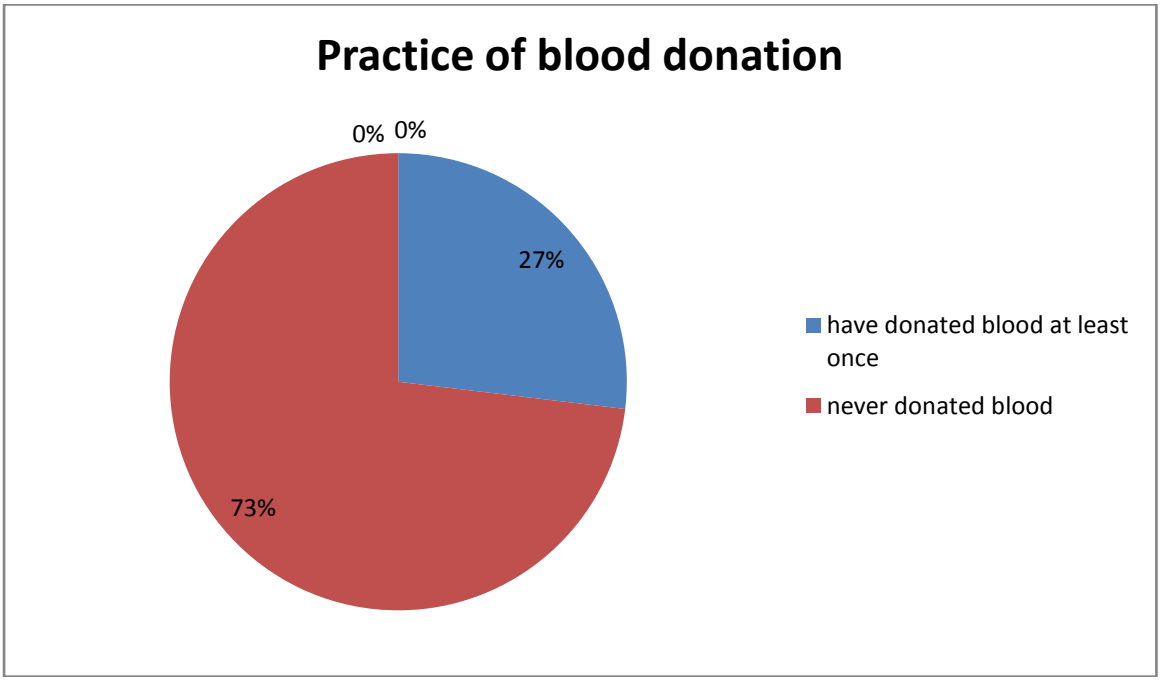

Table 4 Practice of blood donation.

6. Discussion

The finding of our study reveals critical insight in to the KAP towards blood donation among residents of Buchach kebele, Gubrye subcity, Wolkite town, Central Ethiopia. About 101(36.2%) of respondents have good knowledge about voluntary blood donation which is relatively lower compared to research done in Ethiopia 56.57%(95%CI), Harrar 43.5% and hosanna 48.3%. In our study 15.1% of them know blood can be donated every 3months which is lower compared to hosanna 46.9%.

157(56.3%) of respondents have positive attitude towards blood donation which is higher compared to study done in Harrar and hosanna 32.9% and 49.5% respectively.

Of our respondents 75(26.9%) have donated blood in their lifetime at least once of which 65(23.3%) donated voluntarily. In comparison to hosanna where 29.15% (24.9CI)

Compared to the study done in Gonder city, 66.7% and 65.6% of our respondents Didn't know about the appropriate age to donate blood and the minimum weight to donate blood respectively whereas the majority (91.8) and (73.75) of study participants didn't know the appropriate age and minimum weight in study conducted at Gonder city which is higher

compared to our study. Similarly in study conducted at Gondar city 87.5% of individuals of study participants had never donated blood before the reasons were fear of pain(31.8%), feeling of medical unfitness(24.3%) and not having been asked to donate blood(22.8%).whereas in our study 73.1% of participants had never donated blood which is lower compared to the study in Gondar, the main reasons were not being approached(27.2%) , unfit to do so(4.7%) ,need to donate for friend or family in the future((36.6%) ,fear of needle(4.3%) and fear of knowing my status. In the study conducted in hosanna town 80.9% of participants had never donated blood which is higher compared to our study and lower compared to study done in Gondar city.

7. Conclusion

From our assessment residents in Buchach kebele, Gubrye sub city, Wolkite town, Central Ethiopia have poor knowledge and practice towards blood donation despite relatively better attitude. Even if all believe that blood donation can save lives they don't want to donate blood with the most common reason being not being approached.

8. Recommendation

To Wolkite university

- To create awareness in the community
- Promote and organize blood donation campaign
- Partner with red cross and red crescent

To nearby health centers and hospitals

- Train and equip health care professionals to discuss KAP of blood donation and facilitate blood donation.
- Have regular donation events in/out of the institution by promoting it using posters and flyers in the city.
- Educate patients and attendants in the institution and encourage donation if eligible.
- Partner with religious organizations and local establishments to promote about blood donation.

To Red Cross and Red Crescent organization

- In collaboration with health care institutions, the university and religious organizationsin the areaand other stakeholders have regular awareness creation and blood donation campaigns.

9. Limitation and strength of the study

The limitations of this study are

- Difficulty to assess change over time.
- May not contain full range of information on why people don't donate blood
- Participants might over report positive behavior.

The strength of this study: since blood donation is essential part of the health care especially in rural part of our country the study contribute to improve the gap on KAP of the community and improve donation rate and the availability of blood. It also gives insight to different stakeholders which could work on alleviating the problem

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11. Annex

13. Questionnaire

Wolkite University College Of Medicine And Health Science
Department of Medicine
Questionnaire
Consent

- Dear respondents we are in our final year of medical school (internship) in under graduate program of medicine at WKU. You are invited to voluntarily participate a research project to assess the knowledge, attitude and practice of voluntary blood donation among residents in Buchach kebele, Gubrye subcity, Wolkite town, Gurage zone Central Ethiopia in November 2017. The purpose of this study is to get more information on voluntary blood donation among residents in Buchach kebele,Gubrye sub city, Wolkite town, Gurage zone central Ethiopia.Therefore, your honest and genuine participation by responding to the questions prepared is highly appreciated and helpful to attain the objective of the study. Your name will not be written on this form and no individual response will be reported to anybody. Hence, your answers are completely confidential. You do not have to answer any question that you don't want to answer and you may refuse to answer all of the questions.
- Please, if you cooperate by responding to the questions it means that you have your own contribution to the success of this study.
- Are you willing to answer? If yes, proceed to the next page. If no, please stop here.

Thank You!

Part I – Socio demographic Characteristics

Please read each question carefully and answer them genuinely. I want to remind you that writing your name is not necessary.		
No.	Questions	Coding Category
1.	Your sex	1.Male 2.Female
2.	Educational Level	1. No formal education 2. Elementary 3. High school 4. Diploma 5. Degree or above
3.	Your Marital Status	1. Single 2. Married 3. Divorced 4. Others

4.	Your Ethnicity	1.gurage 2.Amhara 3.Oromo 4.tigre 5.Other(Specify)_____
5.	Your Religion	1.Orthodox 2.Islam 3.Protestant 4.Catholic 5. Other (Specify)_____

Part II: Questions about knowledge towards voluntary blood donation

6.	Can a person be infected by receiving blood transfusion?	1. Yes 2. No
7.	What diseases are transmissible by blood transfusion?	1. HIV 2. Hepatitis viruses 3. Others(Specify 4. don't know
8.	What do you think the minimum age for blood donation?	1. 18-65 years 2. ≥64 3. Don't know
9.	What do you think the minimum weight for blood donation?	1. <50kg 2. >50kg 3. Don't know
10.	How often can an individual donate	1. Weekly 2. 3 monthly 3. 6 monthly 4. Annually 5. Don't know
11.	What volume of blood is collected during each donation?	1.≤500ml 2.500_1000ml 3.Don.t know
12.	How long would you expect the blood collection lasts	1. <20mins 2. 20-60mins 3. Don't know

Part 3: questions about attitude towards voluntary blood donation

No.

13.	Do you want to donate blood	1. Yes 2. No
14.	Does blood donation save a lives	1. Yes 2. No
15.	Is blood donation bad for health	1. Yes 2. No
16.	Do you want to be a regular donor	1. Yes 2. No
17.	Do you think donating blood is a moral responsibility	1. Yes 2. No

Part 4: question about practice towards voluntary blood donation

18.	Have you ever donated blood? -If yes proceed to the next question , if no go to question No 28.	1. Yes 2. No
19.	How often do you donate?	1. <1 time a year 2. 1–3 times a year 3. >3 times a year
20.	Why did you donate?	1. A friend or relative needed blood 2. Voluntary 3. Remuneration 4. To know my screening status
21.	Will you donate if called upon or reminded to do so?	1. Yes 2. No
22.	Reasons for not donating?	1. Not approached to donate 2. Unfit to donate 3. Need to donate for friends or relatives in future 4. Fear of needles 5. Fear of knowing my status