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Research Article

### KNOWLEDGE, ATTITUDE, PRACTICE AND ASSOCIATED FACTORS THAT HINDER BLOOD DONATION PRACTICES AMONG THE RESIDENTS IN ILU ABA BOR AND BUNO BEDELLE ZONES, SOUTH WESTERN ETHIOPIA.

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**Abstract:**

Blood transfusion is a fundamental and a requisite part of any nation's health care delivery system for life saving interventions. The study was conducted to assess knowledge, attitude, and practice and associated factors that hinder blood donation practices among the residents in Ilu Aba Bor and Buno Bedelle Zones. The study was determined level of knowledge, attitude and identified practice among residents Zones. Also factors associated with knowledge, attitude and practice of blood donation was identified. Community based survey study was conducted from March, 2017 to June, 2017. Sample size was 809. Data was collected by questionnaires tool and analyzed by descriptive and binary logistic regression. The present study showed that the prevalence of practice of blood donation were too low 24.1%. The level of knowledge and attitude were greater than 67% and 62 % respectively. Concerning source of information 418(51.7%) of them were obtained from medias about the important of blood donation. But there was a gap regarding age categories and sex who should be involved in blood donation the majority 311(38.4%) of them respond that male and female age of <18 years Old > 65 years. Practice of the study participants showed that too low 195(24.1%), of the respondents. The major reasons mentioned for not donating blood among non-donors were lack of information on where, when, and how to donate blood 366(45.2%), perception of not being fitted to donate blood 63 (7.8%), fear of HIV after blood donation 17(2.1%), and didn't have any blood to spare 29(3.6%). The knowledge of the society were not adequate. So this research finding recommend to create awareness to the society about blood donation and its advantage in the community through training, radio and temple.

**Key Word:** Blood donation, Knowledge, Attitude, Practice.

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## INTRODUCTION:

Saving lives could be the ultimate humanitarian gift. One way to save lives is through the process of donating blood. One blood donation (1 pint) can save up to three lives. Blood transfusion is a fundamental and a requisite part of any nation's health care delivery system for life saving interventions. The need for blood and blood products is rising in all parts of the world (BSA, 2016; WHO, 2011). Evidence showed that about a quarter million maternal deaths globally and around 15 % of child mortality in Africa were attributed to obstetric bleeding and anemia, respectively (WHO African Region, 2006). Had there been adequate and safe blood transfusion service such a significant mortality would have been averted.

The use of stored blood began during World War I (1914-1918), but the first large scale blood bank was not created until 1937, in Chicago (McCarthy, 2007). The Canadian surgeon, Major L.B Robertson, serving in Canadian Army Medical Corps in the first World War was responsible for introducing transfusion in the management of war casualties to the British Army. Blood transfusion was generally accepted as the treatment of choice for severe blood loss by the end of the war (Priyanka, 2014). Safe blood is a critical component in improving health care and in preventing the spread of infectious disease worldwide. Millions of lives are saved each year through blood transfusion, yet the quality and safety of blood transfusion are still the concern especially in the developing countries. Most blood is tested for diseases including sexually transmitted diseases (STDs). The donor is generally notified of the test result (Hiremath et al., 2012).

According to its 2011 report, 107 million blood donations are collected globally; approximately half of these are collected in the high-income countries, home to 15% of the world's population. Blood donation rate in high-income, middle-income, and low-income countries was 39.2, 12.5, and 4.0 donations per 1000 population, respectively. The lowest levels of availability are found in low and middle income countries, particularly in Africa (BSA, 2016). Blood donation rates in Africa is estimated to be 5/1000 populations compared with developed countries which is 47/1000 population in USA (WHO, 2006). Ethiopia is the second most populous nation in Africa, with an estimated population of 84 million (CSA, 2008); a country with high maternal mortality rate of 676/100,000 (CSA, 2011) and high motor vehicle accident (ranks 12th in the world) (ERTA, 2016) and with a larger non-immune population for malaria.

The Ethiopian Red Cross Society (ERCS) has been the pioneer organization in developing blood banking

services in the country. According to ERCS, the country's blood demand is estimated to be 80,000 to 120,000 units per year. However, only 24,000 units of blood were collected in 2004 (0.3 units/1000 people) and of these 17,000 units (71 % of the total) were collected from Addis Ababa. This figure indicates severe shortage of blood supply affecting the vast majority of the nation's population (about 96 %) residing outside the capital city (MoH, 2005; Blood safety, 2016 and NBBSE, 2016). The demand for blood supply has progressively increased in developing countries; evidences indicate that there is a major shortage of blood and blood products in these countries, particularly in Ethiopia including our study area Ilu Aba Bor and Buno Bedelle Zones. Thus, this study was conducted to assess knowledge, attitude, and practice towards blood donation and to address those factors hindering the society from participating in voluntary blood donation among the population of in Ilu Aba Bor and Buno Bedele Zones.

## MATERIALS AND METHODS:

### Description of the Study Area

The study was conducted in Ilu Aba Bor and Buno Bedelle Zones which are found in Oromia region of Ethiopia. Based on the 2007 Census conducted by the CSA, these Zones have a total population of 1,271,609, an increase of 50.12% over the 1994 census, of whom 636,986 are men and 634,623 women; with an area of 15,135.33 square kilometers, they have a population density of 84.02 while 124,428 or 12.16% are urban inhabitants. A total of 272,555 households were counted in this Zone, which results in an average of 4.67 persons to a household, and 263,731 housing units (Dechassa, 1999).

### Study Design and Period

Community based survey study was conducted from March, 2017 to June, 2017.

### Source Population

The source population was all population in selected Woreda in Ilu Aba Bor and Buno Bedelle zones.

### Study Population

Study population was person with age 18-65 years in the selected Kebele.

### Inclusion criteria and Exclusion Criteria

Person age less than 18 and greater than 65 years and patients who cannot speak was excluded

### Sampling Techniques

Simple random sampling technique was used to select woreda and selected kebele. Then we were used simple random sampling techniques to select households in each kebeles in order to select

individuals for questionnaires' using simple random sampling.

### Sample Size Determination

The proportion to donate blood was assumed to be 50% to attain the maximum sample size with a margin of error of 5% at 95% level of confidence level (Dechassa, 1999). One eligible member in each selected household will be interviewed until reaching the required sample size. If there were more than one eligible person in the selected household, only one randomly selected participant was included using lottery method.

The sample size was determined using a single population formula  $n = Z^2 \alpha / 2 p (1-p) / d^2$

- ✓ 5% margin of error, and
- ✓ 95 % confidence of certainty.
- ✓ 10% adjustment for non-response rate and
- ✓ 2 as a design effect, the calculated sample size was **809**

### Data Collection Tool and Procedure

Data was collected using questionnaire adapted from other study (NBBSE, 2016). The tool was translated into Amharic and Afan Oromo and then translated back to English to check its consistency. The tool was validated through pretesting at the other kebele than the study area, which is similar to the study area. 20 data collectors and two supervisors' were participated in the data collection process.

### Data Processing and Analysis Techniques

After data collection completed, the result was entered it into a computer using SPSS version 20 software for analysis. Descriptive statistics was done to describe the study population in relation to relevant variables. Binary logistic regression analysis was conducted to discover the effect of each study variable on the outcome variable. Variables having a p value <0.2 on the bivariate analysis was entered into a multivariate logistic regression analysis to check for confounding effects on the association from bivariate analysis. The

strength of association was described at 95% CI p-value less than 0.05 was considered.

### Variables in the study

Dependent variables are Level of knowledge, Level of attitude, and practice. Independent Variables are age, sex, family size, educational level, marital status, family income, profession and experiences.

## RESULT AND DISCUSSION:

### RESULT:

#### Socio-Demographic Data:

From the total of 809 respondents, more than half 526(65%) of them were male and the rest 283(35%) were females, of them the majority 341(42.2%) of them were found between age of 26-35 followed by 278(34.4%) with the age of 18-25. As to religions the majority 396(48.9%) of them were Muslims, the rest 242(29.9%), 156(19.3%) and 15(1.9%) of them were Orthodox, Protestant and Catholic respectively. On the subject of education 197(24.4%) of them were in between 1-8 grade, 157(19.4%) of them were able to read and write, 128(15.8%) of them were unable to read and write, the rest 132 (16.3%), 74(9.1%), 58(7.2%) and 63(16.3%) were in between grade 9-10, 11-12, collage, University and above respectively. On the subject of to their occupation the majority respondent 218 (26.9%) were merchants.

#### Binary Logistic regression:

*Factors Associated with Knowledge:-* In bivariate logistic regression, Income per year, educational status, time when respondents knew, and type of information got on blood donation were significantly associated with adequate knowledge about blood donation, while, in multivariate logistic regression controlling confounders, Income per year ( $p=0.003$ ), the time when respondents knew about blood donation ( $P=0.000$ ) and type of information got on blood donation ( $p=0.001$ ) were significantly associated with adequate knowledge about blood donation (Table 1).

Table 1:- Binary Logistic regression of knowledge towards blood donation with socio demographic characteristics of adult population in Ilu Aba Bor and BunoBedelle Zones zone, 2017.

Variables/category		Single Covariates Result		Multiple Covariate Results	
Educational Level		COR(95% CI)	P value	AOR(95% CI)	P value
Educational Level	unable to read and write	1.207(.852,1.709)	0.000	.647 (.096,4.38)	0.065
	Able to read and write	.227(.151,.339)		1.051 (.231,4.791)	
	Grade 1-8	.539(.402,.722)		.214 (.036, 1.270)	
	Grade 9-10	.913(.649,1.285)		2.268(.476,10.806)	
	Grade 11-12	.318(.174,.581)		.853(.160,4.537)	
	Collage	.194(.104,.359)		.253(.024,2.640)	
Income	0-15,000	.852(.488,1.486)	0.000	.241(.036,1.630)	0.003
	16,000-30,000	.657(.542,.795)		.119(.025,.561)	
	31,000-45,000	.454(.324,.636)		.006(.000,.077)	
	46,000-60,000	.111(.040,.312)		.050(.005,.525)	
	61,000-75,000	.153(.076,.308)		.075(.010,.540)	
	76,000-90,000	.025(.003,.182)		.059(.005,.700)	
Time	1-3 month	.179(.103,.309)	0.000	4.951(1.073,22.854)	0.000
	3-6 month	.035(.020,.062)		1.077(.250, 4.637)	
	No I didn't	115.500(28.714,464.593)		14570.734(901.965,235382.018)	
	6-9 month	.750(.168,3.351)		18.977(1.965,183.311)	
	9-12 months	.029(.004,.209)		.666(.049,9.039)	
Type Information of	Importance of blood donation	.204(.162,.256)	0.000	.256(.084,.782)	.001
	Side effect of blood donation	.350(.190,.643)		.433(.099,1.889)	
	Hadn't about it	16.222(8.275,31.802)		.918(.133,6.347)	
	Regarding the factors affecting blood donation	.529(.236,1.188)		3.619(.732,17.906)	

*b) Factors Associated with Attitude:*

In bivariate logistic regression, Educational Level, Income, Attitude on Source of blood donation, types of problem to donate, Encouragement on blood donation, Willingness and Sex were significantly associated with adequate knowledge about blood donation, while, in multivariate logistic regression controlling confounders, educational status ( $p=.012$ ),

Income per year( $p=.023$ ), Attitude on Source of blood donation ( $p=0.000$ ), types of problem to donate( $p=.000$ ), encouragement( $p=0.000$ ) and willingness ( $p=0.00$ ) were significantly associated with attitude of the participants, while in multivariate logistic regression religion was the factor which was significantly associated with attitude towards blood donation (Table 6).

**Table 1: Binary Logistic regression of attitude towards blood donation with socio demographic characteristics of adult population in Ilu Aba Bor and BunoBedelle Zones zone, 2017.**

Variables/category		Single Covariates Result		Multiple Covariate Results	
		C OR(95%CI)	P value	AOR(95%CI)	P value
Educational Level	unable to read and write	.778(.549,1.103)	0.000	.2.744(1.003,7.508)	.012
	Able to read and write	.172(.110,.267)		.846(.298,2.401)	
	Grade 1-8	.359(.261,.492)		1.432(.544,3.766)	
	Grade 9-10	.404(.277,.589)		1.819(.655,5.050)	
	Grade 11-12	.289(.156,.535)		2.194(.723,6.660)	
	Collage	.138(.069,.278)		.807(.251,2.594)	
	University and above(ref)				
Income	0-15,000	.250(.125,.500)	0.000	.972(.230,4.106)	.023
	16,000-30,000	.347(.280,.429)		1.214(.354,4.159)	
	31,000-45,000	.440(.314,.618)		1.644(.460,5.877)	
	46,000-60,000	.143(.056,.365)		.804(.178, 3.633)	
	61,000-75,000	.333(.193,.577)		1.972(.520,7.481)	
	76,000-90,000	.051(.012,.212)		.101(.014, .727)	
	91,000-120,000				
Attitude on Source of blood donation	Voluntary donor	.178(.142,.223)	0.000	.166(.093,.297)	0.000
	Remunerated donor	.353(.183,.682)		.149(.056,.396)	
	Donation to only relatives	.811(.543,1.213)		.547(.255,1.175)	
	don't know				
If Yes what problems	Infection	.420(.293,.602)	0.000	2.207(.694,7.018)	0.000
	Temporary weakness	.459(.293,.718)		4.292(1.305,14.121)	
	Have no problem	.246(.195,.310)	0.000	1.199(.397,3.627)	
	Sick	1.375(.553,3.418)		13.692(2.800,66.964)	
	Faintness	.359(.223,.579)		2.631(.773,8.952)	
	Headache				
Encouragement on blood donation	Yes	.145(.111,.190)	0.000	.373(.235,.592)	0.000
	No (ref)				
Willingness to blood donation	Yes	.142(.109,.184)	0.000	.311(.195,.495)	0.000
	no(ref)				
Sex	Female	.328(.269,.400)	0.000	1.243(.826,1.872)	.297
	male(ref)				

*c) Factors Associated with Practice*

In bivariate logistic regression analysis, Educational level, Ethnicity , occupation, Income , current blood donation status, of donation, reason to donate and reasons didn't donate blood were statistically associated with blood donation practice of the respondents, while in

**Table 2: Binary Logistic regression of practice towards blood donation with socio demographic characteristics of adult population in Ilu Aba Bor and Buno Bedelle Zones, 2017.**

Variables/category		Single Covariates Result		Multiple Covariate Results	
		C OR(95% CI)	P value	AOR(95% CI)	P value
Education al Level	unable to read and write	3.414(2.257,5.164)	0.000	3.515(.819,15.086)	.189
	Able to read and write	1.754(1.267,2.429)		1.114(.303,4.088)	
	Grade 1-8	6.577(4.354,9.936)		2.880(.715,11.595)	
	Grade 9-10	4.500(2.892,7.003)		1.985(.518,7.602)	
	Grade 11-12	3.143(1.722,5.735)		2.350(.522,10.579)	
	Collage	3.111(1.829,5.291)		1.293(.355,4.709)	
	University and above(ref)				
Ethnicity	Oromo	3.407(2.840,4.087)	0.000	14.009(2.682,73.164)	0.008
	Amhara	2.800(1.774,4.421)		10.305(1.732,61.302)	
	Tigre	1.176(.616,2.246)		4.123(.520,32.710)	
	Gurage				
Occupatio n	Farmer	2.448(1.804,3.323)	0.000	1.030(.355,2.992)	0.000
	merchant	7.385(4.903,11.123)		4.850(1.571,14.970)	
	House wife	2.129(1.389,3.262)		2.137(.602,7.588)	
	Student	2.391(1.470,3.890)		2.169(.667,7.055)	
	Government employee	2.564(1.771,3.712)		6.708(2.120,21.224)	
	6(ref)				
Income	0-15,000	1.778(.998,3.167)	0.000	.135(.004,4.519)	0.000
	16,000-30,000	3.262(2.616,4.068)		.084(.003,2.420)	
	31,000-45,000	5.542(3.588,8.559)		.074(.002,2.221)	
	46,000-60,000	2.333(1.187,4.588)		.021(.001,.670)	
	61,000-75,000	1.519(.934,2.468)		.007(.000,.218)	
	76,000-90,000	2.727(1.367,5.442)		.035(.001,1.328)	
	91,000-120,000				
Current blood donation status	Yes	.323(.227,.459)	0.000	.099(.049,.199)	0.000
	no(ref)				
How many times do you donate Blood	Once	.462(.299,.711)	0.000	9.329(.696,125.035)	0.000
	Twice	.277(.150,.511)		6.676(.464,95.991)	
	Not at all	7.308(5.768,9.259)		30.456(2.376,390.396)	
	Third times				
Why you DB	Friend/relative needed blood	.692(.502,.955)	0.000	.445(.065,3.067)	0.000
	Encouraged by friend or accompanied friend to donate blood	.522(.260,1.049)		1.197(.145,9.899)	
	Not at all	8.557(6.564,11.156)		2.654(.384,18.351)	
	To get money	.600(.143,2.511)		.241(.017,3.522)	
	Because it's the right thing to do	.455(.158,1.308)		.080(.008,.821)	



	Heard appeal for blood in the news/radio				
The main reason	Unfit to donate	14.750(5.358,40.605)	0.000	.232(.007,7.224)	0.000
	Need to donate to friends or relative in the future	7.333(2.195,24.501)		.184(.005,7.119)	
	Yes Or no fear	.523(.366,.747)		.019(.001,.469)	
	Fear of needle	4.333(1.235,15.206)		.216(.005,8.659)	
	Fear of knowing my status	1.000(.290,3.454)		.021(.001,.645)	
	Religion forbid it	11.000(2.587,46.779)		.435(.013,14.848)	
	Donated blood may be sold	1.722(.963,3.078)		.126(.005,3.302)	
	No-remunerations (payment)	9.21(.000, 19)		7.41 (.000,8.00)	
	I am too busy	5.000(.584,42.797)		.146(.001,19.309)	
	No-one ever asked me ...I didn't realize my blood was need	6.038(4.503,8.098)		.140(.006,3.398)	
	I am afraid I'll get AIDS	9.21(.000, 19)		6.70 (.000,7.5)	
	My blood isn't the right type	.813(.391,1.689)		.016(.001,.522)	
	I don't have any blood to spare	4.667(1.341,16.239)		.034(.001,1.274)	
	I don't want to feel weak afterward	9.20 (.000, 19)		7.065 (.000,8.45)	

multivariate logistic regression analysis, ethnicity ( $p=0.008$ ), Occupation ( $p=.000$ ), income per year ( $p=0.00$ ), number of donation ( $p=0.000$ ), reason to donate ( $p=0.000$ ) and reasons didn't donate blood ( $p=0.000$ ) were found to be significantly associated with practice of blood donation (Table 7).

### Correlation between Knowledge, Attitude and Practice

In addition, the study assesses the correlation between knowledge, attitude, and practice scores of the study participants.

**Table 3: The correlation between knowledge, attitude and practice.**

Correlations	Knowledge on blood donation	Attitude on blood donation	Practice on blood donation
Knowledge on blood donation Pearson Correlation	1	.350**	.076*
Sig. (2-tailed)		.000	.030
Attitude on blood donation Pearson Correlation	.350**	1	-.003
Sig. (2-tailed)	.000		.921
Practice on blood donation Pearson Correlation	.076*	-.003	1
Sig. (2-tailed)	.030	.921	

\*\*Correlation is significant at the 0.001 level (two tailed)

Knowledge and attitude scores of the participants achieved significant and had fair positive correlation

( $r = 0.35$ ;  $P = 0.00$ ). Similarly, knowledge and practice scores of the participants had shown statistically

significant positive correlation, even though it is weak ( $r = 0.076$ ;  $P = 0.03$ ). Moreover, the attitude and practice scores of the participants had so weak negative correlation which was not significant ( $r = -0.003$ ;  $P = 0.921$ ) (table 8).

## DISCUSSION:

### Knowledge

From the total 809 respondents more than half 526(65%) them were male and the rest 283(35%) were females, of them the majority 341(42.2%) of them were found between age of 26-35 followed by 278(34.4%) with the age of 18-25. The study conducted at Addis Ababa University also similar with this study from total respondents male were 176 (59.7%) and female 119(40.3%) (Ambaye, 2015). As to religions the majority 396(48.9%) of them were Muslims, the rest 242(29.9%), 156(19.3%) and 15(1.9%) of them were Orthodox, Protestant and Catholic respectively. On the subject of education 197(24.4%) of them were in between 1-8 grade, 157(19.4%) of them were able to read and write, 128(15.8%) of them were unable to read and write, the rest 132 (16.3%), 74(9.1%), 58(7.2%) and 63(16.3%) were in between grade 9-10, 11-12, collage, University and above respectively.

From the total of 809 respondent the majority 546(67.5%) of them were have awareness on blood donations, of them 380(47%) of them respond that timely awareness donation of blood were in between 3-6 month, rest of them, 99(12.2%), 54(6.7%) 7(0.9%) responds that timely donation of blood were in between 1-3 month, 6-9 month and above one year respectively. It's similar with the study conducted in Puducherry, India indicates that 229 (79.5%) of the respondents were aware of blood donation (Shidamet al., 2015). Concerning source of information from the total 809 respondents the majority 418(51.7%) of them were obtaining information's regarding blood donation from medias and the rest 159 (19.7%) of them respond got from health workers which confirmed by the study done by Shidam et al., 2015 stated that the sources of information were media (48%) & health worker (19.7%). From the sources of information they get 520(64.3%) of them were obtained importance of blood donation the rest 54(6.7%), 26(3.2%) and 54(6.7%) of them were obtaining infractions about side effects, factors affecting blood donation and criteria of blood donations respectively. Regarding age categories and sex who should be involved in blood donation the majority 311(38.4%) of them respond that male and female age of <18 years Old > 65 years will be involved in blood donation the rest 246(30.4%), 163 (20.1%) and 40(4.9%), were respond anyone who is

healthy, men (18-65) years, women (18-65) years respectively.

Like the previous reports time interval up to gaining information about blood donation was one of a significant factors association with knowledge towards blood donation. Income and type of information was not a significant predictor associated with blood donation. This discrepancy might be due to previous reports methodology they applied or the nature of the study (Misganawet al., 2014; Singh et al., 2014) is inconsistent with this finding.

In the present study it was observed that source for information was found to be significantly associated with level of knowledge of voluntary blood donation. Year of study were also significant predictor of level of knowledge. This is in line with other studies done in Ethiopia Universities Chalachewet al., 2014; Dereje, 2014)

### Attitude:

Among 809 study participants 612(75.6%) of them were favorable attitudes toward blood donations. This is in line with study conducted in Harar (Urgesaet al., 2017) and student in Addis Abeba University (Dejen A, 2015) were 68% and 94.4% of them believed that voluntary blood donation is good respectively. The majorities 583(72.1%) of believed voluntarily donating blood were the best source; this is in line with study conducted in Harar town (Urgesaet al., 2017) were 87.6% of the participants believed that voluntary non-remunerator donors are the best source of blood.

Issues of complications on blood donation addressed by respondents were infection 142(17.6%), temporary weakness 89(11.0%), Faintness 87(10.8%), being sick 19(2.3%) and Headache 21(2.6%). From the respondents under study, 482 (59.6%) of them have been convinced their friend/or relative to donate blood.

The present study found that educational status, income, source of blood donation; fear problem, encouragement and willingness were significantly associated with favorable attitude towards blood donation. Participants who had higher monthly income were more likely to have favorable attitude than lower income groups. This might be because those who have higher income may access better information sources. Radio listener had lower chance of having favorable attitude. This might be partly explained by the limitations of radio programs on addressing the intended goals. Researchers also concluded that people are not donating blood because nobody approached them for donation, lack of information,



unfit to donate, a need to donate for a friend or relative in future, fear of needle and knowing their viral status, the donated blood may be sold, non-remuneration, ignorance and their religion (Chalachewet *et al.*, 2014)

#### Practice:

195 (24.1%), of the respondents had an experience of blood donation, while the rest of the participants, 614 (75.9%), never donated blood before. This study replies there was low experience for blood donation. A study conducted in Puducherry, India found that 40 (17.5%) donated in the past (Godinet *et al.*, 2013). Ethiopia is categorized as one of the countries with very low blood donation rate which is 0.6 per thousand (WHO, 2015). Of those who donated before, 154 (19.0%) were donated blood due to their friend/relative needed blood. On the time being, from all respondents who donate blood, only 168 (20.8%) respondents were continuing blood donation practice. The major reasons mentioned for not donating blood among non-donors were lack of information on where, when, and how to donate blood 366 (45.2%), perception of not being fitted to donate blood 63 (7.8%), fear of HIV after blood donation 17 (2.1%), and didn't have any blood to spare 29 (3.6%). Many challenges of collecting sufficient and safe blood to meet the demand exist in every country, including Ethiopia, and the demand of blood transfusion is increasing year by year (WHO, 2010).

Frequency of blood donation, income, occupation, pressure to donate blood, the reason to donate, ethnicity, knowledge and attitude were significantly associated with the practice of blood donation. Knowledge of blood donation is a pre-requisite in obtaining access to and providing voluntary blood donation timely and effectively. It is also an important tool in avoiding fear and building positive attitude of blood donors. This is supported by a similar study conducted in Mekelle (Gebremeskel *et al.*, 2014).

#### CONCLUSION AND RECOMMENDATION:

The study showed that the prevalence of practice of blood donation were too low 24.1%. The level of knowledge and attitude were greater than 67% and 62 % respectively. Lower income groups, lower time interval and type of information were significantly associated with knowledge of blood donation. Lower educational level, lower income, attitude on the source of blood donation, fear to donate blood, lack of encouragement, and willingness were found to be the independent predictors of attitude. Merchants, high level of income had favorable attitude whereas fear of HIV and lack of awareness were the most significant factor for attitude. Awareness creation in the society about blood donation and its advantage in the

community at large through training, radio and template is the remaining task.

#### Declaration

##### Authors' contribution

Melaku T. statistical analysis ,

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#### Competing interests

There is no competing interest.

#### Availability of data and materials

If needed the raw data in excel format for this article is available.

#### Consent for publication

Not applicable.

#### Ethics approval and consent to participate

informed consent was not needed.

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