

# Utilization of Institutional Delivery Service and Associated Factors among Women of Child Bearing Age in Bule Hora Town, West Guji Zone, Oromia Regional State, Ethiopia. Community Based Cross-Sectional Study Design, 2018

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## Research article

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# Abstract

**Background:**-Globally at least 303,000 women died during pregnancy and childbirth and every day approximately 830 women die from preventable causes related to pregnancy and childbirth. Although institutional delivery has been promoted in Ethiopia, still delivery in a health facility is far lower than other neighboring countries. The aim of this study was to assess utilization of institutional delivery service and associated factors among women of childbearing age in Bule Hora town, West Guji zone, Oromia regional state, Ethiopia

**Methods:** - Community-based cross-sectional study design with quantitative methods of data collection was employed from February 01 to March 30/2018. A total of 360 childbearing mothers in the Bule Hora town were involved in the study using a systematic sampling method. The instrument was pre-tested on 5% the sample at Gerba town. The data were analyzed by using binary and multivariable logistic regression and statistical associations were measured using odds ratio and 95%CI.

**Results:** - The prevalence of utilization of institutional delivery services in Bule hora town is 72%. According to this finding age at first pregnancy (AOR: 2.08, 95%CI: 1.768-5.620), educational status of mothers who attended secondary school and above (AOR: 4.613, 95%CI: 1.096-11.912) and primary school attended mothers (AOR:3.18, 95%CI: 2.406-3.443), educational status of husbands who attended secondary school and above (AOR: 4.91, 95%CI: 10.792-30.441)and primary school attended (AOR: 2.13, 95%CI: 8.359-12.616), spousal communication about place of delivery (AOR: 4.27, 95%CI: 1.823-10.004), husbands occupations (AOR: 2.94, 95%CI: 2.734-5.137), current antenatal care (AOR: 46.74, 95%CI: 16.778-30.210), and parity three and less children (AOR: 6.97, 95%CI: 1.305-37.212) were had a strong statistical association with utilization of institutional delivery service.

**Conclusions:** - The finding shows the utilization of institutional delivery service in Bule Hora town is higher than a national figure but lower than the national target of skilled delivery. Policymaker and health institutions should have to strength and create awareness of the community on the importance of institutional delivery and use of ANC service in order to screen and detect early signs of disease, followed by timely intervention.

## Background

Globally in 2015, roughly 303,000 women died during pregnancy and childbirth and every day, approximately 830 women die from preventable causes related to pregnancy and childbirth(3). Maternal mortality is the global health indicator with the largest disparity between developed and developing countries. The survival, health and well- being of women's are essential to ending extreme poverty, promoting development, achieving the global strategy and sustainable development goals (9).

The average global target is to reduce maternal mortality to less than 70 per 100,000 live births and no country should have an MMR greater than 140/100 000 live births by 2030 and to reduce new born mortality to at least as low as 12 per 1,000 live births in every country (10). The estimated lifetime risk of maternal mortality in high-income countries is 1 in 3300 in comparison with 1 in 41 in low-income countries and in countries designated as fragile states, the estimated lifetime risk of maternal mortality is 1 in 54(11).

Although widespread progress has been made in recent decades, in Africa 50 percent of women give birth without a skilled attendant and the average coverage of births with a skilled attendant on the continent has not increased significantly (12). Most maternal deaths occur during labor and delivery, or the first 24 hours postpartum, and most complications cannot be predicted or prevented. Nearly 75% of all maternal deaths on the continent are attributable to the complications of pregnancy and childbirth like severe bleeding, infections, high blood pressure during pregnancy and other complications from delivery and unsafe abortion. The remaining 25% are caused by associated with diseases such as malaria, and HIV/AIDS during pregnancy. Ethiopia is one of the highest maternal mortality ratios. In order to minimize this national target is to reduce to 199/100,000 (13), But in 2016 maternal mortality ratio was 412 deaths per 100,000 live births (1).

In Ethiopia twenty-six percent of live births were delivered in a health facility that is far lower than in other neighboring African countries, such as Egypt 87% in 2014, Eritrea 34% in 2010, Djibouti 87% in 2012, Kenya 61% in 2014, Sudan 28% in 2014 and Somalia 9% in 2006 were delivered in a health facility. Institutional deliveries for women living in rural areas of Ethiopia has substantially increased in the last 16 years, from 2% in 2000 to 20% in the 2016 EDHS and among urban women has also increased from 32% in 2000 to 79% in 2016. The national target of skilled delivery is 90% (13) but the achievements were 28% of births delivered by a skilled provider. The majority of births are attended by traditional birth attendant (42%), nurses or midwives (20%) followed by doctors (6%), health extension workers (2%), and health officers (0.4%) (1, 14).

Institutional delivery service utilization and deliveries attended by skilled provider in Oromia were 19 and 20 percent respectively, which are far less than 57 and 59 percent institutional delivery and deliveries attended by skilled providers in Tigray region (1). In order to achieve global strategies and sustainable development goal it needs to identify facilitators and barriers of institutional delivery (13).

Therefore, this community based cross-sectional study was conducted to determine the magnitude of institutional delivery and factors determining place of deliveries and proposed to fill this information gap in west Guji zone with the potential of generalizability of its result to similar settings (Figure 1).

## Methods

The study was conducted from February 01 to March 30/2018 in western Guji zone in Oromia Region, Ethiopia. It is found 467 Km a long way from Addis Ababa toward the south direction at 5°35' N Latitude and 38°15'E Longitude. A Community based cross-sectional study design with quantitative techniques for information gathering was utilized. The source populations were all women of childbearing age who gave birth over the most recent two years preceding the time of data collection in Bule Hora town. Inclusion criteria were women who gave birth in the last two years and resident in the area for at least 6 months available during data collection period were included and women who gave birth in other places but living in the study area at the time of data collection and critically ill, cannot talk or listen were excluded.

The determined sample size was 360 childbearing women by utilizing single population proportion, considering the prevalence of institutional delivery service utilization 57% (25), a margin of error 5%, 95% confidence interval, 10% non-response rate, and correction formula were utilized. Systematic sampling methods were applied. First, an enumeration was conducted in the kebeles to distinguish women who gave birth within the previous 2 years in Bule Hora town and lived at least a half year in the town before the investigation. Bule Hora town has three kebeles and all kebeles were incorporated into the study and in each kebele, the households having the eligible women were distinguished by the house to house. The eligible women in kebele one, kebele two and kebele three were 602, 867, and 913 independently. After eligible women were identified, the sampling frame was prepared. The proportional probability to size sampling technique was used to allocate proportional sample size for each kebeles. Then systematic sampling technique was used after determining the interval by dividing the number of all women who gave birth in the last two years in Bule Hora town to final sample size. Every seventh who are voluntary to participate were interviewed according to their sequence of house numbers. Whenever two or more eligible women were found in the same household only one of them was selected randomly and included in the study (Figure 2).

Data were gathered using an organized questionnaire which intended to cover all contents of socio-demographic, socio-economic, socio-cultural, obstetric factors and perceived quality of health care factors variables to accomplish the goal of this study. The quality of the data was assured by using validated pre-tested questionnaires and questionnaires' were translated into Afaan Oromo. Data collectors were prepared for one day seriously on the investigation instrument and data collection procedure that includes the relevance of the study, the objective of the study, confidentiality of the information, informed consent and interview technique. The data collectors were worked under the nearby supervision of the supervisors to guarantee adherence to address data collection procedures and the supervisors and investigators review the filled questionnaires at the end of data collection every day for completeness.

Data were cleaned, coded, checked for completeness and inconsistencies and entered into Epi-Data Version 3.1 and exported to SPSS Statistics Version 25 for analysis. Percentage, frequency and mean were determined. Binary logistic regression analysis independent variables significant at  $p < 0.25$  was considered for adjustment in the multivariable logistic regression. By multivariable logistic regression analysis, the strength of statistical association was measured by adjusted odds ratios and 95% confidence intervals and statistical significance was declared at  $P < 0.05$ . Finally, the result was presented using texts, tables, figures and charts.

## Results

**Results:** - Out of 360 sample size, 357 participants were engaged in the study with a 99% response rate and the most regular respondents' age groups were 20-24 age groups which account for 147(41.2%). The mean age of the respondent was 24.44 years (Standard Deviation, SD = 4.95). The age of the respondents ranges from 15 to 40 years. Three hundred fifty (98 %) of the women were married. The dominant parts of the respondents were Protestant by religion 289 (81 %) and Oromo by ethnic gathering

324(90.8%) (Table 1). Right around 337 (85.7 %) of the women had attended formal education. The mean month to month pay of respondents was 2452.58 Ethiopian birrs (Table2). The mean age of respondents' first pregnancy was 17.62 years with standard deviations of + 1.7 years and the mean period of the respondent of last pregnancy 23.11 years with a standard deviation of + 4.78 years (Table 3).

The investigation demonstrated most of the respondents, 281(78.7%) visit antenatal care and out of those mothers 119(42%) visit the health facility at three months, 56(19.8%) at one month, 52(18.4%) at two months, 32(11.3%) at four-month, 20(7.1%) at five months and the rest were attended antenatal care after five months of gestational age. With respect to the number of antenatal care visit out of antenatal care followers 104 (38.2%) visit four times,56(19.8%) visit three times,52(18.4%) visit six times, 44 (15.5%) visit five times, 9(3.2%) visit two times and the rest where visited more than six times. During antenatal care visit, 279(98.6%) receive any information and advice about the place to give birth and related complication during labor and delivery. Out of 279(98.8) respondents receive information about complication during labor and delivery, 98(35.3%) severe vaginal bleeding, 49(17.6%) prolonged labour, 43(15.5%) severe headache, 37(13.3%) cessation of fetal movement, 26(9.4%) markedly weight gain of mothers and 25(9%) retained placenta. The reasons given by the mother didn't go to antenatal care visits are there were no medical issue workload, terrified of the expense, Poor treatment of well-being specialist and feel disgrace (Figure3).

### **Utilization of institutional delivery service**

The greater part (72%) of the mothers gave birth at the health facility and the rest of them gave birth at home (Figure 4 and 5). The reason given by mothers those gave birth at homes were:- it is their usual experience, had short labor, had a bad experience from past health facility delivery, felt more comfortable when giving birth at home and their family gives close attention.

### **Factors associated with Utilization's of institutional delivery service among Independent predictor variables**

The binary logistic regression analysis was performed to identify variables candidate for multivariable logistic regression analysis with the utilization of institutional delivery services. Consequently, maternal age, educational status of mothers, educational status of husbands, spousal communication, decision-maker on place of delivery, mothers occupations, husbands occupations, current antenatal care, family size, parity, competence of skill attendants, shortage of skilled attendants in health facility, prefer of sex of care provider during labor/delivery are variables candidate for multiple logistic regression, since their p-values were less than 0.25 (Tables 4).

In this study multivariable logistic regression analysis was performed to identify factors which had a strong association with utilization of institutional delivery service (Table 5).

According to this finding age at first pregnancy, educational status of mothers, educational status of husbands, spousal communication, husbands occupations, current antenatal care, and parity were had a

strong statistical association with utilization of institutional delivery service.

A multivariable logistic regression analysis shows as age at first pregnancy greater than 18 years were 2.077 (1.768-5.620) times more likely to give birth at a health facility than those who became pregnant before 18 years of age. Mothers' education was very important factors determine the place of delivery, thus mothers attended secondary school and above were 4.613(1.096-11.912) times and primary school attended mothers were 3.183(2.406-3.443) times more likely to give birth at a health facility than illiterate mothers.

Husband education had also a statically significant association with utilization of institutional delivery service. A wife whose husbands' attended secondary school and above were 4.911(10.792-30.441) times and primary school attended 2.129(8.359-12.616) time more likely to give birth at a health facility compared with illiterate husbands. According to this finding spousal communication on the place of delivery also had a positive association with institutional delivery services. Spousal communication on the place of delivery was 4.270(1.823-10.004) times more likely to utilize institutional delivery service compared with no communication in the place of delivery. Mothers who had currently attended antenatal care were 46.740(16.778-30.210) more likely to utilize institutional delivery services than others.

The study finds out occupations of a husband had a statistically significant association with utilization of institutional delivery services. Mothers whose husbands' the government employs 2.942 (2.734-5.137) times more likely to give birth at a health facility compared with private employ. Another strong factor for the utilization of health care for delivery is parity. Mothers who gave birth three times and less( $\leq 3$ ) and four to six(4-6) were 6.969(1.305-37.212) and 4.449(2.787-25.138) times more likely to give birth at health facility respectively as compared with mothers who gave birth seven times and more.

## Discussion

This study assessed the utilization of institutional delivery service and associated factors among women of childbearing age who delivered two years preceding to the survey in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia. The study shows that the prevalence of the utilization of institutional delivery services in Bule Hora town is 72%. This finding was higher than the previous study conducted in Dodota Ethiopia (18%), Benishangul Ethiopia (24.8%), Gurage zone Ethiopia (31%), Sodo town Ethiopia (62.2%), Boricha southern Ethiopia (4.9%), Horro Guduru Wollega Ethiopia (57%), Awi zone Amhara Ethiopia (18.8%), Abuna Gindebret Ethiopia (14.4), Bihar Amulo Tanzania (56%) respectively gave birth at a health facility (16, 17, 19, 22, 24, 25, 26, 31, 21). It is also high compared to the national average (26%) in Ethiopia of 2015. Additional efforts are needed to ensure that the Ethiopia national target of 90% is achieved (13). The difference between this study and others may be due to the residence of respondents, level of awareness of mothers about importance institutional delivery services and currently Ethiopian ministry of health using different strategies to increase institutional delivery services like free delivery services at all health facility.

This finding is consistent with a study done in the Gamo Gofa zone in which 73.2% of women gave birth in health institutions (20). However, a study conducted in Bahir Dar city administration (78.8%), Benchi Maji (78.3%) and Debra Berhan (80.2%) were higher than our finding. The possible justification might be the infrastructure and the cultural differences that might exist across these regions. In this study, factors influencing institutional delivery services were the age at first pregnancy, educational status of mothers, educational status of husbands, spousal communication, husband's occupations, current antenatal care and parity of women.

According to this study, age at first pregnancy was important variables predictors of institutional delivery services. This study in line with the finding in Benishangul (17) and Bahir Dar city administration (18). In case of this study as an age of mothers increase from eighteen and above the possibility to give birth at health facility increase, the possible reason might be as their age increase they will get more information about the importance of giving birth at a health facility. The educational status of the mother is also a positive statistically significant association with institutional delivery services. The finding is consistent with studies done in Dodota Ethiopia (16), Bahir Dar Ethiopia (18), Tanzania (21), Sodo town Ethiopia (23), Boricha Ethiopia (24), Benchi Maji Ethiopia (26) and Debra Berhan (32). This might be women who are educated might have access to information, better knowledge on services, access and control over resources and thus might better use health facility for delivery and education helps to understand about the danger signs and complications during pregnancy and delivery.

Parity is another variable strongly determine the utilization of institutional delivery services. Mothers who gave birth three times and less were 6.97 times and who gave birth four to six were 4.45 times more likely to give birth at health facility respectively compared with mothers whose gave birth seven times and more. A similar study in line with this finding done in Sodo town Ethiopia (22). The justification might be due to the expansion of the health extension worker program and education in the last two decade in Ethiopia. This indicates mothers those gave birth more than seven times were using their experience at home birth and less utilize institutional delivery service.

Our study also revealed that the educational status of husbands increases institutional delivery service of mothers compared with uneducated husbands. Similar studies in line with this finding sodo town Ethiopia and reviewed web-based search study (22, 30). A possible reason for this finding is decision making about a place of delivery 242(67.8%) were decided by both husband and wife, 94(26.3%) were decided by herself, 11(3.1%) were decided by their husbands. This is shows educated husbands were influenced their family on the choice of place of delivery. Women who had spousal communication on the place of delivery were four times more likely to utilize institutional delivery service compared with women who had no communication in the place of delivery.

In this study, antenatal care was determinant factors of institutional delivery service, which increase the utilization of institutional delivery services. This finding is consistent with different studies in Benishangul Ethiopia (17), Bahir Dar Ethiopia (18), Sodo town Ethiopia (22, 23), Boricha Ethiopia (24), Horro Guduru Wollega (25), Awi zone Amhara Ethiopia (27), Abuna Gindebret Ethiopia (31) and Debra

Berhan (32). Majority of mothers those attended antenatal care gave birth at a health facility. This is due to awareness creation on the importance of institutional delivery service and related complications of pregnancy and delivery during antenatal care.

## **Conclusion**

The finding shows the utilization of institutional delivery service is higher than a national figure but lower than the national target. Since all study participants were from urban, the finding was higher than a national figure and other studies in a country. Age at first pregnancy, educational status of mothers, educational status of the husband, current antenatal care visit, parity, spousal communication in place of delivery and husband occupation were had a positive statistically significant association with institutional delivery services.

## **List Of Abbreviations**

ANC:-Ante Natal Care, AIDS: - Acquired Immune Deficiency Syndrome, EDHS: - Ethiopian Demographic Health Survey, FGD: - Focus Group Discussion, HIV: - Human Immunodeficiency Virus, IRB: - Institutional Review Board, MMR:-Maternal Mortality Ratio, SAD: - Skilled Assisted Delivery and TBA: - Traditional Birth Attendants

## **Declarations**

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### **Availability of data and materials**

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

### **Author's Contributions**

ZJ have made substantial contributions to beginning and design, collection of data, analysis and interpretation of data and develop this manuscript.

UG have also made substantial contributions to beginning and design, collection of data, analysis and interpretation of data and develop this manuscript.

Both author and co-author read and approved the final manuscript

### **Ethics approval and consent to participate**

Ethical clearance was obtained from Bule Bora University IRB with reference number, Ref.No (BHU/PRD/157/2010 E.C/2018) and written consent were obtained from all respondents. To get full co-operation, respondents were reassured about the confidentiality of their response. Their voluntary participation and the right to take part or terminate at any time they wanted were assured. The data collectors were trained by the principal investigators on how to keep the confidentiality and anonymity of the responses of the respondents in all aspect.

### **Consent for publication**

Not applicable

### **Competing interests**

The authors declare that they have no competing interests.

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## Tables

Table 1 distributions of socio-demographic characteristics of women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018

Variables		Frequency	Percent
Maternal age	<=19	52	14.6
	20-24	147	41.2
	25-29	92	25.8
	30-34	46	12.9
	>=35	20	5.6
Marital status	Married	350	98.0
	Widowed	5	1.4
	Divorced	2	.6
Ethnicity	Oromo	324	90.8
	Amhara	12	3.4
	Gedeo	12	3.4
	Burji	3	.8
	Walayita	6	1.7
Religion	Protestant	289	81.0
	Orthodox	34	9.5
	Muslim	28	7.8
	Catholic	4	1.1
	Wakefata	2	.6
Family size	<=3	92	25.8
	4-6	192	53.8
	>=7	73	20.4

Table 2 distributions of socio-economic characteristics of women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018

<b>Variables</b>		<b>frequency</b>	<b>percent</b>
<b>Educational status of mothers</b>	Illiterate	79	22.1
	Can read and write	21	5.9
	primary education	79	22.1
	secondary school and above	178	49.9
<b>Occupations of mothers</b>	government employ	67	18.8
	Housewife	236	66.1
	private/merchant	53	14.8
	Others	1	.3
<b>Educational status of husbands</b>	Illiterate	19	5.3
	Can read and write	27	7.6
	primary education	70	19.6
	secondary school and above	241	67.5
<b>Occupation of husbands</b>	government employ	174	48.7
	Farmer	72	20.2
	private/merchant	106	29.7
	Student	5	1.4
<b>Monthly income</b>	<=500	9	2.5
	501-1500	67	18.8
	1501-2500	71	19.9
	2501-3500	57	16.0
	3501-4500	48	13.4

Table 3 distributions of obstetrics factors of women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018.

<b>Variables</b>		<b>frequency</b>	<b>percent</b>
<b>Age at first pregnancy</b>	<=19	326	91.3
	20-24	28	7.8
	25-29	3	.8
<b>Age at last pregnancy</b>	<=19	99	27.7
	20-24	134	37.5
	25-29	89	24.9
	30-34	28	7.8
	>=35	7	2.0
<b>Gravida</b>	<=4	283	79.3
	5-8	65	18.2
	>=9	9	2.5
<b>Parity</b>	>=3	244	68.3
	4-6	88	24.6
	>=7	25	7.0
<b>Recent ANC</b>	No	76	21.3
	Yes	281	78.7
<b>History of Abortion</b>	No	318	89.1
	Yes	39	10.9

Table 4: Shows the binary logistic regression analysis between the Utilization's of institutional delivery service and Independent variables among women of childbearing age in Bule Hora town, Oromia regional state, Ethiopia, 2018.

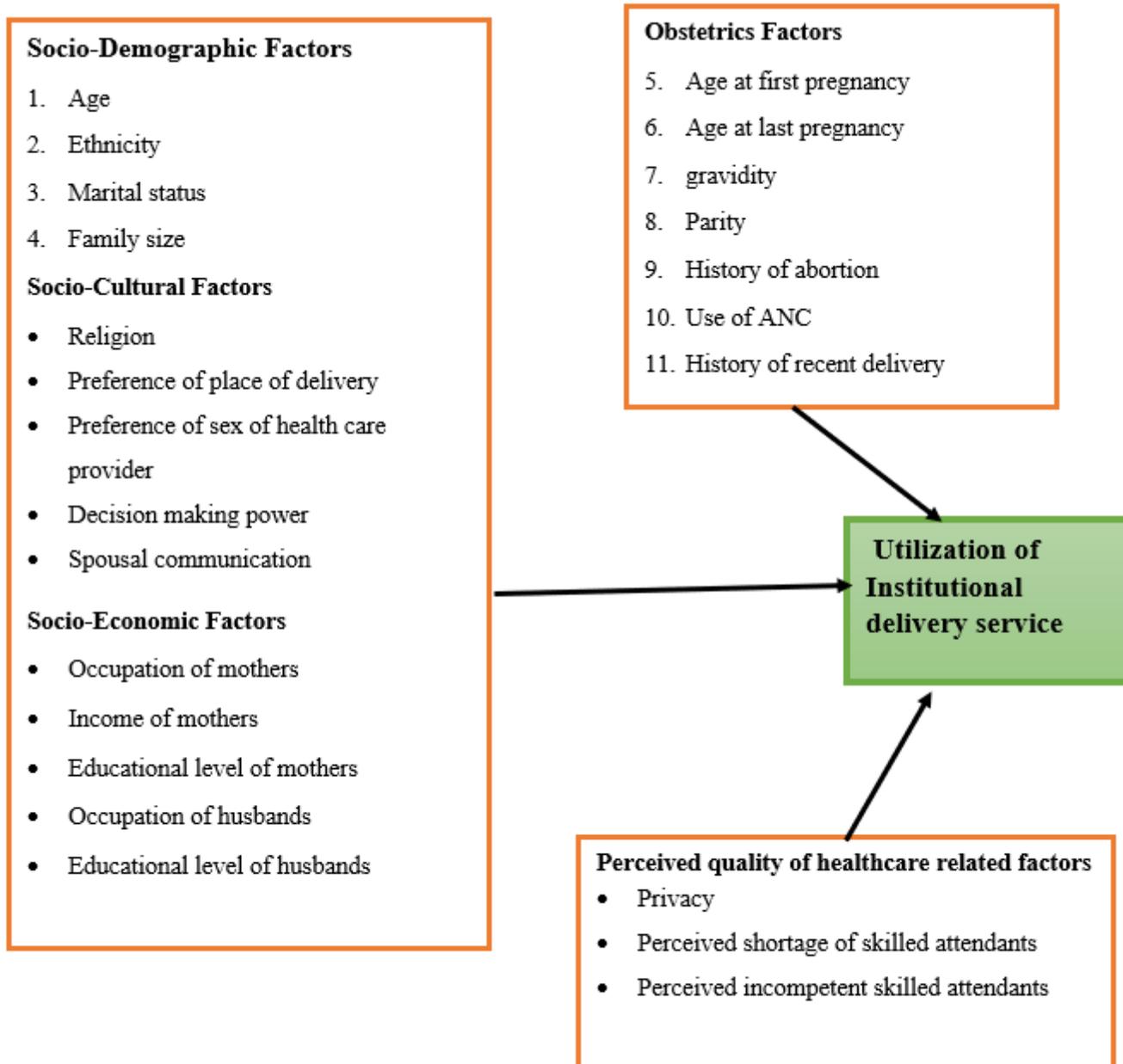
Categorical variables		N	p	COR	95% C.I.	
					Lower	Upper
Maternal Age	<=19	52	.132	2.250	.783	6.468
	20-34	285	.025	2.851	1.141	7.124
	>=35	20		1		
Educational status of mothers	Illiterate	79		1		
	Can read and write	21	.992	1.005	.373	2.708
	primary education	79	.000	3.329	1.733	6.398
	secondary school and above	178	.000	22.594	10.765	47.424
Educational status of husbands	Illiterate	19		1		
	Can read and write	27	.416	1.867	.415	8.398
	primary education	70	.008	5.980	1.598	22.371
	secondary school and above	241	.000	36.129	9.950	131.182
Spousal communication	No	110		1		
	Yes	247	.000	4.489	2.739	7.357
Decision maker on the place of delivery	my self	94		1		
	my husband	11	.002	26.154	3.188	214.587
	both of us	242	.000	19.210	10.589	34.848
	my relatives	10	.004	10.462	2.083	52.549
Mothers occupations	Government employ	67	.000	8.550	2.695	27.129
	House wife	236	.719	1.121	.602	2.086
	private employ	54		1		
Husbands occupations	Governmental employ	174	.000	5.275	2.836	9.813
	Farmer	72	.019	.487	.267	.890
	private employ	111		1		
Current ANC	No	76		1		
	Yes	281	.000	66.141	29.135	150.149
Family size	<=3	92	.000	3.455	1.779	6.708
	4-6	192	.000	4.126	2.318	7.342
	>=7	73		1		
Parity	<=3	244	.000	14.769	5.290	41.236
	4-6	88	.000	8.571	2.917	25.184
	>=7	25		1		
Competence of skill attendants	Not competent	17		1		
	Competent	241	.013	10.578	1.641	68.202

	I don't know	99	.000	.006	.001	.033
shortage of skilled attendants in a health facility	There is a shortage of care providers	21		1		
	There is no shortage of care providers	237	.044	6.132	1.054	35.661
	I don't know	99	.000	.006	.001	.031
Prefer of the sex of care provider during labor	Female	146		1		
	Male	19	.008	15.692	2.041	120.654
	Either of them	192	.000	4.528	2.737	7.491
Age at first pregnancy	Age < 18 years	167		1		
	Age >= 18 years	190	.000	2.362	1.470	3.795

Tables:5 - Shows the multiple variable logistic regression and corresponding p-values for the associations between the Utilization's of institutional delivery service and independent variables among women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018.

Categorical variables		(N)	P	AOR	95% C.I.	
					Lower	Upper
Educational status of mothers	Illiterate	79		1		
	Can read and write	21	.985	1.015	.234	4.391
	primary education	79	.012	3.183	2.406	3.443
	secondary school and above	178	.005	4.613	1.096	11.912
Educational status of husbands	Illiterate	19		1		
	Can read and write	27	.927	1.106	.126	9.727
	primary education	70	.015	2.129	8.359	12.616
	secondary school and above	241	.007	4.911	10.792	30.441
Spousal communication	No	110		1		
	Yes	247	.001	4.270	1.823	10.004
Husbands occupations	Governmental employ	174	.001	2.942	2.734	5.137
	Farmer	72	.133	1.732	0.596	5.037
	private employ	111		1		
Current ANC	No	76		1		
	Yes	281	.000	46.740	16.778	30.210
Parity	<=3	244	.023	6.969	1.305	37.212
	4-6	88	.041	4.449	2.787	25.138
	>=7	25		1		
Age at first pregnancy	Age < 18 years	167		1		
	Age >= 18 years	190	.010	2.077	1.768	5.620

## Figures



**Figure 1**

The schematic representation of the conceptual frame developed after reviewing different literature by authors.

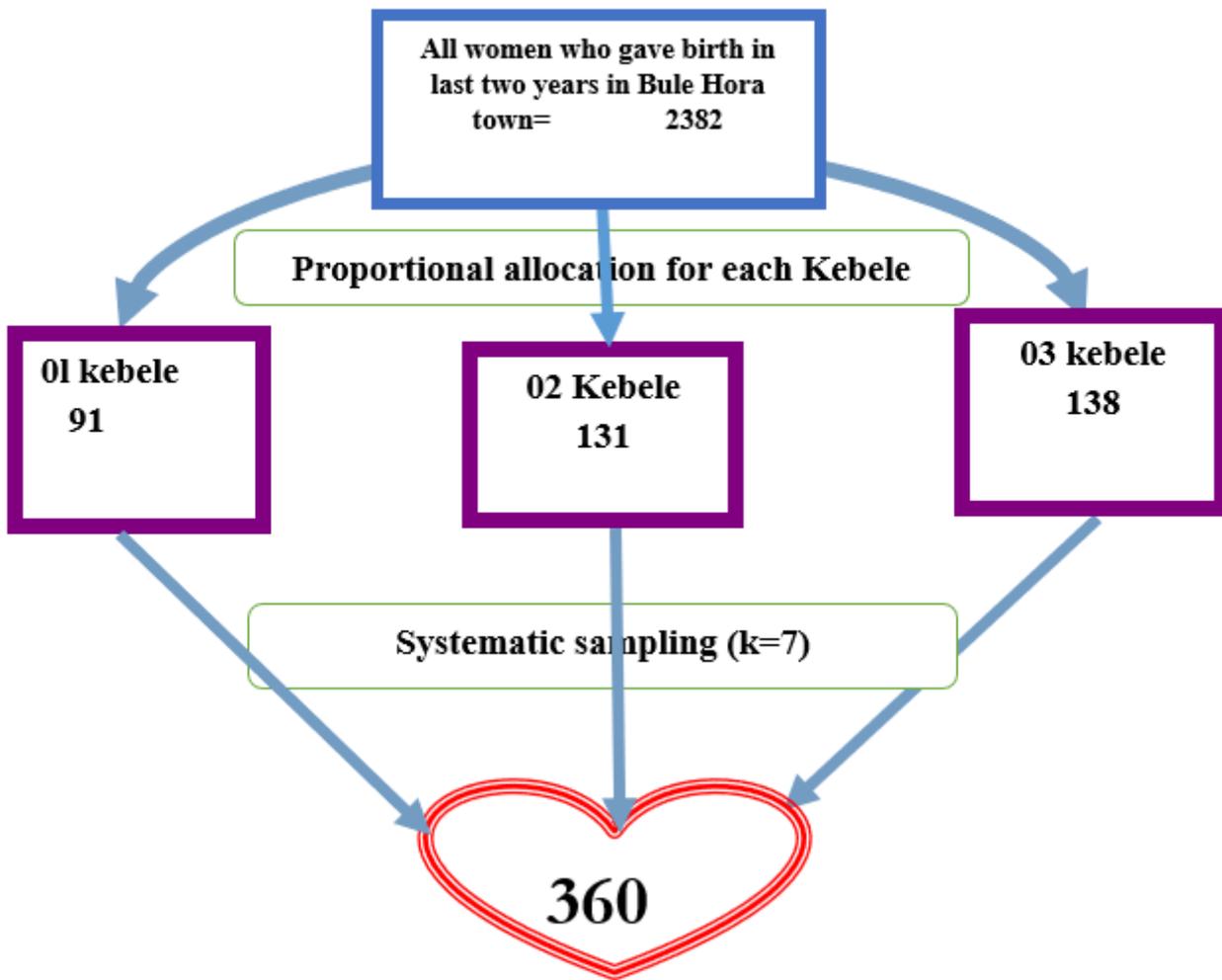
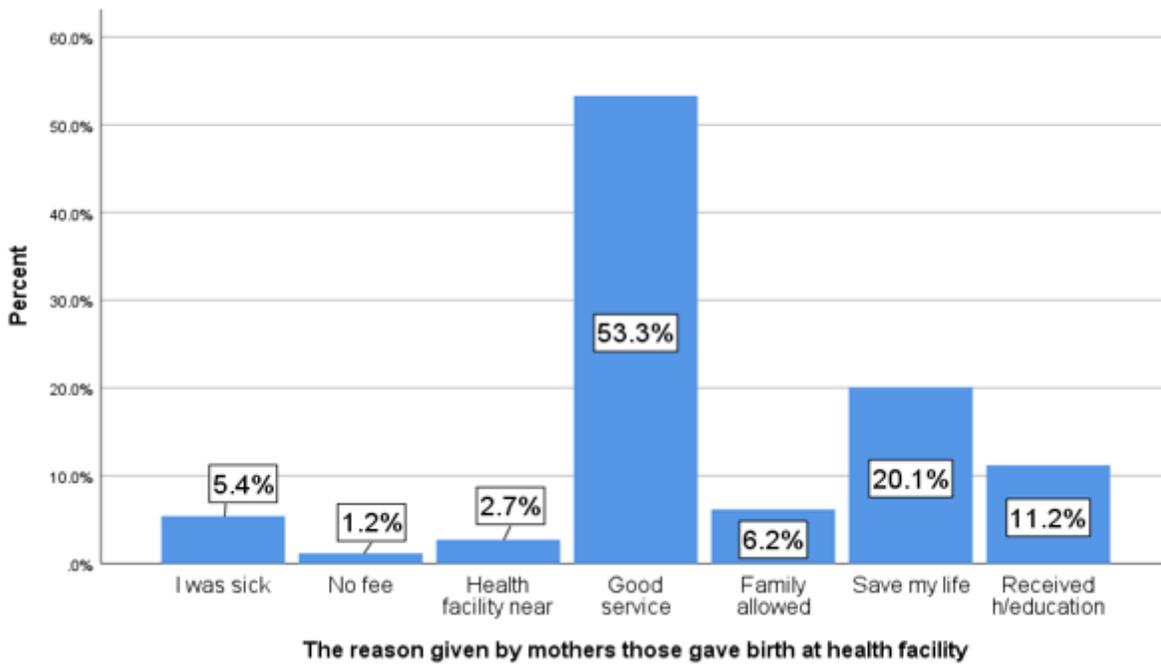


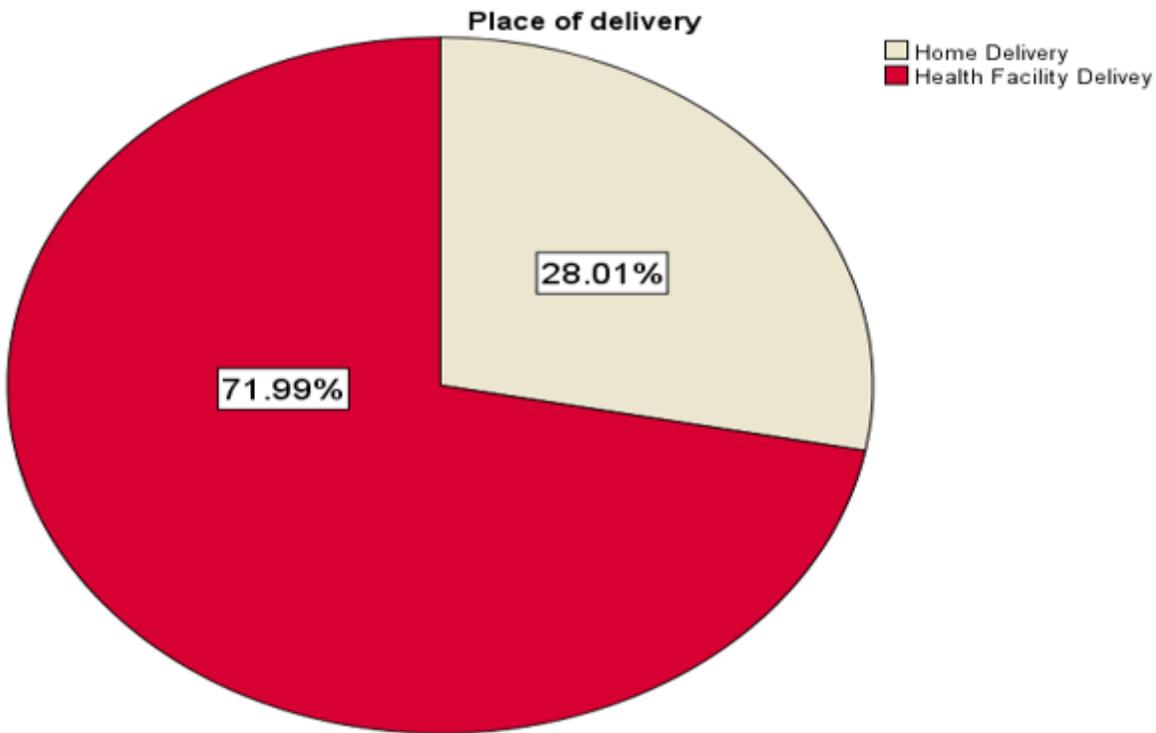
Figure 2

The schematic representation of the sampling procedures



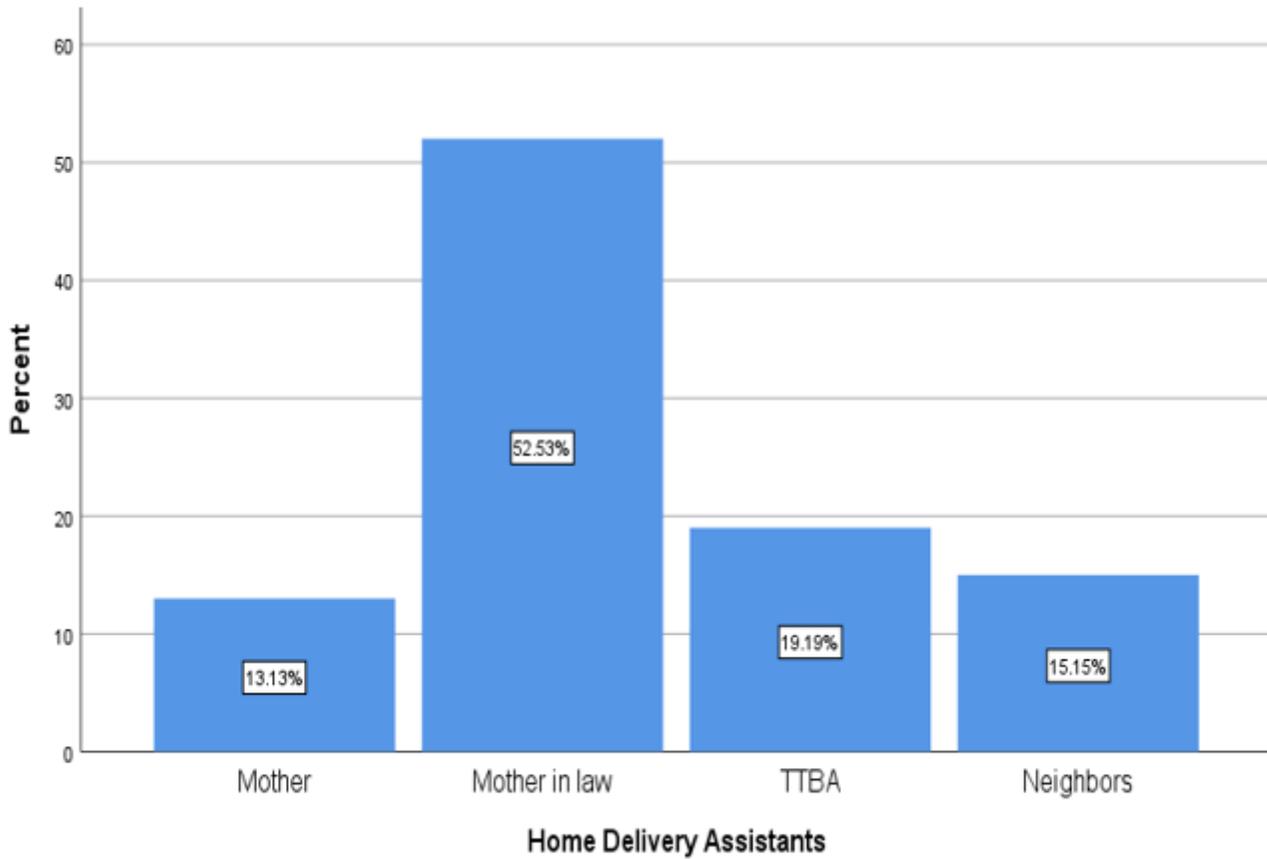
**Figure 3**

The reasons given by the mothers gave birth at health facility of women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018.



**Figure 4**

shows the utilization of institutional delivery service among women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018.



**Figure 5**

Shows who assisted mothers gave birth at home among women of childbearing age in Bule Hora town, West Guji Zone, Oromia regional state, Ethiopia, 2018.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [supplement1.pdf](#)
- [supplement2.pdf](#)