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RESEARCH ARTICLE

PREVALENCE AND FACTORS INFLUENCING INSTITUTIONAL DELIVERY AMONG MOTHERS IN ORMOMIA REGIONAL STATE, GIMBI TOWN, ETHIOPIA, 2016

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ABSTRACT

Ensuring skill delivery attendant at each child birth is the most critical intervention in reducing maternal and neonatal mortality and Morbidity. In Ethiopia, the proportion of births attended by skilled personnel in health facilities is very low. Identifying the level and risk factors is essential for reducing maternal and neonatal mortality and morbidity. Due to this reason this study were conducted to identifying proportion and factors influencing institutional delivery among women who gave birth in the last one year in Gimbi town.

Methods: The study used community based cross-sectional study design. Data for this study was collected using structured questioner from all women who gave birth in the last one year prior to this study and conducted from December-January 2016.

Results: A total of 776 women who gave birth in the last one year of Gimbi town were included in this study in which 635(81.8%) of them gave birth in health facilities. women's age, maternal education, ANC visit, Number of children currently exist, women's attitude towards institutional delivery pregnancy plan and partner's education were associated with utilization of institutional delivery in bivariate analysis. Enhancing women's education to improve their decision making power, need to be the focus area of intervention so that they recognize the vitality of health care service.

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INTRODUCTION

Death of maternal remains a major challenge to health systems globally. According to assessment of trends in maternal death for 181 countries from 1980–2008, it was estimated to be 342,900 maternal deaths globally in 2008 decreasing from 526,300 in 1980. More than 50% of all maternal deaths were only from six countries in 2008 (India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of Congo) (Alemayehu *et al*., 2012). The maternal death has fallen considerably globally; the overall aim of MDG 5 (a 75 % reduction) is very unlikely to be achieved by 2015, unless there are considerable further reductions in the remaining years. It is a well documented fact that most maternal deaths occur due to pregnant related complications during labor, delivery and the immediate postpartum period main medical cause of maternal death (Ronsmans and Graham, 2006). Delivery by skilled birth attendance serves as an indicator of progress towards reducing maternal mortality (Baral *et al*., 2010). Place of delivery is an important factor which affects the health and wellbeing of the mother and the newborn. It's usually a joyful event when women give birth to a baby she wants. However, birth is a serious time for the health of the mother and baby. If situations may arise during labour and delivery not treated properly and effectively can lead to ill health and even death of one or both of them (Sohail and Thomas, 2011; Ronsmans *et al*., 2003). In Ethiopia health institutional delivery service utilization at country level was very low, only 10 % of births were assisted by trained health care provider. Moreover, sixty one percent of mothers mentioned that health facility delivery was not important and thirty percent mentioned that it was not customary to deliver at health facility (Worku *et al*., 2013). A research done in different parts of Ethiopia, found that residential area, antenatal care utilization, maternal education, husband's education, knowledge of mothers on pregnancy and delivery services, husbands and mothers perception towards health institutional delivery, women's decision making power and monthly income were most significant indicators of institutional delivery service utilization (Abera *et al*., 2011; Nigusse *et al*., 2004; Teferra *et al*., 2012; Amano *et al*., 2012). This study, therefore, will try to fill the gaps in understanding the prevalence and factors influencing institutional delivery and status of women using healthcare services for delivery by

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identifying determinants which hinders utilization of health facility for delivery in Gimbi town, WestWelega, Ethiopia.

MATERIALS AND METHODS

Study area

The study was conducted in Gimbi district, Gimbi town, west wellega zone of the Oromia Regional State which is located at a distance of 440 kilometers away from Addis Ababa to the west part of the country. West welega zone has nine woredas in whch Gimbi is the zonal town center for the nine woredas. Gimbi district has 157,072 Population divided in thirty two (32) rural and six (6) the urban kebles in which an estimates of 36,126 are in the reproductive age group (15-49) out of the total population. Gimbi town has 51,384 populations living in six urban kebeles. Population of the urban an estimate of 11,972 is in the childbearing age. Regarding health service distribution, Gimbi town has 2 district hospitals, 2 health centers and 5 higher clinic. According to west welega Zonal Health report in 20011 the antenatal care (ANC), institutional delivery and of postnatal service coverage was 74%, 0.8% and 47% respectively. Gimbi district is a mountainous area with full of ups and downs topography and it covers 113,818 hectare of land area. The main crop of the area is coffee. There are three agro-ecological zones in the district in a range of 1100-2100 meter altitude. The majority classified (72%) as midland, 18.75% as high land and the rest as low land.

Study design and period

A population based cross sectional study was conducted from December-January 2016 among women who gave birth in the last one year before study in Gimbi town Oromia region

Source Population

All women of childbearing age (15- 49 years) who gave birth in the last one year in Gimbi town.

Study population

The study population was women who had history of delivery in the last one year and, women of childbearing age, who gave birth in the last one year, permanent residents of the study area, and willing to participate in the study at the time of the survey in selected kebeles of Gimbi town were included in this study.

Sample seize determination

Total sample size for the study was calculated using the general formula of single population proportion, assuming that 2% margin of error and 10% non-responses rate as shown below.

The sample size for proportion of institutional delivery

$$n= (z_{\alpha/2})^2 * p*(1-p) \over d^2$$

Prevalence of delivery in health facility or assisted by skilled health profession was estimate to be 8.0% in Oromia regional state according to EDHS 2011 (Addis and Meaza, 2012)

P=8

Z=1.96 which is corresponding confidence coefficient of the 95% CI estimate
d=0.02.

$$n=\frac{(1.96)2*(0.08)*(0.92)}{(0.02)^2}$$

n=706.56+10% non-respondent rate

n=776 total sample size

Sampling procedures

Systematic simple random sampling method was employed in order to select a representative sample of respondents from the study population. Using the previous data of the zonal health bureau each house hold was traced through the Health Extension workers and health army of each Keble. The entire five Keble were used for the main study and according to each Keble population size the total sample size was proportionally allocated in order to fulfill the required sample size. Total delivery in the entire six Keble in the last one year was 1862 and sampling frame which in enlists all the eligible study subject was prepared. Then the study participants were selected from the sampling frame using simple randomly sampling method.

Data collection procedure and instrument

A one weak training on interviewing technique and questionnaire administration was given to the data collectors and supervisors. To improve the quality of data, pre tested structured questionnaire was employed to obtain the relevant information. Nine health extension workers and five community health army who were fluent in Afaan Oromo and Amharic from their own Keble collected the data. Face to face interview technique was used in order to collect the data. The administered questioners were prepared in English and then translated to Afaan Oromo the questioners comprises of close ended questions. Two health officer supervisors were involved in the study. Supervisors were followed data collection procedure throughout by offering help and correction.

Definition of variables

Institutional Delivery: delivery attended by health professional at health facilities.

Home delivery: Any child delivery that occur at home attended by health professional or non professional.

Family: For this study only immediate family members i.e. parent and their children are referred as family.

Urban: Are localities in which urban Keble administration that have 1000 or more persons whose inhabitants are primarily engaged in non agricultural activities are identified as towns.

Skilled attendant: Doctors, Midwifes, Nurses Auxiliary Midwives, who undergo formal education in educational program, and successfully completed the qualification to be registered and legally licensed to practice midwifrey

Data quality management

The quality of data was assured by using properly designed and per-tested questionnaire, proper training of the

interviewers and supervisors on data collection procedures, regular follow up and was made by supervisors and principal investigator to monitor quality of the data collection process. Furthermore, every day the questioner was reviewed and checked for completeness, accuracy and clarity' and relevance by the supervisors and principal investigator and necessary feedback offered to the data collectors in the morning before actual procedure.

Data processing and analysis

Each questioner was checked visually for completeness. The data entered using EPI INFO version 3.51 and export to SPSS for window version 20 statistical software packages for data clearing and analysis. After data was entered cleaning was done by going back to the hard copies of the questioners. Frequency and measure of variation were used to describe the study population in relation to socio demographic and other relevant variables. Percentage of women who received delivery services from health institution and factors that are associated with utilization of delver services were determined by cross-tabulation and logistic regression analysis. The data was summarized and presented by frequency table and summary static, tables other summary measures. The degree of association between dependent and independent variables was assessed using logistic regression, bivariate and multivariate analysis techniques, odds ratio with 95% confidence intervals were calculated.

RESULTS

Socio-demographic characteristics

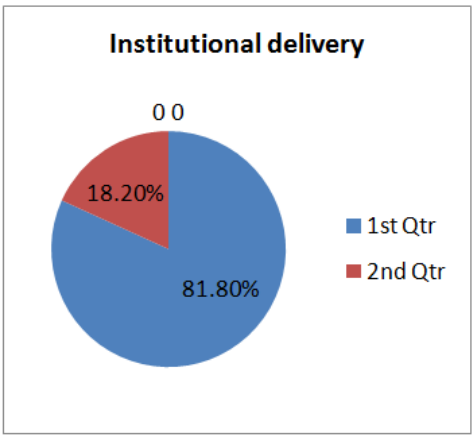
Out of 776 study participants initially sampled in the study, 776 have participated in the study making a response rate of 100%. The participant's ages ranged from 15-49 years with mean and standard deviation age of 24.98+7.2. Most of the participant aged from 21-39(85.6%). Majorities (50.5%) of the respondent were Oromo, and followed by Amhara 19.8% by ethnicity. Regarding educational status of the participants 238 (30.5%) illiterate, never been engaged to formal school but can read and write. Concerning occupation status of the study participants ¾ that is 678(87%) were house wife. When coming to the participants monthly House Hold income rich group 214 (28%), middle income group 200 (26.3%) poor 163 (21.3%), poorest 187 (24.5%). Regarding decision making power on place of delivery those who said both of count constitute the highest number 490(64%) from the total participants (Table 1)

Reproductive health Practice of women who gave birth in the last one year in Gimbi Town

Of the total of 776 participants of the study 635(81.8%) delivered in the health facility and 141(18.2%) delivered at home. Six hundred twenty-two (622) or 89.8% of the participants had attended antenatal care (ANC) follow up at least once. Of the total, 250(40.3%) attended twice, 214(34.3%) attended three times, 104(16.7%) once and 54(9%) attended ANC four and above. Among those delivered at home 10(7.6), were attended by TTBA.4 (3.5%), by HEW.10 (7.5%) by their own mother 5(3.8%) by husbands mother, 104(78.4%) by their relatives. out of the 776 participants of the study 708(91.2%) have information on pregnancy related complecation and 68(8.8%) has no information.

Table 1. Socio Demographic characteristics of the respondents who gave birth in the last one year in West wellega, Gimbi town, 2016 (N=776)

Variables	Frequency	Percentage %
Age		
<20	74	9.6
21-29	271	34.9
30-39	400	51.6
40-49	31	3.9
Ethnic		
Oromo	392	50.5
Tigre	86	11.1
Amhara	154	19.8
Gurage	79	10.2
Other	65	8.4
Religion		
Protestant	342	44.2
Orthodox	319	41.2
Muslim	86	11.1
Catholic	21	2.7
Other	8	0.8
Marital status		
Single	6	0.8
Married	659	84.9
unmarried	12	1.6
Divorced	95	12.2
Widowed	4	0.5
Maternal education		
Illiterate but can read and write	238	30.7
1-6	288	37.1
7-8	131	16.9
9-10	84	10.8
TEVT/Preparatory	17	2.2
1^{ST} degree above	18	2.3
HH Income		
Poorest(100-870)	187	24.5
Poor(871-999)	175	21.3
Middle(1000-1130)	200	26.2
Rich(>1131)	214	28.0
Decision making		
Both of us	490	63.1
My husband	238	30.7
Myself	45	5.8
My family	2	0.3
My mother	1	0.1



Finger 1. Distribution of institutional delivery of women in Gimbi town 2016

Out of the total, about 82.4% of the participant started their follow up visit for ANC in the first three of moths of their pregnancy. About17.4% started in their 4-6 month and the rest is in their 7-9 months. Among the total of the study partcipant105 (13.9%) have one child, 210 (27.7%) have two, 222(29.3%) have three and 221(29.2%) have four children. Out of the total respondent 35(6.0%) experienced abortion and 41(7.2%) experienced stile birth.

Table 2. Reproductive health Practice among women who gave birth in the last one year in Gimbi Town, 2016

Variables	Frequency	Percentage %
Institutional delivery		
Yes	635	81,8
No	141	18.2
Women who had received ANC	622	80.2%
Number of visit		
One	104	16.7
Two	250	40.3
Three	214	34.3
4 and above	54	8.7
TTBA	9	6.8
TBA	1	0.8
HEW	4	4.5
My mother	10	3.5
Husband mother	5	7.5
Relatives	104	78.4
Knowledge on pregnancy related problem		
yes	708	91.2
No	68	8.8
Experience of abortion		
No	546	78.0
Yes	35	5.0
No reaction	119	17.0
Experience of stillbirth		
No	735	94.7
yes	41	5.3
Number of pregnancy		
One	128	16.4
Two	211	27.2
Three	232	30.0
>Four	205	26.4
Gestation at first ANC visit		
1-3month	562	72.4
4-6 month	160	20.6
7-9 month	54	7.0
Current number of children		
One	110	14.2
Two	214	27.6
Three	226	29.1
>four	226	29.1

Table 3. Socio demographic and reproductive health Factors associated with institutional delivery service by women who gave birth in the last one year in Gimbi Town, 2016

Variable	Place of delivery		COR(95%CI)	AOR(95%CI)
	Home delivery	Institution delivery		
Women's Age				
<20	14(18.9%)	60(81.1%)	1.00	1.00
21-29	46(17.0%)	225(83.0%)	4.898(1.945,12.334)*	.974(.227,4.182)
30-39	76(19.0%)	324(81.0%)	5.590(2.552,12.247)**	1.395(.405,4.795)
40-49	16(53.3%)	14(46.7%)	4.872(2.280,10.413)**	1.506(.488,4.645)
Maternal education				
illiterate	41(50.0%)	41(50.0%)	1.00	1.00
literate	112(16.1%)	582(83.9%)	5.196(3.223,8.379)**	.244(.127,4.70)
ANC visit				
No	70(37.2%)	118(62.8%)	100	1.00
Yes	83(14.1%)	505(85.9%)	0 .277(.190, .403)*	3.155(2.065,4.821)**
Decision-making				
Both of us	62(12.7%)	428(87.3%)	1.00	1.00
My husband	68(28.6%)	170(71.4%)	0.814(.083.963)*	0.623(.218,1.782)
Myself	17(50.0%)	17(50.0%)	0.333(031,3.534)	2.455(1.505,4.005)**
Birth order				
First	21(20.4%)	82(79.6%)	1.00	1.00
Second	30(14.0%)	184(86.0%)	1.122(.632,1.991)*	0.126(.005,3.021)
Third	48(21.1%)	180(78.9%)	1.762(1.071,2.899)*	0.950(.043,20.778)
Fourth &above	50(22.3%)	174(77.7%)	1.078(.689,1.686)	0.518(.042,6.337)
Attitude towards ID				
V .good	4(80.0%)	6(60.0%)	1.00	1.00
Good	2(4.2%)	469(95.8%)	.187(013,2.664)	2.714(1.204,612.312)*
Bad	144(20.1%)	572(79.9%)	17.250(2.198,135.392)*	4.470(.434,4.604)
The last pregnancy plan				
NO	137(22.8%)	463(77.2%)	1.00	1.00
Yes	16(9.1%)	160(90.9%)	2.853(1.635,4980)*	1.861(.953,3.635)

*Statically significant, AOR=1.00 is reference

Factors associated with institutional delivery

The various factors associated with utilization of institutional delivery service are shown in Table 3 in the bivariate analysis; women's age, maternal education, ANC visit, knowledge birth related complication, Number of children currently exist, distance from health facility attitude towards institutional delivery last pregnancy planed, partner's education were significantly associated with utilization of institutional delivery service, whereas past history of abortion availability and price of transportation were not associated with institutional delivery service utilization. Maternal age and maternal education was a strong predictor of utilization institutional delivery. Mothers whose age was 30-39 years was five times more likely to delivery at health institution when compared with mother whose age was lessthan 20. (COR=5.590, 95% CI=2.552, 12.247).

Mothers who were literate were more likely to deliver in health institution than illiterate mothers. (COR=5.196, 95%CI= (3.223, 8.379**).** Number of ANC visit made was also another factor which associated with utilization of institutional delivery. Mothers who made ANC visit during their pregnancy were more likely to deliver at health facility than those who did not visit health facility for ANC follow up (COR= .277, 95%CI=.190,.403). Similarly, decision making power associated with institutional delivery, (COR=.814, 95%CI=.083.963), mother's knowledge of pregnancy related problem, (COR=.541, .95%CI=.311, .943), Number of children currently existed (COR= 1.901, 95%CI=1.14, 4, 3157) birth order (COR=1.762, 95%CI=1.071, 2.899), women's attitude towards intuitional delivery (COR=17.250, 95%CI= 2.19,135.392) pregnancy plan (COR=2.853, 95%CI=1.635, 4.980) and partners education (COR=.431, 95%CI=.221, .684) were positive predictor of the institutional delivery and showed association in bivariate analysis. In multivariate analysis ANC visit decision making power on place of delivery and women's attitude towards institutional delivery showed statistically significant association.

DISCUSSION

This study examined the proportion and factors influence of institutional delivery among the women who had deliver in the last 12 month in Gimbi town. The result reveled that out of 776 of women who participated in the study and interviewed 635(81.2%) were delivered at health institution in town while 141 (18.8 %) of the women delivery at home. This finding is consistent with the study done in Bair dare city which is 78.8% (Gedefaw *et al*., 2014), Addis Ababa city administration 82.3% (Yared and Asnakech, 2002), EDHS of women gave in birth in health institution but this study higher when compared with institutional delivery services use among urban mothers at national and Oromia regional state. This may be occurred due to different reason. The first reason could be the time variation between the EDHS 2011 (Ahmed Abdela, 2010) and the time this study conducted, urbanizations and the opportunity comes with urbanizations could be another reason for the achievement because in context of urbanization information availability, service accessibility is much better than the rural area. The contribution of urban health extension program, their controlling mechanism to have ANC follow up and to deliver at health facility to make home delivery zero in the Keble under your catchment area and the computation between one Keble health extension worker in order to win the reward is taking leading portion The other reason could be it's in the time of free delivery service at all levels of health facilities and this makes prevalence of home delivery less in this study when compared to the findings from other developing counters like Malawi (Baral *et al*., 2010) Nepal Zaria (Ronsmans *et al*., 2003), Northern Nigeria (Moore *et al*., 2011), Pakistan (Sohail and Thomas, 2011) and Eastern Burma (Tsinuel and Hailu, 2004). Also this finding has low prevalence when compared with the national and regional proportion of home delivery and other studies done in Ethiopia (Tsinuel and Hailu, 2004; Yalem Tsegaye, 2010; Ewnetu and Dayan, 2015). Women age, maternal education, ANC visit, Decision making power pregnancy related complication knowledge, parity birth order women's attitude towards institutional delver planed pregnancy, and partner's education were associated with institutional delivery in bivariate analysis at a p-value<0.05 were significantly associated. However, when included in the multivariate analysis to determine the factors associated with institutional delivery some of the variable was not statically associated but some were associated. Among those associated, ANC visit, Decision making power, women's attitudes towards intuitional delivery were found to be statistically associated with institutional delver while age at delivery, maternal education, parity and birth order were not statically associated. In contrary to this study, the study done in done in sub-Saharan Africa indicated that, women age 20-24 is approximately1.6 times more likely to deliver at health facilities than women age 45-49. The EDHS (Ahmed Abdela, 2010) also point out that those mothers who are younger than 35 years old are more likely to deliver at health institution than those who are older. In addition to the idea mentioned above, much study conducted in Africa (Pembe *et al*., 2009; Tsinuel and Hailu, 2004; Yalem Tsegaye, 2010; Ewnetu and Dayan, 2015; Bicego *et al*., 1995) and in Ethiopia (Alemayehu *et al*., 2012; Worku *et al*., 2013; Abera *et al*., 2011; Nigusse *et al*., 2004; Teferra *et al*., 2012; Amano *et al*., 2012; Gedefaw *et al*., 2014; Yared and Asnakech, 2002) confirms that mother's who are educated and access to information deliver in health facilities than those who are not educated and don't have access argued that better educated women are more aware of health problems, more close to information, know more about the availability of health service and use this more effectively to maintain or to achieve good health status beside the Various studies finding also showed that more educated women are more likely to delivery in health facilities than not educated. The study conducted in Ethiopia, in Bahirdar (Gedefaw *et al*., 2014) also showed that mothers with primary and secondary education was 4.7 times more likely to give birth in health institution than illiterate mothers and the study in conducted in Bangladesh (Anwar *et al*., 2008) also confirmed for the same result. But in the case of this study mother's education showed significant association in crude analysis but did not show statically significant association when adjusted with other variables in multivariate logistic analysis. In this study ANC visit and decision making power and women's attitude towards institutional delivery were determinant factors of institutional delivery service use. This study revealed that 85.9% attend ANC visit out of the 776 study participants. Pervious study conducted in Ethiopia (7-11) reviled that receiving early and on time ANC advice prepare mothers for child birth and encourage them to give birth in health institution and in this study 85.9% received their ANC visit at their which contributed to the achievements of institutional delivery in the study area. The women who attend their ANC were 3.2 times more likely to give birth at health institution when compared

with women who did not attend ANC. (AOR=3.155, 95% CI=2.065-4.821).

The study conducted in North west of Ethiopia (Teferra *et al*., 2012) revealed that 87.1% women have had at least one ANC visit during pregnancy time in her last index .how ever a considerable number do not make the minimal number of visit (four) recommended by the WHO. The finding of this study is comparable with findings of studies conducted in Jimma town (90%) (Tsinuel and Hailu, 2004), in Jijiga town (82%) (Amano *et al*., 2012) And in Arsi Zone (86%) (Abera *et al*., 2011) Respectively. According to the demographic health survey (EDHS 2011) (), 76% of women in urban area used ANC Gimbi Town ANC use may be due to the fact that it is urban were they do get information and health care services nearby. Above all the commitments of the urban health extension workers take the major part. The other variable which is the predictor of maternal health care utilization is a decisions making power of women. Women who had decision making power is two times more likely to deliver at health facilities than the women who do not have the power (AOR= 2.455, 95%, CI=1.505 4.005) and this result were similar with the other results which maintain health care utilization. It is because of that the women in urban Setting are exposed to information and they do have better educational back ground than the women in the rural setting considered having greater awareness of the existences maternal health care services and befitting in use of such services. Women who had better education opportunity are empowered and have greater confidence and capability to make decision to use modern health care services for themselves and for their children. Therefore in this study decision making power is one of the variables which show statically significant association with institutional delivery services utilization. This study show that women attitude towards institutional delivery were independent predictor of institutional delivery services utilization. Women who have good attitude towards institutional delivery were twenty seven times more likely to give birth in the health facility than those who do not have. This result is consistent with the study result conducted in Arab Minch town (Ewnetu and Dayan, 2015). This is could be due to urbanization that the women in the urban have better information regarding the benefits of modern medical treatment and service utilization. In addition to this, mothers in urban area could be autonomous in making decision, having good knowledge of pregnancy and delivery complications and better access to information than the rural. This could bring the behavioral change to motivate them in utilizing all the benefits of health service package come to them and having positive attitude regardless of their being mother. This good attitude influence them mothers in urban area to make effort for their autonomous in making decision, have good knowledge of pregnancy and delivery complications, and better access to information than the rural mothers. The contribution of the urban health extension workers in the achievements of this proportion of institutional delivery is not neglectable.

Utilization of safe deliver services among the study participants, showed that women who live in urban areas were eight times more likely to use the service than their counter parts OR=8.5, 95%CI; (5.2, 13.9). The other predictor was maternal education, women whose educational status was secondary and above secondary were 2.5 and 4.6 times more likely to utilize the service than women who were illiterate {OR (95%CI): 2.5(1.2,5.0) 4.6, (1.7, 12.8), respectively. But there was no significant difference in utilization between those illiterate and who attend primary education. As shown in Table 3, religion had significant association with utilization of safe delivery services. Orthodox Christians and Muslims were less likely to utilize the service than others Christians (protestant, Catholic, Jehovah witness) OR (95%CI):.36, (0.17, 0.79) and 0.31, (0.13, 0.73)}, respectively. Husbands' attitude towards institutional delivery was also associated with utilization of safe delivery service. Women whose husbands' attitudes were negative were less likely to utilize the service OR= 0.11, 95%CI; (0.02, 0.58). Women's decision making power has a significant association with the utilization of service in that those women who were decision maker in their house utilized the service 8 times more likely than the others OR= 7.8, 95%CI; (2.3, 26.5). Respondents' overall attitudes towards danger health problem related to pregnancy and childbirth and safe delivery utilization has significant association with service utilization. Those women who have favorable attitude utilized the service three times more than those who have unfavorable attitude OR=2.8, 95%CI; (1.6, 4.7).

Conclusion

Generally the proportion of institution delivery in the case of Gimbi town is high and very good, but compared with the national and regional estimates, higher proportion of women in the rural area of Gimbi town gave birth at home and this could be due to the distance and un availability of transportation and commitments of health extension workers including the infrastructure. Therefore the needs for improvement to reach the uncovered part and to maximum are important.

Recommendations

Based on the above findings of the study the following recommendations were made:

1. Health service should be involved in promoting ANC attendance and improving the service given during the follow up may be helpful to maximizing the contribution of the follow up in promoting safer pregnancy and childbirth.
2. Relevant stockholders should be involved to promote empowerment of disadvantaged women through integrated activities including girls education will be helpful to enable them to decide by themselves about their practices.
3. IEC activities intervention which focusing on women's close and extended families including the husband and other relatives can be helpful in utilizing these people, so that their influences can be directed in the line of encouraging women to utilize institutional delivery services. this will have a far reaching advantage since the positives impacts of the favorable influences from these people in promoting institutional delivery services utilization will be reflected through the role of these people influences directing the decision making process on matters related to women practices.
4. Reaching out more women in providing relatives information about institutional delivery services might help in promoting utilization of the services.

Ethical Approval and Consent

The study protocol was reviewed and approved by the research and publication office of the HU School of public health and

Addis continental institute of public health. Permission to carry on the study was granted from West welega Zoal Health department and official letter of cooperation was written to worda health bureau. Individual informed verbal consent was obtained after brief explanation of the objectives and benefits of the study to each respondent. To keep privacy each individual was interviewed separately. All the data were kept in locked place only accessed by the principal investigator. The participants were given the full right to refuse from participating in this research.

Consent for publication

Not applicable

Availability of data

The datasets during and/or analyzed during the current study are available from the author.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

Senait Gobena designed the proposal, involved in the supervision of the data collection and did the entry while Tefera Tezera and Tariku Tesfaye completed the analysis. All of the authors have been involved in the write up and approval of the final manuscript.

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REFERRENCES

Abera M, Gebremariam A, Belachew T. 2011. Predictors of safe delivery service utilization in Arsi zone South-East Ethiopia. *Ethiop J Health Sci*., 21:95–106.

Addis A and Meaza D. 2012. Prevalence of institutional delivery and associated factors in Dodota Woreda (district), Oromia regional state, Ethiopia, *Reproducive Health-Journal,* 9(33):1-7.

Ahmed Abdela. 2010. Maternal mortality trend in Ethiopia. *Eth J Health Devt*., 24:115-122

Alemayehu S, Fekadu M and Solomon M. 2012. Institutional delivery service utilization and associated factors among mothers who gave birth in the last 12 months in Sekela District, North West of Ethiopia: A community - based cross sectional study. *BMC Pregnancy and Childbirth*, 12:74.

Amano A, Gebeyehu A, Birhanu Z. 2012. Institutional delivery service utilization in Munisa Woreda, South East Ethiopia: a community based cross sectional study. *BMC Pregnancy Childbirth*, 12:105.

Anwar, I., M Sami, N Akhtar, ME Chowdhurw, U Salma, M Raman and M Koblinsky. 2008. Inequity in maternal health services: Evidence from home based skilled birth attendant programs in Bangladesh. *Bulletin WHO*, 86: 252-259

Baral YR, Lyons K, Skinner J, van Teijlingen ER. 2010. Determinants of skilled birth attendants for delivery in *Nepal Kathmandu University Medical Journal*, 8: 525–331.

Bicego G, Curtis S, Raggers H, Kapiga S and Ngallaba S. 1995. Sunve survey on adult and childhood mortality, Tanzania.

Bolam A, Manandhar DS, Shrestha P, Elis M, Malla K and Costello AM. 1998. Factors affecting home delivery in the Kathmandu Valley, Nepal. 13(2):152-8.

Ewnetu F and Dayan A. 2015. Magnitude and determinants of maternal health care services utilization in Arba Minch Town. Southern Ethiopia, 3(3):339-343

Gedefaw A, Muluken A and Tesfaye S. 2014. Factors associated with Institutional delivery service utilization among mothers in Bahir Dar City administration, Amhara region, 11(22): 1-15.

Moore BM, Alex-Hart BA, George IO. 2011. Utilization of Health Care Services by Pregnant Mothers during Delivery: A community based study in Nigeria. *Journal of Medicine and Medical Science*, 2(5):864-867

Nigusse M, HaileMarian D, Mitike G. 2004. Assessment of safe delivery service utilization among women of childbearing age in North Gondor Zone. *Ethiop J Health Dev*., 18(3):145–52.

Pembe AB, Urassa DP, Carlstedt A, Lindmark G, Nystrom L, Darj E. 2009. Rural Tanzanian women's awareness of danger signs of obstetric complications. *BMC Pregnancy Childbirth*, 9(12):1-18

Ronsmans C, Etard JF, Walraven G, Høj L, Dumont A, *et al*. 2003. Maternal mortality and access to obstetric services in West Africa. *Tropical Medicine and International Health*, 8: 940–948.

Ronsmans C. and Graham WJ. 2006. Maternal mortality: who, when, where and why. *Lancet*, 368:1189–200.

Sohail A. and Thomas WC. 2011. Determinants of institutional delivery in rural Jhang, Pakistan. *Agha and Carton International Journal for Equity in Health*, 10:31.

Teferra AS, Alemu FM, Woldeyohannes SM. 2012. Institutional delivery service utilization and associated factors among mothers who gave birth in the last12 months in Sekela district, northwest of Ethiopia: a community – based cross sectional study. *BMC Pregnancy Childbirth*, 12:74.

Tsinuel G and Hailu N. 2004. Traditional newborn care in Jimma Town, Southwest Ethiopia. 16:19-27.

Worku A, Jemal M and Gedefaw A. 2013. Institutional delivery service utilization in Woldia, Ethiopia. *Science Journal of Public Health*, 1: 18-23

World Health Organization, 2010. Media center On Maternal mortality.

Yalem Tsegaye. 2010. Detrminats of ANC, institutional delvery and skilled birth attendat utilization in samera Sahari district, Tigray, Ethiopia, Master Thesis in public health:12-14(http://www.biomedecteral.com/147-2393/9/43).accessed on 11 July 2016.

Yared M, Asnakech M. 2002. Utlization of maternal health care services in Ethiopia, Ethiopian health and Nutrition Research Institute: 1-25.

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