

Assessment of Skilled Birth Attendant Utilization Among Women Of Child Bearing Age (15-49)' in Yirgacheffe Town, Gedeo Zone, South Ethiopia, 2011/12

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Abstract: *Skilled attendant for every pregnant woman during childbirth is the most critical intervention for improving maternal and child health. Every day, at least 1,600 women die worldwide from the complications of pregnancy and childbirth, 90% of which occurring in Asia and sub-Saharan Africa. So long as the Ethiopia situation is concerned, maternal and infant mortality as well as morbidity levels are among the highest in the world. To assess utilization of skilled birth attendant at delivery, among mothers who gave birth in the past two Years prior to the survey in Yirgacheffe town. A community based cross-sectional study was conducted among women residing in Yirgacheffe town. After establishing the sampling frame of each household, systematic random sampling technique was used. Crude and adjusted Odds ratios were performed for the association between variables and stepwise multiple logistic regressions were used to identify factors that affect utilization of skilled birth attendant. A total of 440 women were included in the study. 58.9% of the women utilize skilled birth attendant during delivery. Births to women with primary education are two times more likely (OR=2.3 and 95% CI=1.24-4.2), and births to women with secondary and above education are four times more likely (OR=3.6 and 95%CI=1.5-8.4) to utilize SDA as compared to illiterate women. Women who have ANC visits (OR=16.7 and (95%CI= 8.2, 33.89), more likely utilized SDA than who did not visit. The study finding revealed that utilization of SDA was more than half, still there is a gap between users and providers. Consequently, Community members should be discouraged harmful traditional and usual practices that hinder health facility delivery care utilization.*

Keywords: Skilled delivery attendant (SDA), maternal and child health, maternal mortality rate, home delivery.

1. Introduction

Maternal health is the complete physical, social and psychological well-being of a woman of reproductive age. Addressing maternal health encompasses social, cultural, health systems and health policy factors. Maternal mortality and morbidity is the most important indicator of maternal health status (1).

Moreover, providing skilled care at birth goes hand in hand with the MDG 4 strongly influenced to reduce child mortality, particularly neonatal mortality. Nearly 3.4 million of the 8 million infant deaths each year occur within the first week of life and are often due to a lack of or inappropriate care during pregnancy, delivery and the post-partum period (2). In addition, in the developing world, complications from HIV/AIDS and malaria are increasingly becoming indirect causes of maternal deaths and morbidity (2).

Skilled attendance at all births is considered to be the single most critical intervention for ensuring safe motherhood, and has often been used as a proxy indicator for measuring effectiveness of interventions intended to reduce maternal mortality including MDG (3).

2. Methods and Materials

The study was conducted in Yirgacheffe town from September, 2011 to May, 2012, which is located about 395 Kms to the south of Addis Ababa, the capital city of Ethiopia. The Gedeo zone has six Woredas and two towns

namely, Dilla and Yirgacheffe. In the Yirgacheffe town, there are three kebeles, with total population of 18,375.

A community based cross-sectional design was conducted. Systematic random sampling techniques were used to identify the list of households in each kebeles. Women who had given birth in the last two years prior to the survey were included. Data was collected by using adapted interviewer questionnaires, which was adapted from different literature reviews. After the pretest, necessary correction was made based on the feedback. Five diploma UHEWs (Data collectors) and two BSc health professional (supervisors) were trained for three days by the principal investigator. The collected data were analyzed using SPSS version 16; to describe the study subject's frequencies & percentages were calculated. Consequently, Bivariate & Multivariate analyses were used. The survey was conducted after approval by the IRB (Institutional Review board) school of nursing and midwifery, collage of health science, AAU. Permission letter was also obtained from the concerned bodies of Yirgacheffe town Administration bureaus and from each respective kebele's Administration to get collaboration. Verbal consent was obtained from each individual respondent during data collection.

3. Results

Socio demographic characteristics of study population

A total of 440 women reproductive age group were interviewed for the survey; 24(5.5%) were less than the age

of 20 years; 366(83.2%) between the age of 20 and 34 years (table 1).

Table 1: Socio-demographic characteristics of women in Yirgacheffe town, Gedeo zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Age		
Mean + SD	27+ 5.2	
15-19	24	5.5
20-34	366	83.2
35-49	50	11.4
Marital status		
Married	440	100
Educational status		
Illiterate	105	23.9
Read and write	58	13.2
Primary Education (1- 8)	185	42.0
Secondary education & above (9-12+)	92	20.9
Monthly Income in Birr		
<150 Birr	34	7.7
150-499 Birr	126	28.6
>= 500 Birr	280	63.6
Husband's Education Status		
Illiterate	14	3.2
Read and write	36	8.2
primary Education (1- 8)	179	40.7
Secondary education & above (9-12+)	211	48

Previous Obstetric History and ANC Experience of the respondents

Among 440 respondents, 205(46.6%) were first married below the age of 18 years and the rest 235(53.4%) women >=18 years (table 2).

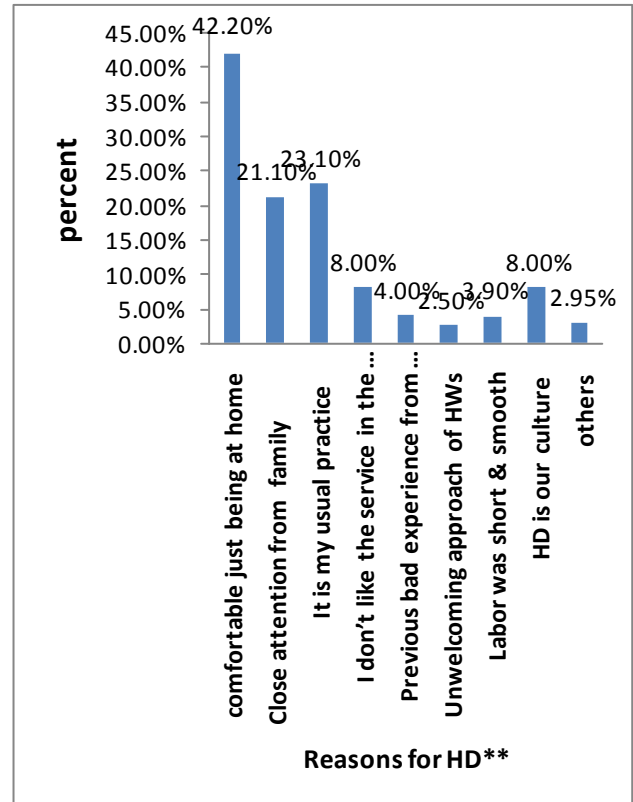
Table 2: Previous obstetric history and ANC visits of women in Yirgacheffe town, Gedio Zone, SNNPR, Ethiopia, 2011/12 (n=440)

Variables	Number	Percent
Gravidity(Total No. of pregnancy)		
1	127	28.9
2-4	245	55.7
>=5	68	15.5
Parity(Total No. of births)		
0-1	127	28.9
2-4	245	55.7
>=5	68	15.5
Attended ANC follow up for the last pregnancy		
Yes	358	81.4
No	82	18.6
During ANC follow up got any information regarding pregnancy and delivery complications (n=358)		
Yes	302	68.6
No	20	4.5
I do not know	36	8.2
Informed about where to deliver (n=358)		
Yes	333	93.0
No	25	7.0

Proportion of mothers attended by skilled birth attendant

Among the total 440 interviewed 241(54.8%) were having institutional delivery and that of skilled delivery attendant was 58.9% while 199(45.2%) home delivery.

Barriers to utilization of skilled birth attendant (Reasons given for home delivery in figure- 1.)



**=multiple answer

Factors associated with utilization of skilled delivered attendants'

Socio- demographic influencing factors on Utilization of skilled Delivery attendant. Analysis of socio-demographic variables on binary logistic regression showed that, occupation, educational status, monthly income, were all significantly associated with utilization of skilled delivery attendant at p<0.05. But by applying Multiple Logistic regression, when they were adjusted for other socio demographic variables, only educational status and occupation of the women were significantly associated with utilization of skilled delivery attendant.(p< 0.05) (Table 3).

Table 3: By applying Bivariate and Multivariate Analysis on socio demographic factors influencing utilization of skilled birth attendant adjusted for Socio- demographic variables, in Yirgacheffe town, Gedeo zone, SNNPR, Ethiopia, 2011/12 (N=440).

Variables	Utilization of skilled birth attendant within the previous 24 months				
	YES	NO	C OR (95%CI)	p value	AOR (95% CI)
Age				0.474	0.21
15-19	12(2.7%)	12(2.7%)	1		1
20-34	220(50.0%)	146(33.2%)	1.51(0.66-3.45)		0.98(0.4-2.5)
35-49	27(6.1%)	23(5.2%)	1.17(0.44- 3.11)		0.53(0.2-1.6)
Occupation				0.02	0.14
Housewife	151(34.3%)	125(28.4%)	0.92(0.6-1.5)		1.4(0.8-2.33)
Private Employee	9(2.0%)	6(1.4%)	1.14(0.4-3.45)		0.7(0.22-2.44)
Gov. Employe.	40(9.1%)	5(1.1%)	6.1(2.23-16.71)		3.6(1.5-8.4)
Private business	59(13.4%)	45(10.2%)	1		1
Educational status				0.00	0.02
Illiterate	36(8.2%)	69(15.7%)	1		1
Read and write	35(8.0%)	23(5.2%)	2.92(1.5-5.7)		1.9(0.9-4.1)
Primary Education	114(25.9%)	71(16.1%)	3.1(1.87-5.1)		2.3(1.24-4.2)
Secondary education& above	74(16.8%)	18(4.1%)	7.9(4.1-15.2)		3.6(1.5-8.4)
Monthly income in Birr				0.02	0.24
<150ETB	15(3.4%)	19(4.3%)	1		1
150-499ETB	62(14.1%)	64(14.5%)	1.23(0.57-2.63)		0.7(0.3-1.6)
>=500ETB	182(41.4%)	98(22.3%)	2.35(1.15-4.83)		1.04(0.4-2.5)

Previous obstetric history and ANC follow up of women

Crude analysis of previous obstetric history and ANC variables on binary logistic regression showed that, Among the obstetric and ANC variables, age at first pregnancy, women gravidity, parity, ANC use were significantly associated with utilization of skilled delivery attendant at $p < 0.05$.

By applying Multiple Logistic regression, when they were adjusted for other previous obstetric history and ANC follow up variables, only gravidity, parity and ANC follow up of the women were significantly associated with utilization of skilled delivery attendant. ($p < 0.05$)

Table 4: By applying Bivariate And Multivariate Analysis on previous Obstetric Factors and ANC follow up Influencing For Women Utilization Of Skilled Delivery Attendant, in Yirgacheffe town, Ethiopia, 2011/12 (n=440)

Variables	utilization of skilled birth attendant within the previous 24 months			
	Yes	No	C OR (95% p value CI)	A OR (95% CI)
Age at first marriage				0.06
<18	101(23%)	104(23.6%)	1	1
>=18	158(35.9%)	77(17.5%)	1.68(0.96-2.94)	0.52(0.3-0.95)
Age at first Pregnancy				0.02
<18	54(12.3%)	62(14.1%)	1	1
>=18	205(46.6%)	119(27%)	1.97(1.3-3.03)	0.98(0.53-1.84)
Gravidity(Total No. of pregnancy)				0.00
1	77(17.5%)	45(10.2%)	1.71(1.2-2.5)	2.6(1.17-4.45)
2-4	151(34.3%)	89(20.2%)	1.7(1.31-2.21)	2.3(1.41-4.65)
>=5	31(7.0%)	47(10.7%)	1	1
Parity(Total No. of births)				0.00
0-1	77(17.5%)	45(10.2%)	1.71(1.2-2.5)	2.6(1.17-4.45)
2-4	151 (34.3%)	89(20.2%)	1.7(1.31-2.21)	2.3(1.41-4.65)
>=5	31(7.0%)	47(10.7%)	1	1
Received ANC last pregnancy				0.00
Yes	249(56.6%)	109(24.8%)	16.45(8.2-33.1)	16.7(8.2-33.89)
No	10(2.3%)	72(16.4%)	1	1

4. Discussion

The study finding revealed that proportion of institutional delivery was 54.8% and that of skilled delivery attendant was 58.9% and home delivery was 45.2%. The finding is less likely consistent with study conducted in Afar Region, Assayta and Dufti town, 54.2% of the deliveries took place at home, and 45.8% at health institution and in contrast, with the previous studies, home deliveries were 88%, 83%, Butajira, Adamitulu respectively,(4,5). This large difference is explained by the fact that the present study is exclusively urban population based. The urban women tend to have better access to health facilities, education, and information about maternal health care services that showed to have effect on the preference to institutional deliveries. This study found that government employee workers were four times more likely to utilization of skilled delivery attendant than those who had private business. This finding is consistent with other studies, a study done in Rwanda showed that, farmers and manual workers were more likely to deliver at home than women working in professional, technical and management areas(6).

The possible explanation is employment can increase women's economic autonomy and reproductive health status and Government employee women are more likely, raises awareness and provides new ideas, behavior and opportunities through interaction with other people outside the home and community. Gravity is one obstetric variable found to be significantly affecting the utilization of skilled delivery attendant. Women with first pregnancy are three times more likely to utilize skilled delivery attendant as compared to those who are pregnant for ≥ 5 . This finding is consistent with other studies, which indicate that women are more likely to utilize professional assistance for their first births (7, 8, 9). The possible reason, younger women is more likely to accept modern health care as they are likely to have greater experience to modern medicine and have greater amount of schooling than older women. Study in India, revealed that women are more likely to get care for their first delivering than others that follow. This is associated with factors like fear of the unknown or excitement that is probably associated with the first child birth (10).

The current study has revealed that higher birth order mothers are less likely to give birth at HFs compared to those with lower order births. This study consistent with many studies done in Ethiopia and abroad, birth order was found to be an independent determinant for utilization of skilled delivery attendant (7, 11, 12). As birth order increased the chance of giving birth at health institution decreased. A possible explanation for this could be women develop confidence and may believe that modern health care is not as necessary due to the experience, self efficacy and knowledge accumulated from previous pregnancies and births. On the other hand, women who are pregnant for their first child are usually more likely to have difficulties during labor and delivery than women of higher parity, so that they tend to fear home deliveries (10, 13).

The health care that a mother receives during pregnancy and time of delivery is important for the survival and well being of the mother and child (3). In the present study majority

(81.4%) had received prenatal care during the last pregnancy. However, only 56.6% of those who received ANC gave birth at HFs for the respective conception. On the other hand, among the core aims of providing ANC is to promote skilled attendance at birth. This implies that there is still need investigation on the gap between ANC and delivery care utilization which need to be linked to each other. This study showed that women who received prenatal care were more than sixteen times more likely to utilize skilled delivery attendant (SDA) than those who did not. The finding is consistent with many studies conducted elsewhere (7, 14, 15). The importance of ANC follow up in utilization of skilled delivery attendant, may be explained in such a way that, exposure of the women to the health service in general and the information as well as the experiences they have gathered during the follow up in particular, might have influenced them to deliver in HFs. In contrast, a study in Uganda suggested attendance at antenatal care actually may discourage delivery in a health unit; women who were told that their pregnancy is normal see no reason to deliver at the health unit (16).

Based on these findings it can be observed that, even though ANC attendance is important factor which promotes institutional delivery, it is not fully utilized as a conducive opportunity to provide pregnant women with the relevant information about pregnancy and child birth.

5. Conclusion and Recommendations

The study finding revealed that proportion of skilled delivery attendant was fifty eight percent and home delivery was forty five percent. Even though, utilization of SDA was more than fifty percent, still there is a gap between users and providers. This community based study has attempted to identify the extent and factors associated with utilization of skilled attendant at delivery. Consequently, factors influencing women's utilization of skilled delivery attendants were identified.

Health care providers should provide information on risks of pregnancy and labor & delivery of giving birth at home, benefits of giving birth at health facilities, danger signs during pregnancy and labor to mothers, family members and the community and should know their professional duties and responsibilities and respect their clients' duties and responsibilities.

Multi-gravidity, multi-parity and higher maternal age where less likely to utilize SDA implies that these group should be one of the priorities criteria for targeting education campaigns on the benefits of institutional delivery and MCH.

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