



KNOWLEDGE ATTITUDE AND PRACTICE OF MOTHERS IN CHILD
BEARING AGE TOWARDS INSTITUTIONAL DELIVERY IN ADABA TOWN
SOUTHEAST ETHIOPIA

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Abstract

Back Ground: Appropriate delivery care with skills attendant at birth is crucial for both maternal and perinatal health. In addition to professional attention, it is important that mothers deliver their babies in an appropriate setting, where life saving equipment and hygienic conditions can also help reduce the risk of Complications that may cause death or illness to the mother and child.

Objectives: To assess knowledge, attitude and practice of mothers in child bearing age towards institutional delivery in Adaba town, southeast Ethiopia.

Methods and materials: A Community based Cross Sectional Study was conducted from March 15 to March 20. All women of reproductive age group (15-49yrs) were considered as source population. Systematic sampling method was used and data was collected by using structured questionnaires. A study was conducted on 242 women who gave at least one alive birth within five years. The analysis of data was calculated by using scientific calculator and SPSS software. The questionnaires were checked for completeness and consistency through discussion on questionnaire and Prior to applying the total questioner, pretest was done.

Result: The overall practice of institutional delivery of last child in this study was 141(58.3 %). The study revealed that out of 242 mothers in reproductive age group, 212(87.6%) have knowledge and 218(90.1%) have positive attitude to words institutional delivery. Age, marital status, religion, parity, income, ANC follow up and occupation had significant association with institutional delivery.

Conclusion and recommendation: practice of institutional delivery is low in the study area. Religion and cultural practice is one of the major factors that make mothers not to deliver at health institution. From a total of 242 mothers 158 (65.3%) of them have delivered at health institution previously while 84(34.7%) of them have never delivered at health institution before. Most mothers have knowledge and positive attitude of institutional delivery in the study area. Health education program about institutional delivery should be given at ANC follow up since mothers who have ANC follow up were more likely to deliver at health institution than mothers who haven't ANC follow up. Cost of health service should be reduced because income has significant influence on delivery service utilization.

Key words: knowledge, attitude, practice, mothers in child bearing age, institutional delivery.

Background

Maternal mortality remains a major challenge to health system worldwide. According to assessment of trends in maternal mortality for 181 countries from 1980-2008, it was estimated to be 342,900 maternal deaths worldwide in 2008, decreasing from 526,300 in 1980. More than 50% of all maternal deaths were only from six countries in 2008 (India, Nigeria, and Pakistan, Afghanistan, Ethiopia and Democratic Republic of Congo). Worldwide the major causes of maternal mortality are hemorrhage (24%), Infection (15%), unsafe abortion (13%), prolonged labor (12%) and eclampsia (12%). Whereas primary cause of maternal mortality in Africa are hemorrhage (34%), other direct cause (17%), infection (10%), hypertensive disorders (9%), obstructed labor (4%), abortion (4%) and anemia (4%) [8]. Appropriate delivery care with skilled attendant at birth is crucial for both maternal and prenatal health. In addition to professional attention, it is important that mothers deliver their babies in an appropriate setting, where life saving equipment and hygienic condition can also help reduce the risk of complications that may cause death or illness to mother and child [1, 8-10]. Over the past decades, interest has grown to examine influences on care seeking behavior. As cited in the “Three Delays” model, three main inhibitors to health care service utilization exist; the delay in deciding to seek care, the delay in reaching an adequate health care facility and the delay in receiving adequate care. Phase 2 delays may be due to distance home facility, lack of transportation and high cost of travel [2].

One of the objectives of the United Nations Millennium Development Goals (MDG₅) was to reduce MMR by an average of 5.5% every year over the period 1990-2015 by improving quality of skilled care attendance at birth and eradicating extreme poverty. At the global level, MMR decreased by less than 1% per year between 1990 and 2005 for below 5.5% to reach the target of MDG [3, 4]. As Ethiopian EDHS 2011 has shown MMR was 676 per 100,000 live births for the seven year period preceding the survey which is not significantly different from EDHS 2005

Report (673 per 100,000 live birth) [5]. The proportion of women who delivered with the assistance of a skilled birth attendant is one of the indicators in meeting the fifteen MDGs. In almost all countries where health professionals attend more than 80% deliveries, MMR is below 200 per 100,000 live births. However, birth with skilled attendance was low in Southern Asia (40%) and SSA (47%), the two regions with the greatest number of maternal deaths [6].

According to EDHS 2011 and 2005, the proportion of women utilizing safe delivery service in the country in general and in Oromia in particular is very low. About 30% of the eligible mothers received ANC service and only 8% of the mothers delivered in health facilities in the region [7]. Therefore, this study conducted to evaluate knowledge, attitude and practice of mothers in child bearing age towards institutional delivery in southeast Ethiopia.

Methods and materials

Study design, area and period

A community based cross sectional study was conducted from March 15 to June 15 in Adaba town, southeast of Ethiopia. The town is situated at about 345km to the south east of Addis Ababa, along Addis Ababa-Robe-Goba road and 100km from zone capital, Shashemene. The total area of the town is 1288.7 hectare. Administratively the town is structured in two kebeles and two peasant administration kebeles, Furunna-melka and Ejersa-chumlugo. The total number of population is 26,418, Out of which 12,367 are male and 13,151 females. Among the different ethnic group in Adaba Oromo, Amhara, Gurage, Tigrae and others, Oromo is the dominant ethnic group in the town. Among the different regions Muslim, orthodox, protestant, catholic and others, majority are Muslim followers. The weather condition of the town is tropical. The average temperature of the town is 10-25⁰c. Concerning on health facilities, the town has one government health center, three private clinics, four private pharmacies and three private diagnostic laboratories.

Sample size determination

According to study conducted on prevalence of mother toward institutional delivery in child bearing age in Dodota woreda, Oromia region, Ethiopia.2011. The result [practice] was 18.2% (26). Then assuming that mothers in child bearing age have practice towards institutional delivery is 18.2%, using 95% confidence interval and 5% tolerable error was considered. Adding 10% non-response rate the final sample size calculated to be 242.

Sampling Technique

A systematic sampling selection method was used during the study. Initially all households of the town were numbered, and then every 15th (the interval) which was calculated by total number of house hold 3774 divided by the sample size 242 were selected. The first house was selected by using lottery method. When the 15th mother was absent we used the next house (15th +1), and then the next sample was from last house plus the interval [(15th+1) +15th] and if there are two feasible mothers we selected them by lottery method.

Data collection tool and techniques

Questionnaire was developed by using questionnaire developing methods and previously developed questionnaires on KAP as reference and guiding tool. Data was collected using pre tested and structured questions by five public health officer students using interview administered questionnaires and the data was collected for five days.

Data quality control

The questionnaires were checked for completeness and consistency through discussion on questionnaire by us and interview was held among ourselves before active data collection was started. We discussed about interview techniques and make sure that all member of data collectors master interview techniques. Prior to applying the total questioner, pretest was done which was not included in sample size by taking 5% of the sample size. We coded the

questionnaire by a total of five separate types of codes. We carefully and meticulously collected, entered and analyzed the data. Interviewers checked whether the questioners were filled completely or not before finishing each interview. We were reviewed the data during the data analysis stage to check whether data was complete and consistent. After careful evaluation data inconsistent and missing was excluded.

Data analysis procedure

The collected data was checked for its completeness, consistency and accuracy. The data was analyzed by using SPSS 20 software then the analyzed data was presented with tables, frequency and proportions in respective variables and objectives. We used chi-square to assess the association between dependent and independent variables.

Operational definition

Institutional deliveries: are deliveries that take place at health institution (hospital, health center, and private clinic and health posts) and were assisted by medically trained professionals (such as medical doctors, health officers, nurses, midwives) and health extension workers.

Antenatal care: is a health care and education provided to pregnant women in the health institution from conception to onset of labor by health professional at least one visit.

Safe delivery: is a delivery that takes place at health institution with clean procedure and assisted by trained health professionals and results in minimal morbidity and mortality for the mother and child.

Danger signs: Abnormal signs like vaginal bleeding, swelling sevreheadache, blurring of vision excessive which indicate the pregnancy is risky.

Ethical consideration

First ethical clearance was obtained from Madda Walabu University, department of public health then permission letter was taken from the woreda health office to the selected kebeles administrative bodies; finally each respondent was informed verbal consent, after being told the purpose and procedure of the study while the willingness and confidentiality was maintained. Informed consent was obtained from each respondent before data collection.

Result

Socio demographic characteristics

A Total of 242 Mothers of reproductive age group who has at least one alive child in the past five years voluntarily responded making the respondent rate 100%. Most of 68 (28%) respondents were in age group of 25-29. sixty four points five percent 156 (64.5%) of respondents have less than five family sizes. Regarding the marital status 182(75.2%) was married. Concerning the ethnicity 66.1% were Oromo followed by Amhara 23.6%, others 7.4% (Wolayta (3.6%), Gurage (2.6%) and Silte (1.2%) and Tigrae 2.1%. Majorities (63.2%) of mothers were house wives by Occupation and 36.4% of the mothers have attended primary school education. Out of the total respondents 93(38.4%) have monthly income less than 700 birr (Table 1).

Table 1. Socio demographic Characteristics of respondents in Adaba town, southeast Ethiopia.

Variables	Category	Frequency	Percent
Age in year	15-19	14	5.9
	20-24	63	26
	25-29	68	28
	30-34	39	16.1
	35-39	45	18.6
	40-44	4	1.7
	45-49	9	1.2
Family size	1-4	156	64.5
	≥5	86	35.5
	Total	242	100
Marital status	Married	182	75.2
	Divorced	34	14
	Widowed	7	2.9
	Separated	19	7.9
Ethnicity	Oromo	160	66.1
	Amhara	57	23.6
	Tigræ	7	2.9
	Others	18	7.4
Occupation	House wife	153	63.2
	Merchant	44	18.2
	Government employee	26	10.7
	Private employee	12	5
	Daily labor	7	2.9
Monthly income(in birr)	<700	93	38.4
	700-1499	86	35.6
	1500-2299	50	20.6
	≥2300	13	5.4

In this study the 35.1% of mothers and 52.5% of husbands had

finished secondary and above (Figure-2).

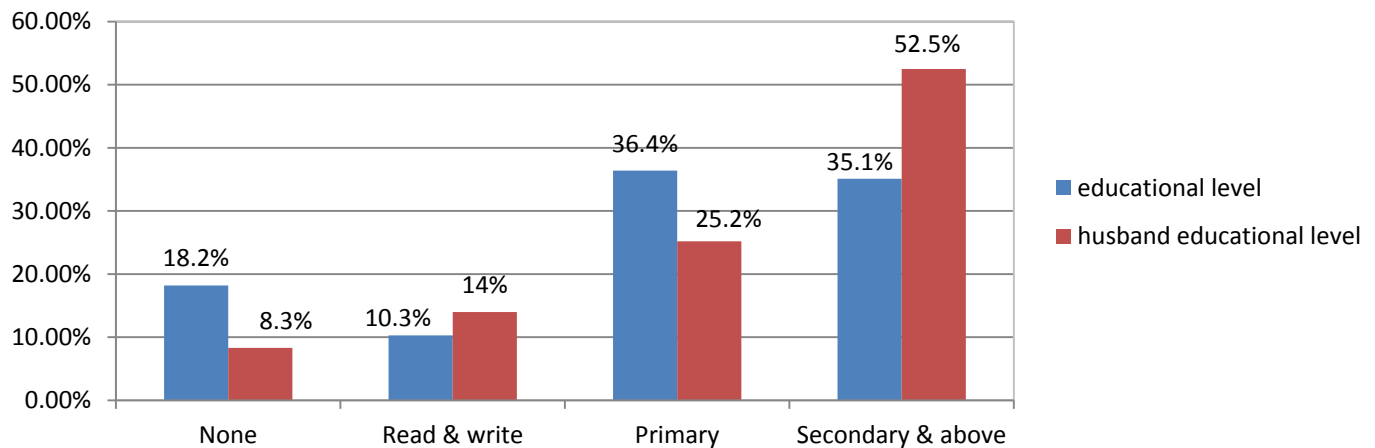


Figure 1. Comparison of educational level of mothers and their husbands in Adaba town, southeast Ethiopia.

Knowledge of institutional delivery

Respondents were assessed whether they have adequate knowledge about institutional delivery or not. From a total of 242 respondents, 212 (87.6%) have good knowledge about institutional delivery. Out of 242 respondents 233(96.3%) know that there is delivery service at health institution and 9(3.7%) don't know that there is delivery service at health institution. From those 233 mothers who know that there is delivery service at health institution 97(41.6%) get the information during ANC follow up, 54(23.2%) from Neighbors, 60(25.7%) delivered at health institution before, 74(31.7%) from health education at health institution and 17(7.3%) reported other reasons like school 3(1.2%), TV 5(2.3%), health extension workers 9(3.8%). Out of 242 mothers 212(87.2%) of them think health institution is the appropriate place of delivery, 22 (9.1%) of them think home is the appropriate place of delivery and 8(3.3%) responded that they don't know which is appropriate place of delivery. From those 212 mothers who think health institution is appropriate 128(60.3%) of them go to health institution soon after onset of labor, 64(30.2%) before onset of labor, 18(8.5%) hours after onset of labor, 2(0.9%) after delivery if

there is complication & 6(2.8%) of them replied other reasons like if prolonged labor 4(1.6%), failure of delivery by TBA 2(1.2%). From the total of 242 respondents, 211(87.2%) of mothers wishes to give birth at health institution & 31(12.8%) of mothers don't want to gave health institutional delivery and their reported reasons were, I like to give birth at home 23(74.1%), no money to pay 4(12.9%), TBA is better 1(3.2%), fear of episiotomy 2(6.4%) & other reasons 4(12.9%) like I don't want to give birth any more 3(9.6%) and I have no husband 1(3.3%). Out of 211 mothers who wishes health institutional delivery, 169 (80.0%) of them were reported to avoid possible complications that may happened during home delivery, 99(46.9%) of them to have healthy baby, 70(33.1%) of them to avoid harmful traditional practice & 4(1.9%) of them reported other reasons like it is clean environment 1(0.5%) and birth attendants are well educated 3(1.4%). Regarding knowledge of respondents about danger signs of pregnancy 98(40.5%) of mothers know danger signs while 143(59.1%) don't know (Figure 2).

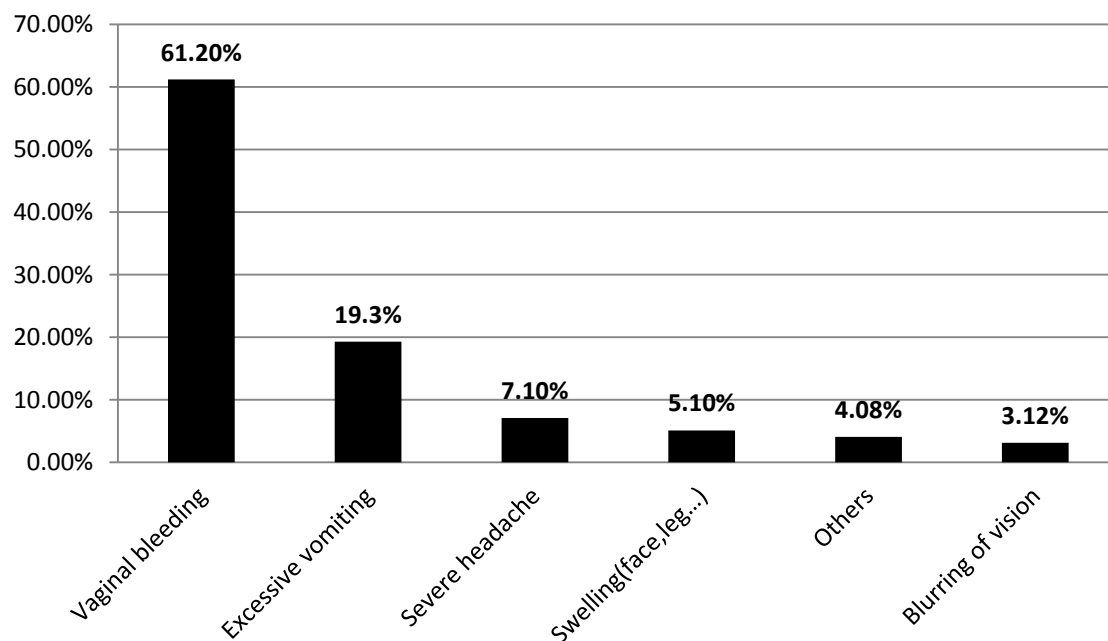


Figure 2. Knowledge of mothers about danger signs of pregnancy

Attitude towards institutional delivery

Out of 242 mothers in reproduce age group 218(90.1%) of mothers have positive attitude (Table 2).

Table 2. Attitude of mothers towards institutional delivery

Variables	Frequency	Percent
ANC status		
Yes	220	90.9
No	22	9.1
Institutional delivery is better place of delivery (n=242)		
Yes	218	90.1
No	24	9.9
Reason for saying institutional delivery is better place of delivery (n=218)		
They save my life	153	70.2
They are polite	7	3.3
They reduce my anxiety	16	7.3
The new born get good care	42	19.2
Reason for saying institutional delivery is not better place of delivery (n=24)		
Religion & cultural practice doesn't allow	9	37.5
TBA is better	7	29.2
Fear of male attendant	0	0
Fear of episiotomy	3	12.5
Fear of operation	5	20.8

Practice of institutional delivery

From a total of 242 mothers 158 (65.3%) of them have delivered at health institution previously while 84(34.7%) of them have never delivered at health institution before. Out of 158 mothers who have delivered at health institution before 141 (89.2%) were satisfied by the care given & 17(10.7%) were not satisfied. Reported reasons for dissatisfaction were leave alone while they were in labor 5(29.4%), there is disturbance shout 7(41.3%), birth attendant examined roughly 2(11.7%) and Physical & Psychological injury 3(17.6%). The overall practice of institutional delivery of last child in this study is 141 (58.3%). The number of pregnancy all together in our study population were, one pregnancy is 84(34.7%), Two to five pregnancies are 131(54.1%), six to ten 24(9.9%), above ten are 3(1.2%). However, in the study population all have at least one delivery in the past five years, 175(72.3%) have one pregnancy & 67(27.7%) have two to five pregnancy in past five years. Concerning number of living children, 101(41.7%) of mothers have one living children, 47(19.5%) have two, 24(9.9%) have three, 36(14.9%) have four and 34(14%) of mothers have above four living children. Regarding parity, from a total of 242 respondents 94(38.8%) have one alive delivery, 50(20.7%) two, 27(11.2%) three, 32(13.2%) four and 39(16.1%) have above four alive deliveries. Majority 230(95%) of mothers have alive deliveries in all pregnancies. Among alive deliveries, 28(12.2%) dies at home and 6(2.6%) were died at health institution. Out of those deaths 9(26.5%) were died immediately after delivery, 3(8.8%) with in 30 min and 22(64.7%) were died after 30 minutes of delivery. From a total of 242 respondents 110(45.5%) of mothers deliver their first child at health institution, but out of 151 mothers who had more than one pregnancy 54 (35.7%) delivery their second child at health institution i.e. institutional delivery decreases in subsequent deliveries (Table 3).

Table 3. Attendant and place of delivery in Adaba, southeast Ethiopia

Subsequent deliveries	Place of delivery & attendants											
	Home										HI	
	Family		TBA		TTBA		Neighbor		HP			
	N	%	N	%	N	%	N	%	N	%	N	%
1 st delivery	66	27.3	27	11.2	20	8.3	16	6.6	3	1.2	110	45.5
2 nd delivery	46	30.4	12	7.9	13	8.7	24	8.6	2	1.4	54	35.7
3 rd delivery	29	27.8	10	9.6	14	13.3	11	10.5	5	4.6	36	43.4
4 th delivery	23	29.9	5	6.6	7	9.89	9	11.8	1	1.2	32	41.5
Last delivery	54	22.3	9	3.7	19	7.9	17	7	2	8	141	58.3

Out of 242 mothers, 141(58.2%), gave birth of their last child at health facility among them majority were 90 % (63.8%), gave through spontaneous vaginal delivery (Figure 3).

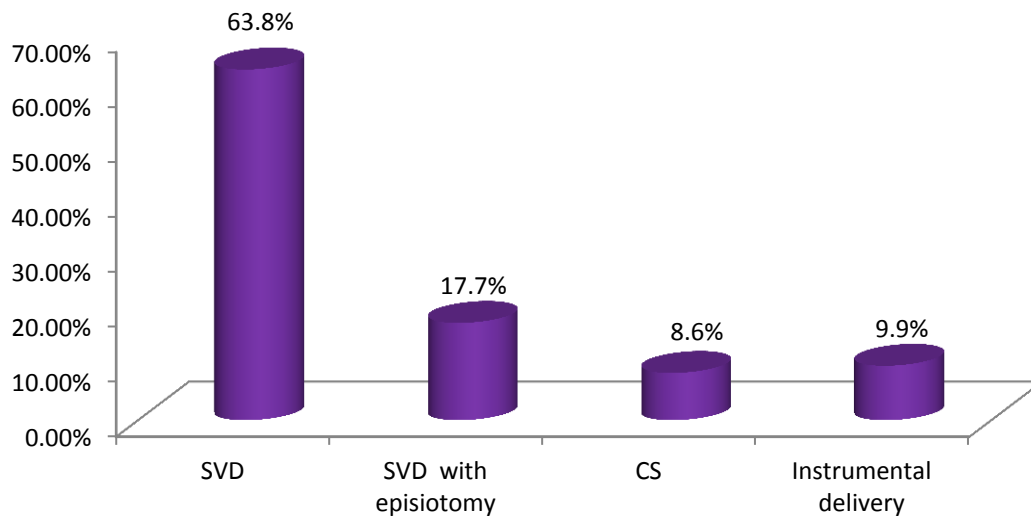


Figure 3. Mode of delivery of last child at health facility in Adaba town, southeast Ethiopia

Factors affecting delivery of institution

Access to health service for the study population is 100%. The length of time spent by mother to reach the health institution is <15 minutes for 117 (48.3%), 15-30 minutes for 73(31%) and >30 minutes for 52 (21.5%). And reported means of transportation are on foot 182(75.2%), wheel cart 48(19.8%), private transport 8(3.3%), public transport 4(1.7%) (Table 4).

Table 4. Decision maker about place of delivery and source of maternal health information in Adaba town, southeast Ethiopia.

Variables		Number	Percent
Decision maker about place of delivery	Self	44	18.2
	Husband	2	0.8
	All family member	194	80.2
	Other	2	0.8
Source of information about maternal health	Radio	81	33.5
	TV	155	64
	Health education at health institution	88	36.4
	During ANC	87	36
	Other	25	10.3

Factors affecting preference of place of delivery

Table 5. Socio-demographic and obstetric factors affecting place of delivery after chi-square test in Adaba town, southeast Ethiopia.

Variables		Home		Institution		Chi square (x ²)95% CI	Df	p- value
		No	%	No	%			
Age	15-19	4	28.6	10	71.4	22.876	6	<0.005 (0.001)
	20-24	30	47.6	39	61.9			
	25-29	18	26.5	50	73.5			
	30-34	27	69.2	12	30.9			
	35-39	22	48.8	23	51.2			
	40-44	1	25.0	3	75.0			
	45-49	2	22.2	7	77.8			
Material status	Single	0	0	0	0	17.05	3	<0.005 (0.001)
	Married	63	34.6	119	65.4			
	Divorced	24	70.6	10	29.4			
	Widowed	4	57.1	3	42.9			
	Separated	10	52.6	9	47.4			
Religion	Orthodox	47	51.1	45	48.9	10.273	2	<0.005

	Muslim	40	32.0	85	68.0			(0.006)
	Protestant	14	56.0	11	44.0			
	Other	0	0	0	0			
Occupation	House wife	71	46.4	82	54.6	11.442	4	<0.005 (0.022)
	Merchant	14	31.8	30	68.2			
	Government employee	5	19.2	21	80.8			
	Private employee	6	50.0	6	50.0			
	Daily laborer	5	71.4	2	28.6			
	Other	0	0	0	0			
Educational level	None	35	79.5	9	20.5	39.094	3	<0.005 (0.000)
	Read and write	13	52.0	12	48.0			
	Primary	32	37.6	53	62.4			
	Secondary and above	21	23.9	67	76.1			
Monthly income	<700	50	53.2	44	46.8	18.416	3	<0.005 (0.000)
	700-1499	39	44.8	48	55.2			
	1500-2299	11	22.4	38	77.6			
	>2300	1	8.3	11	91.7			
Number of alive deliveries	One	28	29.8	66	70.2	11.203	4	<0.005 (0.024)
	Two	26	52.0	24	48.0			
	Three	16	59.2	11	40.7			
	Four	14	43.8	18	56.2			
	Above four	17	43.6	22	56.4			
ANC	Yes	83	37.7	137	62.3	15.989	1	<0.005 (0.000)
	No	18	81.8	4	18.2			

Discussion

This community based cross sectional study attempts to assess knowledge, attitude and practice Of mothers in child bearing age towards institutional delivery in Adaba town, Ethiopia. The overall practice of institutional delivery of last child in our study is 58.3% which is higher when compared to the study done in Kenya (42%), SSA (47%) and Asia (40%) [23, 6]. Also it is very higher when compared to national level institutional delivery (10.8%) according to EDHS 2011[12]. This difference could be due to increased facility of health services as time goes and because of our research conducted within the town. This study revealed that out of 242 mothers in reproductive age group, 212(87.6%) have knowledge and 218(90.1%) have positive attitude towards institutional delivery. According to this study monthly income has strong association with institutional delivery. As the monthly income increases above poverty line (700birr), more mothers were more likely to deliver at health institution (chi-square=18.416, p=0.000) [14]. This is because of the reason that mothers can afford the cost of health service and transportation as their income level becomes higher. Study conducted in south west Ethiopia shows that, family with low monthly income (below 100birr per month) tends to use health institutional delivery at lower proportion 17].

According to the result of this study, use of health institution as place of delivery is associated with maternal age .As this study shows; those mothers in the age range between 15-19,25-29,45-49 were more likely to deliver at health institution than those mothers in other range. The reason behind this is those mothers (25-29) are intellectually matured and they are nearer to health information as they interact in many social affairs, those mothers (15-19) are primigravida and fear complications. Those mothers (45-49) may develop complications as their age increases. Women education is also associated with place of delivery. Those women with no education were less likely to deliver at health institution than those with primary and secondary education (chi-square=39.094, p=0.000)

[18]. The reason behind is educated women are expected to have knowledge about risk of home delivery that they are more likely to deliver at health institution than those with little knowledge. The other factor which associated with place of delivery is ANC follow up, which has significant association with institutional delivery (chi-square=15.989, $p=0.000$). This is due to advice given about importance of institutional delivery during ANC visits. According to the finding from this study, out of 220 mothers who have ANC follow up in their last child, 137(62.3%) had delivered at health institution. This is higher when compared to study done in the country in general and Oromia in particular at which 30% of eligible mothers received ANC service and only 8% of mothers delivered at health facility in the region [7]. In this study, distance from health institution (chi-square=2.456, $p=0.299$) and means of transportation (chi-square=7.467, $p=0.058$) have no association with institutional delivery.

Conclusion and recommendation

Practice of institutional delivery is still low in the study area. Age, religion, income, educational level, occupation, ANC follow up and parity were factors affect utilization of institutional delivery. Cultural practice is one of the major factors that make mothers not to deliver at health institution. Most mothers have Knowledge and positive attitude of institutional delivery in the study area. Therefore, health education program about institutional delivery should be given at ANC follow up because mothers who have ANC follow up were more likely to deliver at health institution than mothers who have no ANC follow up. Cost of health service should be reduced because income has significant influence on delivery service utilization. Further extensive research should be done to assess practice of mothers in child bearing age about institutional delivery and tackle influencing factors.

Limitation

There may be recall bias in the study since we interview mothers who have at least one alive delivery in the past five years which may be difficult for mothers to remember the event exactly. Since it is cross sectional study, it doesn't able to identify temporal relationship of the variables.

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