ANTENATAL CARE UTILIZATION AND ASSOCIATED FACTORS AMONG MOTHERS IN LEMO WOREDA, HADDIYA ZONE, SOUTHERN ETHIOPIA: A CROSS SECTIONAL STUDY.

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Abstract

Background: - *Antenatal care is an essential health care pregnant women need for healthy maternity and normal growth of the fetus. However, many pregnant women miss the opportunity particularly in rural settings.*

Objective: *The objective of this study was to determine Antenatal Care Utilization and associated factors.*

Methods*: A community based cross-sectional survey was conducted among women who had less than one year child in Lemo woreda from March 15 to 30/2015.Both quantitative and qualitative approaches of data collections were used. Eleven kebeles were randomly selected by lottery method.347survey sample were recruited using simple random method. In addition, 4 focus group discussions and 7 in depth interviews were included in the study. Structured interviewer administered questionnaires, FGD and IDIs guides were used for data collection. Ethical clearance and formal letters were obtained from ethical review board of Jimma University. Informed concent was sought from the study participants. The collected data were entered to EPI-data 3.1 and exported to Statistical Packages for Social Sciences (SPSS) version 20 for analysis and ATLAS-ti version-7 was used for qualitative data analysis. The descriptive analysis and bivariate and multivariable logistic regression analysis were used. The crude and adjusted odds ratio together with their corresponding 95% confidence intervals were computed and P-value<0.05 was considered to declare a result as statistically significant.*

Result*: Antenatal care utilization was 121(34.9%) in the study population. Multivariable analysis revealed that maternal education, knowledge, house hold income, mother decision making power, urine testing and deworming during ANC visit have positive association with ANC utilization. But maternal age has negative association with ANC utilization. Result from qualitative data also support this as most participants mention that male decision making power, social and cultural influence, women lack of awareness about ANC, supply and service provision problem at health post make them not to utilize the recommended service.*

Conclusion*: The findings of this study showed that most women do not utilized the recommended antenatal care service. This is because of antenatal care was viewed primarily as curative rather than preventive due to lack of awareness in the study population, social and cultural influence like male dominance and institutional service and provision time problem and low level of women education.*

Recommendation: *health institutions should focus on good approach during care provision, availing supplies, community education, and strengthening the available linkage and networks, partner participation and discussion on ANC issues together with women empowerment on household decision-making would be helpful in reducing the problem.*

Key words: *- Antenatal care, utilization, four visits*

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Acronyms

ANC	Antenatal Care
AOR	Adjusted Odds Ratio
CHW	Community Health Workers
COR	Crude Odds Ratio
EDHS	Ethiopian Demographic and Health Survey
ETB	Ethiopian Birr
FANC	Focused Antenatal Care
FDRE	Federal Democratic Republic of Ethiopia
FGDs	Focused Group Discussions
FP	Family Planning
HCPs	Health Care Providers
HDAs	Health Development Armies
HEWs	Health Extension Workers
HSDP	Health Sector Development Program
IMR	Infant Mortality Rate
JU	Jimma University
MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
MOH	Ministry Of Health
RH	Reproductive Health
SNNPRS	Southern Nations Nationalities Peoples' Regional State
TBAs	Traditional Birth Attendants
WHO	World Health Organization
ZDHS	Zimbabwe Demographic Health Survey

CHAPTER ONE: INTRODUCTTION

1.1. Back ground

According to the World Health Organization (WHO) definition, antenatal care (ANC) is a pregnancy-related essential health care, which could be given either in a health facility or at home[1]. A minimum of four ANC visits was recommended by WHO for women whose pregnancies are progressing normally[2] with personalized visit interval, the first visit in the first trimester, should be before 16 weeks; 2nd visit 24-26 weeks; 3rd visit 28-32 weeks and 4th visit; 36-38 weeks[3]. This could only be effective if it encompasses the essential components of care during pregnancy, health promotion, counseling on potential danger signs of pregnancy, birth preparedness, nutrition counseling, preventive measures and treatment for an existing health problems[4]. Attending ANC service at early stage and utilizing the recommended visit enables women and her partner to ensure that they are equally important partners with health care professionals and it is an option less opportunity to review and update the care plan for transition to safe parenthood[5].

The Goal of Focused Antenatal Care (FANC) is provision of quality, safe, simple, cost-effective and basic antenatal care interventions that all women should access and help them to maintain normal pregnancies. One of the quality measure of ANC is the number and frequency of personalized ANC visit [6]. Ethiopia's HSDP also recognized and had been strongly advocating access to FANC service as one of the most important and key areas of interest and the only opportunity for birth preparedness, complication readiness and planning in order to bring down the high maternal and child mortality and morbidity[7].

1.2. Statement of the problem

The current obstetrics consensus is that, all pregnancy is a risk for the mother as well as her baby. Despite the reality that almost all of these risks are preventable before causing further damage, majority of them are unpredictable and occur at late stage of pregnancy[8]. Even though pregnant women are not necessarily ill and childbearing seems non risky process for most women, there is high chance of getting potentially fatal complications especially among poor socio economic and rural women[9]. Till for many women worldwide, giving birth can be

dangerous or even fatal. Globally there is a painful news, as nearly three million mothers and 3 million newborns continue to die every year from pregnancy related causes[10]. According to WHO report, even though there was a progress in reducing maternal death over the past two and half decades, 289,000 and 800 women still die each year and each day respectively due to pregnancy and childbirth worldwide[11].

The chances of African woman dying from pregnancy complications is 1 in 16 and for every woman who dies, 20 others are seriously disabled[12]. Despite the agreed goal, (MDG) 5, result from 1990 to 2013 showed that, globally only 16 countries, including only seven in developing regions, attained 5.5% average annual reduction of MMR. Out of an estimated 184,000 global maternal deaths which will occur in 2030, 3/4 was estimated to be occur in Sub-Saharan Africa with more than 100 MMR and lifetime risk of 47 times greater than for a woman living in the United States[11].

Ethiopia has distinctly high maternal mortality ratio showing that 420 maternal death per 100,000 live birth due to pregnancy related complications[7]. Proportion of women who are exposed to two or more fertility-related high risk pregnancy are 11.3% and double in rural area of the country, which is 21.7% with regional variation showing that women in Somali region are the most exposed followed by SNNPR[2].

In 2010 there was about 81% antenatal care coverage globally, but data from 2005 to 2012 showed the figure was go down and only around 55% of women received the minimum required four ANC visits[13]. Despite its crucial effect on MMR reduction, there is a large variation in ANC service utilization in developing countries especially in sub-Saharan Africa.

According to mini EDHS 2014, 41.4% of mothers had never attended ANC visit and only 32.1% of them received the minimum recommended number of ANC [14]. In SNNPR, even though it is low, improvement was seen in ANC utilization which was only 10.9% to 17.6% from 2000 to 2011[2].

In summary, despite ANC is an exempted service in public health facilities as national policy of Ethiopia and an option less entry point for intervention with comprehensive service provision, there is still a huge gap in utilization of the recommended ANC service and pregnancy

complications become the primary source of maternal and child death. Studies in Ethiopia showed that the use of ANC services was influenced by, socio demographic and economic factors mainly and scares studies about socio cultural and institutional factors especially in the study area which need to be studied.

Therefore this study was goes beyond what currently known from different literatures by including socio cultural and institutional aspects, referral linkage among HEWs, HDAs, TTBA and HCPs in relation with ANC utilization.

CHAPTER TWO: LITERATURE REVIEW

2.1. Socio demographic factors

Antenatal care services uptake remains very low due to, among others, education, age and religion variations. Secondary data analysis in Zimbabwe, from ZDHS showed, education and religion were factors associated with ANC service utilization. Women who have attained secondary and higher school and religions other than traditionalists and apostolic women utilize ANC more likely than others and no variation with age[(15).] But study from Bangladesh showed as age increases the likely hood of using ANC service decreases[(16),] unlike in Ghana, study from Ghana Demographic and Health Survey, showed old women had more likely utilized ANC service when compared to young women[(17).] Wealth was an important predictor to utilize the recommended number of ANC service showing that women from high income house hold was utilized more ANC service than the opposite group[(16)] which was similar with the study done in Pakistan where 41% of the women did not receive any ANC service, due to lack of financial support[(18).]Similarly in Kenya most society prefer TBA service giving the reason that the payment for TBA is flexible, negotiable, easy and could be paid in kind or by instruments[(19)]. High number of an employed women in Italy were attended the recommended four or more ANC visits than unemployed[(20)]. A cross-sectional study conducted in Ethiopia, Mekele city and study from rural Uganda showed mother's age**,** employment status, and partner's/husband's and mothers level of education were found to be positively associated with ANC service utilization, whereas ethnicity had no significant association with ANC service utilization [(21,22).]

2.2 Knowledge on ANC, attitude towards ANC and source of information

In a community survey conducted in rural Uganda (68%) of the women had attended four ANC visits, of whom (98%) had received education and know about danger signs, where to go for complications and had knowledge about skilled health professional showing positive association with ANC utilization[(22)]. Another community based cross- sectional study result from urban area of Impala, East Manipur showed even though women have good knowledge on ANC utilization, only 42.6% of women got full ANC service and not think ANC as essential was the main reasons for not attending any ANC[(23).] Similarly in northern Nigeria, majority (94.8%) of the

respondents have heard about maternal health services, but only few actually knew and utilized the main services being given at ANC unit ,42.2% of urban and 40.2% of rural[(24).]

Mothers positive attitude towards ANC in Nigeria also has significant association with ANC service utilization[(25).] Study in Malawi showed that, respondents had adequate knowledge on the benefits of utilizing ANC services, but only (30%) utilized ANC showing that knowledge was not translated in to practice[(26).] A community based cross sectional study in Kham District, Japan showed even among women who knew danger signs, such problems were considered as a normal situation for pregnant women[(27).] Findings from community based cross sectional study done in Metekel zone, North West Ethiopia showed that, (49.8%) of the respondents had at least one ANC visit during the last pregnancy, out of them only (48%) had the four or more ANC visits, nevertheless (65.6%) of subjects knew at least half of the knowledge questions on ANC service[(28).] Study in Nigeria showed radio and health experts through radio as the main information sources, where as in Ethiopia Health extension workers, traditional birth attendants, relatives, health education through campaign and media like Radio/TV/Newspaper and community conversation were the main sources of ANC information[(29–31).]

2.3. Socio cultural and maternal obstetric factors

An Ethnographic study in Pakistan showed 41% of the women did not receive ANC the reason being family did not support their decision, in 43% and 31% of the cases, the husband and mother in-law respectively were the decision makers and only 3% reported self-decision[(18).] Secondary data analysis in Zimbabwe, from ZDHS showed, polygamy was a factor negatively influence ANC service utilization showing , non-polygamous women had utilized ANC more likely than polygamous[(15).] Community based cross sectional study in Nigeria where (67.7%) of women attended the required ANC service, husband and the women's own mothers influence them positively to utilize ANC, but women were not confident to tell their pregnancy condition to their friends and relatives as early as they knew they were pregnant due to cultural reasons[(32)]. Even though most common pregnancy related complications**,** were mentioned by most women, some of them did not seek any medical care when problems occurred during pregnancy due to felt shy to show their abdomen to a male health care provider[(23,27).] But study in Onitsha, Anambra state, showed absence of female health care providers was not seen as

a problem with ANC service utilization[33]. Qualitative study in Malawi discovered, if pregnancy is disclosed to the public early, the woman or the whole family considered as being rude or uncultured by the society and a woman may be bewitched resulting into the disappearance or abortion of the pregnancy[34]. Some women highly like the herbs and the service they got from TBA because people who provide them these services are socially friendly with them. This hinders them from attending antenatal care service[35]. But study from afar showed TBAs are highly respected in the community, women tell them every secret and play significant role in maternal and child health improvement being in collaboration with HDAs and HEWs[36]. A qualitative study from United Kingdom identified that healthy past experience and having another child were also the main maternal factors leading them not to attend ANC[37]. Cross-sectional study in rural Nepal showed, mothers having first pregnancy had higher ANC visit than second or higher number of pregnancy[38]. But in rural West Indonesia where 77.9 % of respondents received four or more ANC, as a group primiparous received significantly less number of ANC when compared to multiparous[39]. Women in Tanzania with intended pregnancy were the group most likely to have recognized their pregnancy and utilize the recommended four ANC visits than their opposite groups[40]. A community-based cross sectional study conducted in Jimma and Yirgalem was found out that husband's support has a greater positive effect on ANC service utilization[41].

2.4. Institutional factors

A cross-sectional study in rural Pakistan which used both quantitative and qualitative methods showed health workers unfriendly approach, and not respecting the clients significantly associated with ANC service utilization[42]. Among women who mentioned pregnancy related problems in Kham District, Japan, some of them did not seek any medical care when problems occurred because they felt pain when HCPs palpated the abdomen and thought that in health centers, the HCPs did not better than TBAs, only palpated the abdomen and there was no good support[27]. Women who received more doses of anti-malarial drugs for preventing malaria, TT, Iron and folic acid, who were informed about signs of pregnancy, had their blood pressure and weight measured during ANC visits had more likely utilized ANC service than others[40]. An institution based cross sectional study in Malawi, where 75% of women were started ANC between 4 and 6 months of pregnancy, distance and waiting time at the health

facility were the significant determinants for ANC service utilization[26]. Fear of reprimand from nurses when women come late, in adequate birth spacing and not wearing washed closes before attending ANC had discouraged women from attending ANC in India and Tanzania[39,40]. Study from Holeta town, central Ethiopia found that distance, from health facility make some women not to use ANC service[43].

2. 5 Conceptual framework

The conceptual framework below has been self-prepared after reviewing the above different literatures. Respondent's socio demographic status, personal characteristics (Knowledge on ANC, attitudes towards ANC service) and obstetric factors has direct association with ANC service utilization. The socio cultural and institutional factors and the source from where they get information also have association with ANC service utilization **(figure 1).**

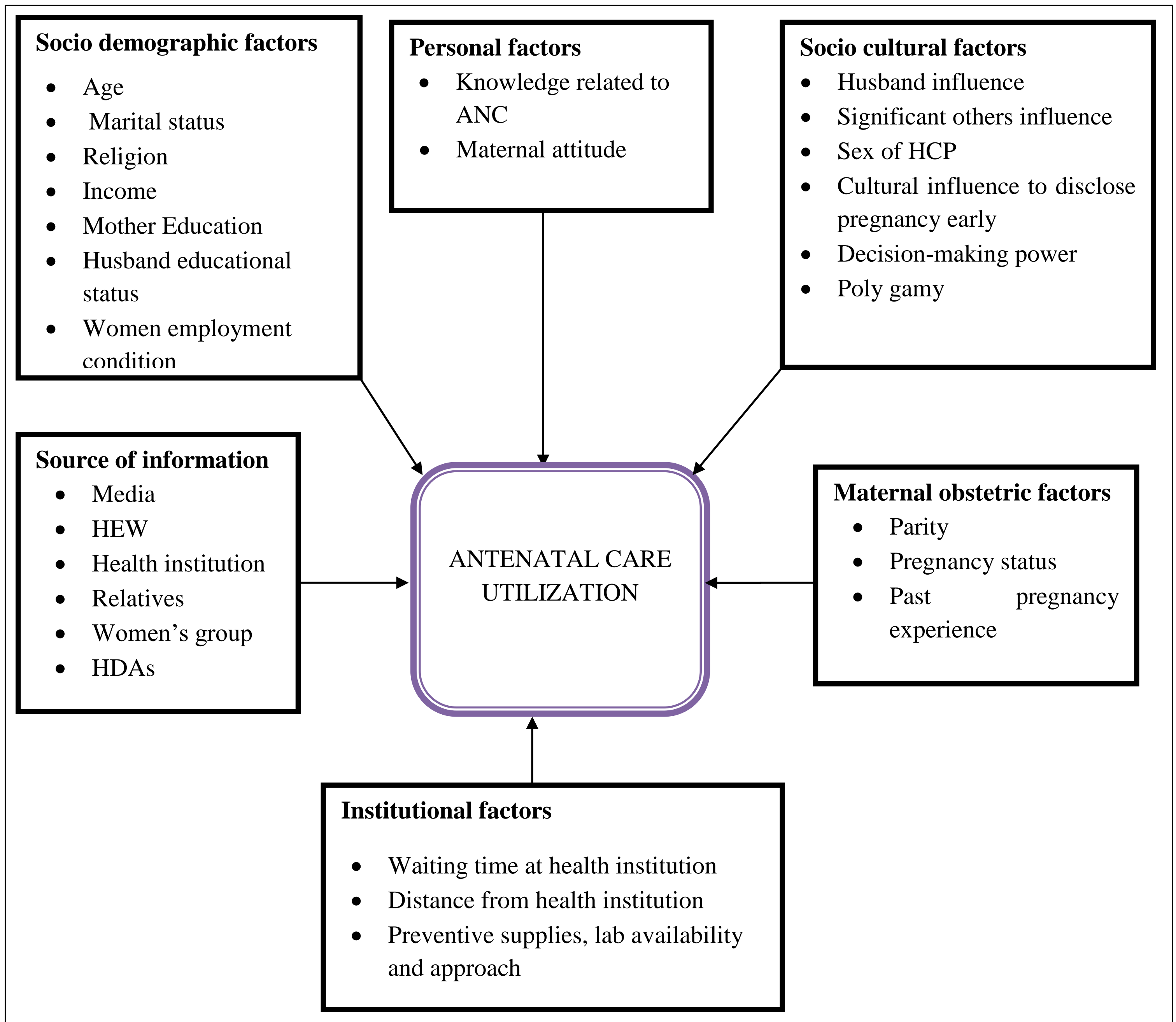

Figure 1:- Conceptual framework above was self-prepared after literatures review on ANC service utilization and associated factors among women.

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2.6 Significance of the study

Findings from this study will help to increase awareness of health professionals and all other concerned governmental bodies and nongovernmental organizations about the possible reasons for non-utilization of the recommended antenatal care service. It also be used for planning, acting in motivating women to use ANC service and evaluation of this services in the study area and there by maternal and new born mortality and morbidity will decline. The findings from this study will also be used as good source of information for further research.

CHAPTER THREE: OBJECTIVE

3.1. General objective

To assess ANC service utilization and associated factors among mothers in Lemo woreda, SNNPRS in 2015

3.2. Specific objectives

3.2. 1 To determine ANC service utilization status among mothers

3.2.2. To identify factors associated with ANC service utilization among mothers

CHAPTER FOUR: METHODS AND MATERIALS

4.1 Study area and period

This study was carried out in Lemo woreda, which is one of the 10 woredas and 01 town administration of the total zonal catchments of Hadiya, SNNPR, from March15-30/2015. Hadiya zone is one of the central zones in SNNPR with 1,547,846 total populations in 3542.66 sq. km area. It is 194 km far from regional town Hawassa to the North West and 230 km to the south west from the capital Addis. Based on the information obtained from Lemo woreda Health office, there were seven health centers and 35 health posts one in each Keble of the woreda. The total population of the woreda was 148,339 of which 73390 (49.5%) were male and 74949(50.5%) were female live in 329.6 sq. km area. Number of women in reproductive age group, (15-49) were 34,563, number of children less than one year of age were 4732 in 2015.

4.2. Study Design

A community based cross sectional study design was used.

4.3 Population

4.3.1 Source population

All mothers who had less than one year child in lemo woreda.

4.3.2 Study population

Selected/ sampled/ mothers who had less than one year child.

4.3.2.1 .Inclusion Criteria

Women, who live at least six months in the study area before they had gave birth.

4.3.2.2. Exclusion criteria

Women who were seriously ill and unable to respond for the questioner were excluded.

4.4. Sample size and sampling procedures

4.4.1. Sample size for quantitative data

Sample size was determined by using single population proportion formula using the proportion of four ANC visits, which was 34.1% with 95% confidence level, and 5% margin of error.

$$\text{Sample (n)} = \frac{(Z\alpha/2)^2 * P\ (1-P)}{d^2} = \frac{(1.96*1.96)*0.341*(1-0.341)}{(0.05)2} = 345$$

Where; n= Sample size

$Z\alpha/2$= Standard variant (1.96) which corresponds to 95% confidence level

P= Proportion of four ANC visit which is 34.1% obtained from study done in Kembata Tembaro zone SNNPR(44).

d= Margin of error = 5%.

Since the study population, mothers with less than one year age child were below 10,000, which were 4732; finite population correction formula was needed.

$Nf =$ (n/1+n/N) = (345/1+345/4732) =322

Finally by adding 10% non-response rates the total sample size for quantitative part become 354.

4.4.2 Sample size for qualitative data

For qualitative data four focus group discussions in two conveniently selected kebeles were conducted with 8-12 mothers. In each group, mothers who were not included in quantitative study but from the same source population were included. 7 in-depth interviews were also conducted with key informants, two with HEWs, three with HDAs leaders and two with TBA.

4.4.2. Sampling technique

Eleven kebeles, about 30% of the total 35 kebeles, were selected randomly by lottery method assuming that all kebeles in the woreda are homogenous. Study participants in each Kebeles were selected by using computer generated random number sampling technique from sampling frame of HEW registration book, mothers with child under one year of age after proportional allocation of participants to each Kebeles. For qualitative data, for FGD, first two kebeles were selected conveniently, in each of the two kebeles one group who attended at least one ANC visit and the other group non attendants were selected by purposive criterion sampling technique. For in depth interview three HDAs (one to five networking leaders), two HEW and two TBA who have good information in ANC, after asking the woreda health office and HEW about key informants information fullness, they were selected purposively, (by criterion purposive sampling) and interviewed.

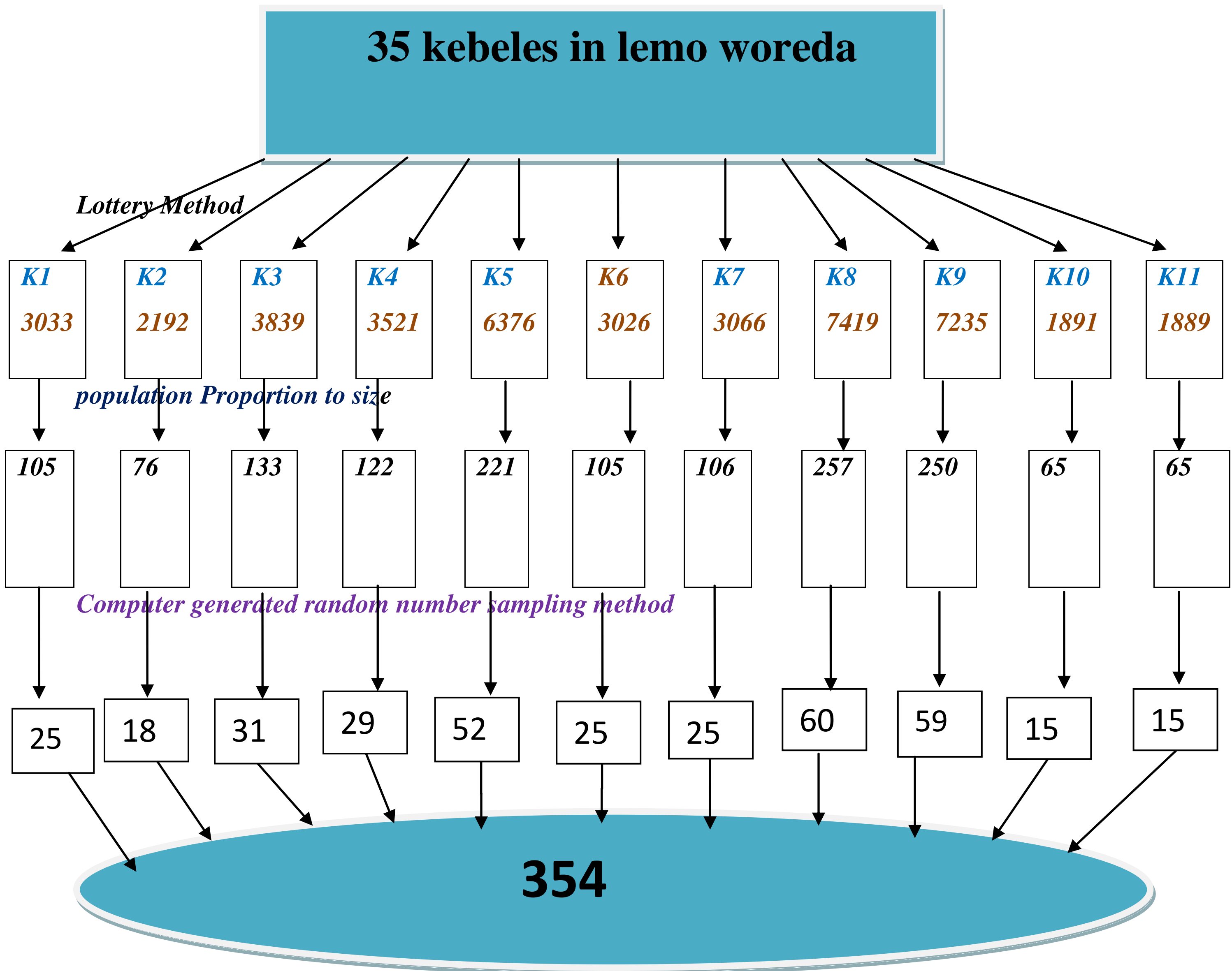

Figure 2:-Schematic presentation of sampling procedure used to assess antenatal care utilization and associated factors among mothers in Lemo woreda 2015

4.5 Measurement

4.5.1 Variables

4.5.1.1 Dependent variable

- Antenatal care utilization.

4.5.1.2 Independent variables

- **Socio demographic factors**: - age, marital status, religion, income, education, husband educational status, women employment condition.
- **Institutional factors:-** waiting time ,distance from health institution, preventive supply provision and tests during ANC and health workers approach
- **Maternal obstetric factors:-** parity, pregnancy status, past pregnancy experience
- **Socio cultural factors**: - husband, significant other (mothers in law, women's own mother, sisters, friends and neighbors) TBA, HDAs, Sex of HCP, cultural influence to disclose pregnancy early, decision-making power of women, Poly gamy**.**
- **Personal factors**: - maternal knowledge related to ANC, maternal attitude towards ANC.
- **Source of information:-** media, HEW, health institution, relatives, women's group, HDAs

4.5.2 Data collection instrument and measurements

Structured interviewer administered questioners were adapted from published similar studies which consists of socio demographic characteristics with 9 items which was checked for individual proportion and association with ANC service utilization, obstetric factors, institutional factors and source of information by 26 questions, Social and cultural factors with 10 items. Knowledge 18 items with response format of 'yes' or 'no' (yes=1, no=0) which were treated as above mean score and below mean score (mean= 6.06), to describe as good and poor knowledge respectively for descriptive part and sum was used as continuous for logistic regression analysis. Attitude towards ANC in public health facility consists of 10 questions with five point Likert scales strongly agree 5, agree 4, neutral 3, disagree 2 and strongly disagree 1. Its mean score was used (mean=36.5) for descriptive analysis as above mean and blow mean as favorable and unfavorable attitude respectively and sum was used for logistic regression.

4.5.3 Data collecting technique

Quantitative data was collected using structured interviewer administered questioners by face to face interviewing. Three supervisors, degree holders in health and 11 data collectors, who completed college diploma in health and can speak and read Hadiyisa language were recruited. For qualitative data two individuals BSC in health were recruited. FGD guide, in-depth interview guide, tape recorder and note books were used**.** Modulator, the investigator, had introduced the purpose of the study, discussion topic, assured them about confidentiality and had took informed verbal consent including for voice/ tape recording and had facilitated the process.

4.5.4. Data quality management:

4.5.4.1 Tools translation and training

Tools/ questionnaire were adapted from published similar studies; this was translated to Hadiyisa language and retranslated back to English language before data collection by different translators to keep consistency. Then one day training was given for supervisors and data collectors, on how to supervise and interview the respondents. For qualitative data collection, FGD and in-depth interview guides were developed and translated to local, Hadiyisa, language; one day training

was given for data collectors and practiced the process in simulated participants during training to be familiar.

4.5.4.2. Pretest and checking completeness

The questioners were pre tested in 5% in Misha woreda, which is one of the woredas in Hadiya zone and 18 Km far from Lemo woreda, before the actual data collection and corrections were made accordingly. To check the reliability, Cronbach's alpha was calculated and it was ($r = 0.83$), for attitude questions also reliability test was done and no item was deleted because the difference with item deletion was insignificant (0.847-0.835=0.012). During data collection, questionnaires were checked for consistency and completeness on collected dates by supervisors and investigator and communications were made accordingly. For qualitative data enough time was given to prevent premature interruption of idea and records were cross-cheeked with transcriptions before analysis by other collogues to check dependability.

4.5.5 Data processing and analysis

After data collection data was cleaned manually. Then it was entered in to Epi data version 3.1 to control data entry error and exported in to Statistical Packages for Social Sciences (SPSS) versions 20 for data analysis. Necessary recoding was made, descriptive statistics, frequency and cross tabulations and binary logistic regression was applied to assess the proportions of each variables and the relationship between dependent and independent variables. Those variables with p value < 0.25 in bivariate analysis were included for multivariable analysis and OR, CI and p-values were checked and those variables with p value < 0.05 in multivariable analysis were declared as statistically significant. Model fitness was checked by Hosmer-Lemeshow fitness test which was (0.97), therefore the model adequately fits the data.

For qualitative data records were transcribed after hearing, reading and rereading the records, the data was entered in to ATLAS-ti version7 soft were to facilitate data analysis. Quotations were coded, categorized, families were formed and thematized. Finally concepts/ narrations/ and direct quotations were used for reporting the finding.

4.6 Operational definitions

Antenatal care utilization: - Mothers who have received at least four ANC visits from health institutions (health center, health post and hospitals).

Family income: - Denotes the total income of the family earned from all sources per month.

Far/ long distance from HF: - More than one hour walk on foot travelling to reach nearby public health institution which was self-reported by mothers.

Good Knowledge about ANC: - Mothers who scored above the mean score of the total 18 knowledge questions related to ANC.

Poor Knowledge about ANC: -Mothers who scored below the mean score of the total 18 knowledge questions.

Favorable attitude towards ANC: - Mothers who had above the mean score of the total 10 attitude questions.

4.7 Ethical consideration

Approval of the proposal and ethical clearance was obtained from ethical review board of Jimma University. Formal supportive letter was obtained from the department. Permissions were obtained from Hadiya zone health department, Lemo woreda health office, and finally from the study kebeles. Verbal informed consent was taken from the study participants including the key informants. Participants were assured that data will be kept confidential and it will be used only for research purpose.

4.8. Dissemination plan

The findings of this study will be disseminated to college of health sciences; department of Health Education and behavioral science of Jimma University, Hadiya zone health department and lemo woreda health office after final defense. Findings will also be disseminated to different stakeholders/ NGOs/ those have contribution to improve maternal and child health in the woreda. Finally effort will be made to present in various seminars and workshops and for publication in national or international journals.

CHAPTER FIVE: RESULT

5.1 Socio-demographic characteristics of respondents

Three hundred forty seven out of three hundred fifty four respondents were participated in the study giving 98% response rate. The mean age of the respondents was 30.3 years with±5.34 SD. Majority were house wife 214 (61.7%) and protestant religion followers 287(82.7%). The higher proportions of women attended from grade 1-4 82(23.6%). About half of the total respondents 175 (50.4%) were in the middle percentile income category (470-100 ETB per month) and half 173 (49.9%) had family size 4-6(table1).

Table 1:-Socio-demographic characteristics of women with less than 1 year child in Lemo woreda, SNNPRS, Ethiopia, March, 2015 n=347

Characteristics	Category	Number	Percent
Age	<24	51	14.7
	25-29	116	33.4
	30-34	83	23.9
	>=35	97	28
Education status of mother	No formal education	49	14.1
	Only read and write	49	14.1
	Grade 1to 4	82	23.6
	Grade 5 to 8	74	21.3
	Grade 9 to 10	57	16.4
	Grade 11to 12	29	8.4
	College diploma and above	7	2
Education status of husband	Unable to read and write	24	6.9
	Only read and write	35	10.1
	Grade 1to 4	50	14.4
	Grade 5 to 8	91	26.2
	Grade 9 to 10	74	21.3
	Grade 11to 12	48	13.8
	College diploma and above	25	7.2
Ethnicity	Hadiya	221	63.7
	Kembata	45	13.0
	Gurage	31	8.9
	Amhara	26	7.5
	Silte	23	6.6
	Others	1	0.3
Occupation	House Wife	214	61.7
	Farmer	92	26.5
	Merchant	33	9.5

	Civil servant	8	2.3
Religion	Protestant	287	82.7
	Orthodox	43	12.4
	Muslim	12	3.5
	Catholic	5	1.4
Monthly income(in percentile/ tertiary)	<470	89	25.6
	470-1000	175	50.4
	>1000	83	24
Marital status	Married	336	96.8
	Single/ unmarried/	11	3.2
Family size	<=3	5	1.4
	4-6	173	49.9
	>=7	169	48.7

*** Unmarried means single, divorced, widowed and separated (added)

5.2 Source of information, Knowledge and attitude towards ANC utilization

In this study, majority 335(96.5%) of the mothers had heard about ANC service and the main source of information were HEWs 306(91.3%), the most known danger signs of pregnancy by the respondents was vaginal bleeding 177(51%) and PMTCT was the least mentioned service only 29 (8.4%) know about it(table 2).

Table 2 :-Source of information, knowledge, and attitude towards ANC utilization of mothers with less than one year child in Lemo woreda, SNNPRS Ethiopia, March 2015

Characteristics	Category	Frequency	%
Heard about ANC	Yes	335	96.5
	No	12	3.5
Source of information **	HEW	306	91.3
	Health institution	211	63
	Media	80	23.9
	Family	44	13.1
	HAD	40	11.9
	Women’s group	15	4.5
	TTBA	11	3.3

Knowledge about danger signs **	Vaginal bleeding	177	51
	loss of fetal movement	116	33.4
	Hand/ face swelling	68	19.6
	Severe vomiting	64	18.4
	Convulsion	47	13.5
	Severe head ache	44	12.7
	Seizure	15	4.3
Know about minimum visit, starting time and services being given at ANC unit**	Know about starting time is at first 1-3 months	74	21.3
	Know the minimum number of visit is 4	122	35.2
	TT immunization	242	69.7
	Advice	185	53.3
	Blood test	161	46.4
	IFA supplementation	105	30.3
	Fetal health and growth monitoring	85	24.5
	Birth preparedness	65	18.7
	PMTCT	29	8.4
knowledge on ANC (mean score as cut of point)	Good	153	44.1
	Poor	194	55.9
Attitude (mean score as cut of point)	Favorable attitude:	179	51.6
	Un favorable	168	48.4

** More than one responses were mentioned

5.3 ANC practice and institutional factors

Majority, 296(85.3%) of women sought ANC at least once during last pregnancy, but only 121(34.9%) of mothers used the minimum recommended ANC level during their last pregnancy. 56(18.9%) of mothers attended ANC within 3 months of gestational age (GA) while nearly half, 146 (49.3%) of mothers attended within 4-6 months. In fact, significant proportion 94 (31.8%) were much more late visitors after 7 months of GA. 148 (50%) of mothers visited health center as part of ANC site. Out of ANC attendants 165(55.7%) and 152(51.4%) took the minimum recommended TT dose and IFA supplementation respectively. But for large proportion 232(78.4%) their urine never been tested. Large proportion, 113(50%) women reported they didn't attend due to being busy, another 107(47.3%), due to lack of awareness and 99(43.8%) absence of illness as a reason for not attending at all as well as not to complete ANC as recommended (table3).

Table 3:-Frequency distributions of ANC attending practice and services received at ANC unit of women with less than one year child, in Lemo woreda, SNNPRS, Ethiopia, March 2015.

Characteristics	Category	Number	Percent
ANC visit(n=347)	Never attended	51	14.7
	1-3 visits	175	50.4
	Four and above	121	34.9
Site ANC attended (n=296)	Hospital	24	8.1
	health center	148	50.0
	health post	124	41.9
Month ANC started(n=296)	1 to 3 months	56	18.9
	4 to 6 months	146	49.3
	7 to 9 months	94	31.8
TT immunization(n=296)	not given	17	5.7
	One dose given	114	38.5
	two and more doses given	165	55.7
Iron folic acid	not given	38	12.8
	given once	106	35.8
	given twice and above	152	51.4
Deworming	not given	159	53.7
	Given	137	46.3
Weight	not measured	14	4.7
	Measured once	114	38.5
	Measured two and more times	168	56.8
BP	not measured	31	10.5
	Measured once	118	39.8
	Measured two and more times	147	49.7
Urine	not tasted	232	78.4
	Tasted once	58	19.6
	Tasted two or more times	6	2

Have you ever told about danger signs when visiting ANC?	Yes	207	69.9
	No	89	30.1
Do you think distance from health institution is a problem to go for ANC?	Yes	47	14.5
	No	300	86.5
How long do you walk to reach nearby HI	≤ one hr.	290	83.6
	> one hr.	57	16.4
Do you think that waiting time in health institution make a problem?	Yes	45	13
	No	302	87
Reason not to attend as recommended*			
Lack of awareness		107	47.3
Absence of illness currently		99	43.8
Being busy		113	50
expense/ high cost		13	5.8
Healthy previous experience		77	34.1
Loubor comes before appointment date		98	43.4
No husband support		75	33.2
Others (cultural, religion, fear of blood test		7	3.1

* Multiple answers were responded

Table 4:-Qualitative finding regarding institutional factors

Referral linkage	Provider	Description
	Health workers, HDAs & TBAs	As all most all of the discussants raised there was poor referral linkage from the community to health institution, b/n HW & HDAs, TBAs. HDAs do not know their responsibility well to educate and sent women to health institution they, need incentives to do as routine job. Mistrust on HEW due to no ambulance service for emergency time referral as they had been told and given phone number when women go for ANC service make them dissatisfied and not to visit health post again. *"At night time also HEW not present at health post as health center and hospital staffs, at this emergency time women may suffer from different problems, no transportation at night and men carry women by traditional stretcher, when such things happened, the community and the women blemish and refuse the HEW service, and resist to accept what they say and do another time like ANC"38 years G6P5, FGD participant).*
Supply		Most of the discussants complain that shortage of supplies, test kit, like RDT and HCG and preventive drugs at health post such as deworming, and giving appointment due to supply problem make women dissatisfied and disappointed at kebele level health workers, HEWs, so women not attend and those who were appointed did not come back to complete the ANC as recommended.
Provider/ place/ preference by women		Preference of HCP due to their competency, closed health post at day time and absence of night service at health post make them to think less organized and less equipped and dissatisfied on their services. Health care providers approach was raised widely, Some HCP discourage and reprimand women if they become pregnant without birth spacing, this make woman not to attend early to get full ANC service as recommended. A31 years G2P2 FGD participant Said *"some women including me may think males as better than female, I think they may had more education than female,*

but this may not be true always, some female providers are stronger and have more approaches than males, for me both are good. But sometimes health care providers at health institution annoyed at women when we wear some unclean closes, or when women give many births without spacing this may make women to fear HCP and not to use ANC service and not come back as appointed to take the full recommended service".

5.4 Maternity condition and Socio cultural circumstances

More than half 224(64.6%) had two to five children and had plan in 257(74%) to become pregnant for the last most recent pregnancy. Overwhelming proportion, 203 (97.1%) of mothers had been advised by HEWs as they visited ANC. But, 31 (14.8%) HDAs and TBAs played a sending role to health facility for ANC use. In majority of the cases, 216 (62.2%) pregnant women didn't get social support to go for ANC, in 198 (57.1%) of cases husbands were decision makers on ANC issues and 63(18.2%) of women preferred one sex of HCP from the other to get ANC service (table5).

Table 5:-Frequency distribution of maternity condition and socio cultural circumstance of woman in Lemo woreda, SNNPRS, Ethiopia, March 2015

Characteristics	Category	Number	Percent
Parity			
	One	49	14.1
	Two to five	224	64.6
	Above five	74	21.3
Gravidity	One	47	13.5
	Two	52	15
	Three	78	22.5
	Four	61	17.6
	Five and above	109	31.4
Pregnancy status	Planed	257	74
	Want to wait or delay	62	17.9
	Didn't want any more child	28	8.1
Anyone who told/ refer you to go for	HEW	203	97.1

ANC**	TBA	18	8.6
	HDAs	13	6.2
Any Social support to attend ANC	Yes	131	37.8
	No	216	62.2
Source of support**	HDAs	74	56.5
	Neighbors	51	38.9
	From sisters	41	31.3
	TBA	20	15.3
	Mothers in law	16	12.2
Anyone who told not to attend ANC	Yes	45	13
	No	302	87
If yes who are they? **	Mother in law	18	40
	Husband	16	35.6
	Neighbors	12	26.7
	Her mother	3	6.7
	Others	5	11
Who is the decision maker on ANC issue?	The women her self	149	42.9
	Her husband	198	57.1
Do you think that sex of HCP make problem to go for ANC service?	Yes	63	18.2
	No	284	81.8
Which sex do you prefer?	Male	7	11.1
	Female	56	88.9
Why this sex	Due to their good approach	39	61.9
	Religious reason	16	25.4
	Cultural reason	6	9.5
	Other (her husband fear / his preference)	2	3.2

**Multiple answers were invited from the respondents.

Social and cultural factors, qualitative finding

Table 6:-husband and significant others roles/support and influences and cultural factors/

Source	Role/influences	Description
Husband	-Approve for ANC	As most of the participants said husband is the most decision makers in any issues in the house hold including family planning and ANC issues, since they are source of income/money/, women accept and comply with husbands' decision whether it is good or bad. Don't help her at house hold to reduce work load as they mentioned most of them not attend ANC due to being busy at house hold.
	-help wife to attend ANC	Some other husbands are cooperative, concern about her pregnancy, encourage his wife and facilitate for her anything that she wants to go for ANC. One FGD participant said *"...no problem, it is rare to discourage ANC attending, those who drink alcohol may not treat their wives properly and even bit them. But majority have no problem, family also support women to go for ANC most of the time 31 years,G3P3"*
Aged women (Mother's in law, women own mother)	-Share experiences	Most participants agree that mothers in law and aged women influence them by sharing experiences like they were healthy without going to anywhere for ANC, say that ANC is anew fashion, not as such helpful and told them as no difference if they attend ANC or not.
	-Took pregnant women to TBA	Mothers in law serve as bridge to bring pregnant women to TBA when they feel pain or discomfort thinking that the fetus is mal positioned.
	-Help women to go to HI for ANC	Sometimes/rarely help pregnant women to attend ANC by telling them this as good opportunity and as they are lucky and not to miss this good service even by telling them it as a fee free service. *"Sometimes mothers in law also influence women not to decide on ANC issue and other maternal services/ "by saying you are making my boys pocket empty, by asking him money for meaningless things we had gave more than 8 births in our home without going to anywhere" what kind of fashion is it…." (41 years female HDA)*

Friends and neighbors	Tell about ANC service	Neighbors and friends those who attended ANC but not satisfied with the services tell them that HEW do nothing, only palpate abdomen but no provision of medications specially if TT was taken in previous pregnancy no need to go to health post, if transport and house hold conditions are facilitated, it is better to go to HC/ hospital. In contrary to this some of them tell as they had got good service from health post.
HDAs & TBAs	Educate Remind Refer Give home care	As most participants mentioned HDAs role, they educate and inform women to go HI, not to practice HTP and remind ANC date at health post. But sometimes they need incentive and motivation when they do such activities. TBAs tell women not to come to them or not to call them for home care since it is not allowed and not good to give care by TBA for pregnant women at home. TBAs Provide emergency time home care for pregnant women in secrete way but it is challenge for them to refuse due to social relationship fear. They reported that they don't do deep massage and palpation but some position checking and tell them to go health institution.
Cultural fear and preference		
Fear to disclose pregnancy early	Fear of abortion Fear due to first pregnancy Due to unintentional pregnancy	Most discussants said unless the pregnancy is visible and large abdomen, they fear to tell to any one and not start ANC early due to fear if it disappears, so that they start at last trimester and not attend the recommended number of visit. Those with first pregnancy and others those become pregnant un intentionally shy to go for ANC due to lack of previous pregnancy experience and social and health care provider reprimand for unintended pregnancy specially if women had little baby. *"oh it is shame if abortion occurs after you disclose your pregnancy status, to be confident you have to sense at least fetal movement, even sometimes you may hide from nearby family and not wear tight clothes and even we stretch our abdomen "* (36 years old, G8P8,FGD participant).
HCPs sex preference	Religious reason, Cultural reason,	Some discussants said that shy to show their abdomen to male providers, others due to religious reason not allowed showing some parts for male other than husband make them to fear and not to attend ANC.

5.5. Factors associated with ANC utilization

Multivariable logistic regression analysis of this study revealed that maternal age, maternal education, house hold income, deworming and urine testing at ANC unit, decision making power of women and comprehensive knowledge of women showed statistically significant association with the outcome variable, ANC utilization (table7). Maternal age had negative association with ANC utilization showing that mothers with age ≤ 24 years had 4.89 times (AOR=4.89, 95%CI: (1.42-16.91)) more likely utilized ANC than those in the 25-29 years age group. Mothers who had no formal education had utilized the recommended ANC service 84% less likely when compared with those who had completed primary school (AOR=0.16, 95% CI: (0.04-0.64)). Similarly mothers who were in the first, least, tertiary income category had utilized the recommended ANC 82% (AOR=0.18, 95% CI: (0.06-0.58)) less likely when compared with mothers in the reference, middle group. Regarding institutional factors, women whose urine test was done at least once had 6.82 times (AOR=6.82, 95% CI :(2.31-20.16)) and those who had got deworming had 5.28 times (AOR=5.28, 95% CI :(2.28-12.24)) more likely utilized ANC service than those never tested their urine and never dewormed respectively. Decision making power of the women had strong positive association with ANC utilization. Mothers who made decision for ANC visit by themselves had 8.36 times (AOR= 8.36, 95% CI: (3.30-21.24)) more likely utilized ANC when compared with those whose decision making power was on their husband's hand. In a similar manner maternal comprehensive knowledge about ANC service had strong positive association with ANC service utilization. As a unit increase by the knowledge of the mother, ANC service utilization increases by 1.46 (AOR= 1.46, 95% CI: (1.24-1.72)) (table7).

Table 7:-Final logistic regression model with variables associated with ANC utilization among mothers in Lemo woreda Southern Ethiopia, March, 2015

Characteristics		ANC UTILIZATION		COR (95% CI)	AOR(95% CI)
		Yes-no (%)	No-no (%)		
Mother age	<=24	44(36.4)	8(3.5)	5.23(2.27-12.05)*	4.89(1.42-16.91)**
	25-29	61(50.4)	58(25.7)	1.00	1.00
	30-34	12(9.9)	93(41.2)	0.12(0.06-0.25)*	0.13(0.04-0.43)**
	>=35	4(3.3	67(29.6)	0.06(0.02-0.17)*	0.09(0.02-0.49)**
Educational status of mother	No formal education	9(7.4)	89(39.4)	0.19(0.09-0.41)*	0.16(0.04-0.64)**
	Primary school(1-8)	54(44.6)	102(45.1)	1.00	1.00
	Secondary and above(>=9)	58(48)	35(15.5)	3.13(1.84-5.34)*	0.90(0.35-2.33)
Husband education status	No formal education	6(5)	53(23.4)	0.29(0.11-0.72)*	1.07(0.16-7.16)
	Primary school	40(33)	101(44.7)	1.00	1.00
	Secondary and above	75(62)	72(31.9)	2.63(1.61-4.29)*	1.48(0.57-3.84)
Income	Least tertiary,<470	12(9.9)	77(34.1)	0.25(0.12-0.48)*	0.18(0.06-0.58)**
	Middle tertiary 470-100	68(56.2)	107(47.3)	1.00	1.00
	Highest tertiary>1000	41(33.9)	42(18.6)	1.54(0.91-2.60)	0.74(0.28-1.98)
Parity	primiparous/ 1	28(23.1)	21(9.3)	1.98(1.05-3.73)*	1.50(0.40-5.73)
	multiparas 2-4	80(66.2)	119(52.7)	1.00	1.00
	Grand multiparas ≥5	13(10.7)	86(38)	0.23(0.12-0.43)*	0.82(0.18-3.79)
Family size				0.74(0.65-0.85)*	1.33(0.93-1.89)
Pregnancy status	had plan to become pregnant	101(83.5)	156(69)	1.00	1.00
	wont to wait or delay	15(12.4)	47(20.8)	0.49(0.26-0.93)*	0.38(0.11-1.29)
	don't want any more child	5(4.1)	23(10.2)	0.34(0.12-0.91)*	0.51(0.07-3.70)
Decision maker for ANC	women	89(73.6)	60(26.5)	7.70(4.67-12.69)*	8.36(3.30-21.24)**
	Husband	32(26.4)	166(73.5)	1.00	1.00
Source of information Media	No	45(37.5	35(16.3)	3.09(1.84-5.18)*	1.23(0.44-3.44)
	Yes	75(62.5)	180(83.7)	1.00	1.00
Deworming	not given	43(35.5)	116(66.3)	1.00	1.00
	Given	78(64.5)	59(33.7)	3.57(2.19-5.80)*	5.28(2.28-12.24)**
Blood tasted	No	21(17.4)	68(38.9.)	0.33(0.19-0.58)*	0.61(0.23-1.67)
	Tasted at least once	100(82.6)	107(61.1)	1.00	1.00
Urine tasted during ANC visit	No	73(60.3)	159(90.9)	1.00	1.00
	Tasted at least once	48(39.7)	16(9.1)	6.53(3.48-12.27)*	6.82(2.31-20.16)**
Told about danger signs	Yes	101(83.5)	106(60.6)	1.00	1.00
	No	20(16.5)	69(39.4)	0.30(0.17-0.57)*	0.90(0.31-2.57)
Knowledge sum				1.51(1.37-1.66)*	1.46(1.24-1.72)**

*Significant at p-value <0.25 **Significant at p value <0.05 Reference= 1.00

CHAPTER SIX DISCUSSION

According to the WHO recommendation, every pregnant woman should receive at least four ANC visits during pregnancy[2]. However, in this study only 34.9 % of the mothers had the recommended four and above ANC visits which is a bit higher than the study conducted in Yem special woreda(29.1%) and the mini EDHS2014 report(32.1%) [31,45]. This difference could come from the current higher attention towards maternal health than ever, so the time gap might have contributed to the difference with that of Yem study. The difference in access since EDHS include the remote areas and this study considered mothers having access to the service while the EDHS might not. Age of mothers found to be negatively associated with ANC utilization, mothers with age ≤24 years had utilized ANC more likely than the reference group (25-29) years old. However, this relationship is common. This finding is similar with the study conducted in Bangladesh, this might be due to young women might have more information and awareness about ANC than older [16], but contradict with study in Ghana where, as the age of the mother increase ANC utilization also increases and in Zimbabwe where no variation with age[15,46]. These differences might be due to the socio demographic and socio cultural deference; since older women were influencing young women by sayings and sharing different past experiences as they were healthy without attending any ANC, no difference if they attend or not and like in this study. And there might be previous pleasant experience, which motivate Ghana and Zimbabwe women to attend and utilize ANC more. This study also found that mothers' educational level had significant association with outcome variable, ANC utilization. Mothers who had no formal education had less likely utilized ANC when compared with those who had completed primary school. This is comparable with the study conducted in Ethiopia, Mekelle city and Anambra State in Nigeria, where as mothers education level increases utilization also increase[21,47]. This might be due to high exposure to many sources of information so might have high awareness about modern health care and its effectiveness and such educated women might also resist to accept any social and cultural influence from others which was found to be raised by many participants as factor for ANC utilization in qualitative result of this study. In this study income becomes one of the significant determinants of ANC utilization. Women who were in the lowest percentile income category had less likely utilized ANC than women in the middle percentile. This is similar with the study conducted in Bangladesh where women from higher income family utilized ANC service more as recommended than lower house holds[16]. These could be due to economical independency of women enable them to make wise decision about their own and get ANC from their preference site than their counterparts.

Women who can make decision on ANC issue by their own had utilized ANC more likely when compared with those whose decision making power was on their husband's hand. Qualitative finding among many of the discussants supported this as they had low decision making power in the house hold due to economic, social and cultural influences like cultural thought women should stay decent. The society even the women themselves accepted the men high decision making power in every issue in the house hold as normal due to men are source of money and also social, nearby family influence like mothers in law not encourage women decision making power. This finding is in line with the study conducted in Nurpur Shahan in Islamabad and an ethnographic study in Pakistan where women who make decision by their own utilized four or more ANC as recommended than those who lacks support specially husband approval and mothers in law influence[18,48]. This could be due to women who can make decision by their own might be in economic independency and an educated women, so they can convince their husband's and family and not be influenced easily by significant others so can decide and use.

Knowledge of the mothers was strong predictor of ANC utilization. Having good comprehensive knowledge on ANC increase ANC utilization by 1.46. This is in line with the qualitative finding where significant number of the participants agreed that, among the main reasons for not attending or attending less than the required ANC was due to lack of awareness, don't knowing the pregnancy related danger sign, the right time to start ANC, the services being given there, others think attending twice is more than enough, others also know if TT doses are completed in the previous pregnancies, it is enough thinking that the only service is TT and stopped assuming that no benefit from mere palpation unless some medications or injections are not provided at each visit, mothers gave priority for other business if no illness or if busy. This is in line with the studies conducted in other parts of Ethiopia, Metekel zone, where the knowledge of mother had strong positive association with ANC utilization and a qualitative study in South Yorkshire, UK where mothers gave priority for other business than ANC due to lack of awareness[28,37]. Possible explanation for this could come from knowing about the benefit and risk of pregnancy may make them alarmed, better understand and accept ANC service and reduce any barriers to access and utilize ANC.

Women who get deworming during ANC visit had more likely utilized ANC service when compared to their counter parts. As well, women who get urine test at least once during ANC visit had also utilized ANC more likely when compared to their counter parts. In support of this finding from qualitative result showed, almost all informants and discussants agree that availability of services and supplies like deworming, the laboratory (simple test kits like KHB, RDT, HCG) facilities and the medications like

deworming in the nearest health institution especially at health posts level are basic things they need when they attend ANC clinic, unless absence of this supplies make HEW to appoint or refer pregnant women to other facilities, so that women become dissatisfied, think as there was no quality service there and not return back latter. This finding is similar with the study conducted in Tanzania where supplies availability had strong association with ANC utilization[40].This might be due to most women go after some illness occurrence and perceive ANC primarily as a curative care rather than preventive.

6.2 Limitations of the study

The current study has a number of strengths. Application of both quantitative and qualitative approaches also provided updated knowledge on factors associated with the utilization of ANC. Nevertheless this study has its own limitations. Cross-sectional nature of the study limits the capacity to draw any causal inferences. Also the survey asked the information retrospectively, this may have some recall bias. Nevertheless this bias is not considered problematic.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

In conclusion, in this study, despite high proportion of respondents favorable attitude towards ANC from health institution, there was still high proportion of women not utilising the recommended ANC servise. Eventhough majority of women had one ANC visit, only small portion of them utilized the minimum recommended four ANC. The direction of the result emplies that still there are social and cultural influence from husbands mothers in-law,TBAs and nighbors. On the other hand there are also social supports and networks in the community from HDAs, TBAs and families which ranges from encouraging by telling them about ANC as it is good service to educating and refrring women for ANC which need due attention to be strengthened. On top of these, health care providers and supplies issues which affect starting and complesion of the recommended ANC visit and knowledge/awareness gap among women about ANC, especially among lower income and lower education cathegory which need to be adressed in detail. There fore, the need to increase discussion with women, with their partner's, with the community and the health workers in the community on ANC is vital.

Hadiya Zone Health Departement, District Health Office, health workers, and any organizations working on MCH in the study area should follow the following recommendations.

 Hadiya Zone health departement and Lemo Woreda Health Office should focus on Strength, Weakness, Opportunity and Threat (SWOT) analysis and use this finding to communicate with stake holders like Regional health bureau, NGO (Clinton Foundation Health Access Initiative, which is currentlly working in the specific woreda on MCH) to allocate budget and directly go to the grass-root level and fill the gap identified by this study among the eligible women by :-

- Giving training for health workers on good approaches and care for pregnant women.
- Strengthen the current focus of mathernal care provision by female midwife care providers.
- Availing supplies and facilitating for HEWs to be present at health post at working hrs.
- Preparing IEC/BCC materials, media and facilitate sessions for community and women education and awareness creation and avail ambulance service.
- Capacity building through continuos refreshments and support of health workers, specially at community level (HEW, HDAs).

   Health extension workers and health workers.

- HEW Should be punctual and give the night service.
- Should collaborate with and strengthen the HDAs and TBAs, on refferal system, communicate with partiners/ husbands / and other socially influencers like mothers in law to educate and increase their awareness on ANC.
- Should encourage communication between couples and involving men in ANC are the keys to improve ANC utilization.
- **Recommandation for researchers :** Further study on quality of care including observations during care provision and supplies availablity in health institution is needed**.**

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ANNEXIS

ANNEX I: Questionnaire for community based survey on factors affecting antenatal care Utilization English version.

Verbal consent

Greeting

Hello! My name is _____________ from hosanna health center. We are conducting a study on mother's antenatal care attendances during pregnancy and factors affecting utilization of these services. You are kindly requested to be included in the study, which will have importance in improving maternal and child health services. The interview will take about 30 minutes. No information concerning you, as individual will be passed to another individual or institution without your agreement. Your participation is voluntary and you have the right not to participate fully or partially. Only honest answers would contribute to improvement of health planning. If you agree to be included in this study I will start my questions by asking general identification points.

The study has approval from Jimma University. "May I continue?"

If yes, continue interviewing.   If No, thank and stop interviewing.

Name of the interviewer _____________ Sign. _____ Date of interview________ cell phone…

Name of the supervisor _ ____________ Sign. _______ Date________cell phone…………

1. Households Identification

001. Questionnaire Code______   002. Kebele _____

003. House number ________   004. For how long have you been in this area before giving birth_____?

Part one

Socio – demographic characteristics of the study population

101	Maternal age	…………..years
102	Education level	1. No formal education 2. Only read & write 3. grade 1 to 4 4. grade 5 to 8 5. grade 9 to 10 6. grade 11-12 7.college diploma and above
103	Husband education level	1. No formal education 2. Only read & write 3. grade 1 to 4 4. grade 5 to 8 5. grade 9 to 10 6. grade 11-12 7.college diploma and above
104	Maternal Ethnicity	1. Hadiya 2. Gurage 3. Amhara 4. Kembata 5. Silite 99. Other (Specify)------
105	Maternal Occupation	1.House wife 2. Farmer 3.Civil servant 4. Merchant 5.student 6. private employee 99. Other specify………
106	Maternal Religion	1. Protestant 2. Muslim 3. Orthodox 4.chatholic 99.Other (specify)------
107	Marital status	1. Single 2. Married 3.Divorced 4.widowed 5.Separated

108	Average family income per month	_______Ethiopian Birr
109	What is the number of people who live usually in this household?	Total______ in number.

PART TWO

Obstetric factors, institutional factors and source of information related to ANC utilization.

S. No	Question	Alternative answers
201	How many times you become pregnant before?	1.Once 2.Twice 3.Three times 4.Fourtimes 5.Five and more times
202	What was the number of delivery?	_______
203	What was your plan during the last pregnancy?	1.I had plan to become pregnant 2.I wont to wait or delay 3.I didn't want more child
204	Have you heard about ANC service?/ the care being given during pregnancy	1. yes 2. No skip to Q 206
205	If yes, from where have you heard? ** more than one answer is possible	1.Heath institution…yes……..no 2.Radio/TV ……….yes……..no 3.TBA …………….yes……..no 4.HEWs……………yes……..no 5.Relatives ………..yes……..no 6.Women's group ….yes……..no 7. HDAs …………..yes……..no 99.othres specify
206	Have you attended ANC service during your last pregnancy?	1.Yes 2.No skip to Q 217
207	If yes to Q 206 from where?	1. Hospital 2. Health center 3. Health post 4. TTBAs 99.Others specify
208	If yes to Q 206 at what gestational age did you first started?	1. 1-3 months 2. 4-6 months 3. 7-9 months 88. Don't know
209	If yes to Q 206 What was the reason for you to started initiating antenatal care /ANC follow up/?	1. Health problem/sickness …yes….no 2. To start regular checkup ….ye…..no 3. Previous pregnancy complications.. .yes. No 4. Previous fetal loss….. ye…..no 99. Other specify-----------
210	If yes to Q 206, what was the total number of ANC visits from health institution?	1. One 2. Two 3. Three

		4. Four and above	
211	Was there anyone who told you to go or refer you to health institutions in the community for ANC?	1.Yes 2.No	
212	If yes who were they?	1.TTBAs ………yes……..no 2. HDAs/ one to five network leaders. Yes….no 3.HEWs………yes……..no 99. Other specify………	
213	Was any of the following care given for you during ANC visits?	1.No 1. TT immunization. 2. Iron folic acid. 3.Drug for worm 99. Other specify…	** If yes, how many times? 2.Once 3.Two and more 2.Once 3.Two and more 2.Once 3.Two and more
214	Have any of the following done? 214.1 Weight measured? 214.2 Blood pressure measured? 214.3 Urine sample taken? 214.4 Blood tested?	1. No 1.weight 2.BP 3.Urine 4.Blood test 88.Ididn't remember 99. Other specify…	** If yes, how many times? 2.Once 3.Two and more 2.Once 3.Two and more 2.Once 3.Two and more 2.Once 3.Two and more
215	During any of your antenatal care visit(s), had you been told about the signs of pregnancy complications?	1. Yes 2. No 88. I did not remember	
216	If you did not attend any ANC or attended less than 4 ANC visit, What was the reason not to attend? (Multiple response is possible) **(Don't read the choices)	1. No knowledge about ANC service (1)yes (2) no 2. Being in a state of good Health (1)yes (2) no 3. Too busy to attend ANC Clinic (1)yes (2) no 4. Expenses for ANC clinics are Unaffordable (1)yes (2) no 5.Past experience was normal (1)yes (2) no 6.laubur comes before the next appointment date (1)yes (2) no 7. ANC clinic too far from my home (1)yes (2) no 8. Long waiting time at HI (1)yes (2) no 9. No husband support (1)yes (2) no 10. My religion not allow (1)yes (2) no 11.My culture not allow (1)yes (2) no 12.Fear of blood test (1)yes (2) no 88. I don't know 99. Other specify______	
217	Do you think that waiting time was a problem to attend ANC?	1. Yes 2. No 88.Don't know	
218	If yes to Q217 on average how long did you wait for ANC at health institution?	1. ____ Hrs	

219	Do you think that distance from health institution was a problem to attend ANC?	1. Yes 2. No 88.Don't know
220	How long do you walk to get to the nearest public health institution	1. < = 1 hour 2. >1 hour

PART THREE:
Socio cultural characteristics.

301	Does your husband have wife(s) other than you?	1.Yes 2.No
302	Was there any one who supports/ push you to attend ANC?	1.Yes 2.No
303	If Yes who are they? **Don't read the chooses	1.Hasband (1)yes (2) no 2.My mother (1)yes (2) no 3.Mothers in law (1)yes (2) no 4.Relatives (1)yes (2) no 5.TTBA (1)yes (2) no 6.HDA (1)yes (2) no 99.Others specify
304	Who is (was) the decision maker to go for ANC visit?	1.Me(mother) 2.Husbund 3.My mother 4.Mothers in law 99. Others specify…….
305	Was there any one who told you attending ANC is not good or disappoint you from attending ANC?	1.Yes 2.No
306	If yes who are they? **Don't read the chooses	1.Hasband (1)yes (2) no 2.My mother (1)yes (2) no 3.Mothers in law (1)yes (2) no 4.Relatives (1)yes (2) no 5.TTBA (1)yes (2) no 6.HDA (1)yes (2) no 99. Others specify ……..
307	Do you think that sex of health care providers is a problem for ANC service utilization?	1. Yes 2. No.
308	If yes for Q 307 which sex do you prefer?	1.Male 2.Female
309	Why do you prefer this sex?	1.For cultural reason (1)yes (2) no 2.For religious reason (1)yes (2) no 3.The preferred sex have good approach with ANC client (1)yes (2) no 99. Other specify……..

PART FOUR

Respondent's knowledge related to ANC service utilization.

S. No	Questioner	Alternative answers
401	Do you know the starting time of ANC visit/follow up?	1.Yes 2.No
402	If yes at what month/gestational age should a pregnant woman start ANC?	1. 1-3 months 2. 4-6 months 3. 7-9 months
403	Do you know the minimum required number of visits a normal pregnant woman should attend for ANC?	1.Yes 2.No
404	If yes, at least how many visits is /are/ needed?	1. One 2. Two 3.Three 4.Four or more
405	Do you think that any pregnant women may encounter pregnancy related health problems?	1. yes 2. No 88.Don't know
406	Do you know dangerous health problems related to pregnancy?	1. Yes 2. No
407	If yes to Q406, can you mention some of them? (More than one answer is possible) **Don't read the options	1.Vaginal bleeding(1)yes (2) no 2.persistant vomiting (1)yes (2) no 3.hand/ face swelling (1)yes (2) no 4.convoulsion 1.yes 2.no 5.loss of fetal movement (1)yes (2) no 6.Sever Headache (1)yes (2) no 7.Seizure (1)yes (2) no 99.Others specify-------------
408	What do you do if such complication(s) will occur during pregnancy?	1. Go to traditional healers 2. Go to TBA

		3. Go to health institution 4.I don't go anywhere 88.Don't know 99. Others specify…………
409	Do you know the services being given at ANC unit?	1.Yes 2.No
410	If yes, what are they? **don't read the chooses	1. Advising and counseling(1)yes (2) no 2.Blood testing (1)yes (2) no 3.prevent MTC transmission of disease(1)yes (2) no 4.Immunization/TT injection(1)yes (2) no 5.Iron folic acid supplementation(1)yes (2) no 6.Fetal growth monitoring(1)yes (2) no 7. information about place of delivery and birth preparedness(1)yes (2) no 99. Others specify-------------

Part five Attitude towards ANC utilization

S.N	Questions	Answers	
501	Attending ANC service is very important	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
502	ANC follow up should be Attended only in health institution	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2	

		Strongly disagree -------1	
503	All cares which are being provided in ANC unit are very important	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
504	Starting ANC with in the first three months of pregnancy is very important	Strongly agree-----------5 Agree-------------------4 Neutral ------------------3 Disagree -----------------2 Strongly disagree--------1	
505	ANC should be followed for at least four times during a pregnancy only at public health institution.	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
506	Health institutions are equipped enough with materials and man power for ANC service provision.	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
507	Health institution is favorable for ANC service utilization.	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
508	Health care providers in health institution are friendly and in good approach to give ANC service	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	

509	ANC care provision by male health care provider has no problem	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	
510	I will go GHI for ANC service in the future if I get pregnant.	Strongly agree-----------5 Agree ---------------------4 Neutral -------------------3 Disagree ------------------2 Strongly disagree -------1	

ANNEX II questioner Hadiyissa version

Xumaato

Xumm ki'inena ihonna! Ii sum _____________ yamamommo, waarumok hosaa'in fayaoo'm egechchi mininsete.waarum quuxxi, anni losoomok Jimm yuniversiiteenete, eebagan matakam losanuwiinse mat annann annann sorobuwwa isimma.Eeebikinam ka nni uulane amoi qaroo'in illage isoo fayaoo'm egechcha teim lam foor ihaa heeukuyi isoo fayaooim egechcha isameena hooroo annann annann luwuwi mah ihuk dae sorobiminate. Ee bikina ki'nem ka amoikaa ciiluwikaa leho gatisimina isakam soroobina xaminoom xamichchuwa dabarimine haramamtakona mashshoomine xaminoommo.kukim lophphukare mat 30 daqiiqa masookko. Ki'neense aa'inoom maaxaq wocca te'im ayyi sawitom ki'n iiti beeka mull manina higinsaa uwinoombeean ihukisa xoxxoolinsaa kulleena iitinoommo.Ki'ne gidinsaateyo ka xamichchuwa dabatakona isinoommok, hasakolas ayyi amanem uuwlisimma xantakammo.ka sawitone iitamtakoolas ashsheerima xanommo. Xalei caak ihaakoo hankoi dabachchi uwitakamisina mashshoomine edaa tiisiisommo. Kusoroob jimm yuniversiiteiinse hanqooma siidakohane ihukisam lainseena hansoommo.

"Ashsheerim xansiisoo?"

Xansiisoohan ihulass xamima ashsheelehe. Xansiisoobelas galaxitaka'aa uulisehee.

Xammaanchch summi______________ furma'i. _____ xamako'i ball________

001. Xamichchi annann mare'e (koodda) ______

002. Ga'inna Qaaballe'e_____

003. Mi'n Xigo ________

004. Lasaanchch ciila qatakeena illage Ka qabale,ene hinkaa'na hee'ilaka'a? _____ (aganna)

Luxx baxanchcha.

Xa'imamaa'n hegeeq heechch gatti xamichchuwa.

101	Umuri mee'o	------------hiinchcho
102	Lob losa'n gaball	1. Mahim losan bee'e 2. Xalei kitaabimmaa qananaimaa xanommo. 3. baxanchch 1 tii- 4rii afebe'e 4. baxanchch 5tii-8ti afebee 5. baxanchch 9sii 10 afebe'e 6. baxanchch 11- 12afebee 7.collejji diplomaa eehanii hanaanii
103	Ki 'n mi'n anichik losa'n gaball meeo?	1. Mahim losan bee'e 2. Xalei kitaabimmaa qananaimaa xanommo. 3. baxanchch 1 tii- 4rii afebee 4. baxanchch 5tii-8ti afebee 5. baxanchch 9sii 10 afebee 6. baxanchch 11- 12afebee 7.collejji diplomaa eehanii hanaanii
104	Ki giichch maruchcho	1. Haddiya 2. Guraage'e 3. Amaara 4. Kambaata 5. Silixe'e 99. Mulekk yolass-----

105	Ki baxx maruchcho?	1.Min amatte 2.Abuulanchote 3. Addi’l baxanchchotte 4. Daddaraanchchotte 5. Losaanchotte 6.manina qaxaramammohane 99. Mulekk yolass-----
106	Ama’nnati maruchcho?	1. Protestaanta 2. Islaanchcho 3. Ortodoksa 4.kaatolika 9. Mulekk yolass-----
107	Min issim ogor hinkide?	1.Min isumoyyo 2.Min issaammo 3.Tiraammo 4.Mi’n anichchi lehaakko 5. Annan inkaammo.
108	Ka mi’nekk mat aga’n aago’i meeo?	_______Bira
109	Ka mine heeoo man xig mee’o?	………………

La’im baxanchcha.

Qa’l ogora, fayaoo’m mi’n halatoo, woshsha maceesakam bey ogoraa amadoo xamichchuwa

Xigo.	**Xamichchuwa**	Doo’luwwa
201	Kannii ilage mee’i kore lam foor ikaka’a?	1. Mat kore 2. Lam kore 3. Sass kore 4. Soor kore 5.ont koree hanaanii
202	Mee’i ooso qataka’a?	_______
203	Lasaanch ciila qatakoi amane ki’n gudo’i hinkidet heeukko?	1. Lam foor iheena hasamatetem 2. Hofokam egereena hasaa heeummo 3. Mull oosi hasumoyyo heukko.
204	Qarakoo’n ilagge isakam fayao’m egechch bikina maceesaka’a laqakammo?	1. Ooyya 2. Maceesaa laoomoyyo (ihulass xamichchi 206 higgehe)
205	Macceesako’oolas haniinse? **Doo’luwa qananalakote	1.Fayaoo’m egechch miniinsee (1). Maceesaammo (2).Maceesumoyyo 2.Radooninse/Telebejiininsee (1). Maceesaammo (2).Maceesumoyyo 3.Hegeeq amo’i qasiisaaninse (1). Maceesaammo (2).Maceesumoyyo 4.Xeenaa

		ekkisteenshininse (1). Maceesaammo (2).Maceesumoyyo 5. Hegeeq maniinse/qarinse (1). Maceesaammo (2).Maceesumoyyo 6. Amoi dumichchinse (1). Maceesaammo (2).Maceesumoyyo 7. Fayaoo’m lichchi gogotiinse/Xeena limaat sarawiitiinse/ (1). Maceesaammo (2).Maceesumoyyo 99. Mulekk yolass……..	
206	Lasaanchch ciilla qatakoi amane qarakoo’n ilagge isakam fayao’m egechch awaaxxitaka’a?	1. Ooyya 2. Awaaxummoyo (ihulass xamichchi 216 higgehe)	
207	Awaaxitakolas hannone?	1. Hospitalanne 2. xeenaa xaabaanne 3. Xeena kelanne 4.Hegeeq amoo qasiisaaninse 99. Mulekk yoolas………	
208	Awaaxitakolas meei aganane asheetako’o?	1. 1-3 aganane 2. 4-6 aganane 3. 7-9 aganane 88. Laoomoyo	
209	Awaaxitakolas qai’ll ilagge isakam fayaoo’m eggechch luxxekka asheetakamisina isukk mashkai maruchcho?	1. Fayyaoomma hoonge/xisumbikina (1) .Hanqame (2). Hanqayo. 2. Qa’l ilagge isakam fayaoo’m eggechch awaado hassaate (1) .Hanqame (2). Hanqayo. 3.illageen qedd gambayubikina (1) .Hanqame (2). Hanqayo. 4.Iillageen ciilli/qachchi lehu bikina (1) .Hanqame (2). Hanqayo. 99. Mulekk yoolas………	
210	Awaaxitakolas, fayaoo’m egechch mininse mee’i kore awaaxitako’o?	1. Mati kore 2. Lam kore 3. Sass kore 4. Soor koree hanaanii	
211	Hegeegone xeena xaaba’a teim hospital matakona geegesu te’im refeerau man yoo’o?	1.Yookko 2.Bee’e(213 higehe)	
212	Yoolas ayete?	1.Hegeeq limd amo’o qasiisaano meento (1). Hanqame (2). Hanqayo 2. Fayaoo’m lichch baxxaano/ mato onto awonsaano (1). Hanqame (2). Hanqayo 3. Xeena ekestenshina (1).Hanqame (2). Hanqayo 99. Mulek yoolas…………	
213	Kannii woroon yoo awaaduwa uwaka’a?	1. Uwakooyyo	2. Uwakookko ** mee’i

		1.Teetanoos kitibaata 1. Uwakooyyo 2.xiiga edoo kiniina 1. Uwakooyyo 3.Godaphphi daquu'l Kiniina 99. Mulekk yoolas…	Kore? (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii …(2).mat kore (3) lam koree hanaanii
214	Awaaxitakolas Kannii woroon yooi awaaduwa siidaka'a? 214.1 Killo'o keenamtaka'a? 214.2 Xiiq gafeechcha keenamtaka'a? 214.3 Wo'i shuma moo'amtaka'a? 214.4 Xiiga maramaramtaka'a?	1. Awaaxummoyo 1.Killo'o 1. Awaaxummoyo 2. xiiq gafechcha 1. Awaaxummoyo 3. Wo'i shuma 1.Awaaxummoyo 4.xiiga mirmawa 88. Sawoomoyyo 99. Mulekk yoolas	Awaaxitakolas mee'i Kore? (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii (2).mat kore (3) lam koree hanaanii
215	Qa'l ilagge isakam fayaoo'm eggechch istakkoi amane lam foor amo'one afoo hawojji bikina kuraka'a?	1. Kurakookko. 2. Kurakooyyo 88. Sawoomoyyo.	
216	Qail ilagge isakam fayao'm eggechcha istakko'in yoolas, teim Soor korii woroon isitakolas mashkai maha? **matii hanaan dooilim xansiisokko **Doo'luwwa qananalakote	1. Qail ilagge isakam fayaoom eggechcbikina lachch hoonge (1). Hanqame (2). Hanqayo 2. Fayaoom heeu bikina (1). Hanqame (2). Hanqayo 3. Baxx lophaate (1). Hanqame (2). Hanqayo 4. Qa'l ilagge isakam fayaoo'm eggechch miqo'i xansiiso beebikina (1). Hanqame (2). Hanqayo	

		5. Kanni ilage xumine qaroom bikina (1). Hanqame (2). Hanqayo 6. Qaxaro'i aman afooinm xuuchchi warukko (1). Hanqame (2). Hanqayo 7. Qail ilagge isakam fayaoom eggechch beyyi qee'llloominse kiaa (1). Hanqame (2). Hanqayo 8. Fayyaoo'mm egecchch minene lobakata egesiiso bikina (1). Hanqame (2). Hanqayo 9. Mi'n anichchiinse hara'mato hoogaamma (1). Hanqame (2). Hanqayo 10. Ama'naxx seer uwoobeebikinna (1). Hanqame (2). Hanqayo 11. Heechch haala'xx / bahi'll/ seer uwoobeebikinna (1). Hanqame (2). Hanqayo 12. Xiiq mirmara badimma (1). Hanqame (2). Hanqayo 99. Mulekk yoolas ______
217	Fayaoo'm eggech minene masoo aman lobakat qeda qoocookko yitaa sawitoo?	1. Ooyya hundamanem. 2. Qedda qoocooyyo. 88.Laoomoyyo
218	Qocoohan ihulass hinkaan amanne egesiisoo?	1. ____ Saata.
219	Fayaoo'm egechchi mine afakkena yoo qee'iloom qeda qoocoo?	1. Ooyya hundamanem. 2. Qedda qoocooyyo. 88.Laoomoyyo
220	Lokine hinkaan amanne masoo?	1. < =1 saaata 2. >1 saaata

Saxx baxanchcha:

301	Ki mi'n anichchina kiini mull meent yoo'o?	1. Yookko 2. Bee'e
302	Qai'll ilagge isakam fayaoo'm egechcha isitakamisina gafeansoo/ hara'mato isoo mani yoo'o?	1.Yookko 2.Bee'e
303	Yoolas ayiayaammo?	1. Mi'n anichcho (1). Hanqame (2). Hanqayo 2. Iyumma (1). Hanqame (2). Hanqayo 3. Ballote (1). Hanqame (2). Hanqayo 4. Qarimanna (1). Hanqame (2). Hanqayo 5. Hegeeq amo'o qasiisaano (1). Hanqame (2). Hanqayo 6. Fayaoo'm lichch gogota/tena limaat seraawita (1). Hanqame (2). Hanqayo 99. Mulek yoolas……….

304	Ki'n minene kaa quuxone lob oogato uwoo (wosanoo) ayete?	1.anete (ama) 2. mi'n anichcho 3. Iyumate 4. Ballote. 99. Mulekk yoolas……….
305	Qai'll ilagge isakam fayaoo'm egechcha isitakambeeisina hooroo mani te'im dannaam ihubeeisa kuroo mani yoo'o?	1.Yookko 2.Bee'e
306	Yoolas ayiayaammo?	1.Mi'n anichcho (1). Hanqame (2). Hanqayo 2. Iyumma (1). Hanqame (2). Hanqayo 3. Ballote (1). Hanqame (2). Hanqayo 4. Qarimanna (1). Hanqame (2). Hanqayo 5. Heggeq amo'o qasiisaano (1). Hanqame (2). Hanqayo 6. Fayaoo'm lichch gogota/ tena limaat seraawita/ (1). Hanqame (2). Hanqayo 99. Mulek yoolas……….
307	Fayyaoomma egechch baxaa'n albachch qai'll ilagge amoina uwakam awaadina hawo qoocookoo yitaa sawitoo?	1.Eeya qoocookko 2. Qoocooyyo.
308	Xamichchi 308 dabachchi qcoohan ihulass hink albachchi e'llo?	1.Goonchchi 2.Meentichchi
309	Ka albachcha mahina doo'ilitako'o?	1.Ugado'i uwoo bee'i bikina (1). Hanqame (2).Qophphano 2.Amanat uwoo bee'i bikina (1). Hanqame (2).Qophphano 3.Doo'ilum albachch amoine danamisa shiinatamoo bikina (1). Hanqame (2).Qophphano 99. Mulek yoolas……….

Soo'l baxanchcha.

Xamichchi Dabaraanekka lachcha keenimina xa'makam xamichchuwa.

Xig.	Xammichcha	Dooiluwwa
401	Mat lam foor ama qai'll ilage isakam fayaoo'm egechcha hink amane asheerim hasisoodae laqakammo?	1. Ooyya laoommo. 2. laoomoyo
402	Laqqakaman ihulass mee'i aganane	1. 1-3 aganna

	asheerim egeramo?	2. 4-6 aganna 3. 7-9 aganna
403	Mat faya’a lam foor ama hoogo beyo mee’i kore qa’l ilage isakam fayaoo’m egechc isim hasisoo dae laqakammo?	1.Yes 2.No
404	Laqqakaman ihulass mee’o?	1. mat kore 2. lam kore 3. sass kore 4. Soor koree hanaanii
405	Mat faya lam foor amanne lamfoorominne amaxamma hawi affokko yitaka’a sawitakammo?	1. Ooyya afookko yaa sawoommo. 2. Sawoomoyyo.
406	Lam foor amoone Qail ilagge Afoo hawojj bikina laqakammo?	1. Ooyya lanqoommo. 2. Lanqoomoyyo ihulass xiq 306 higgehe
407	Laqqakaman ihulass, mat mato kulehee. (Matii hannaan dabachchi xansiisokko).	1. Hundi amanem uwiisimma. (1). Hanqame (2).Hanqayo. 2. Xiiq hofechcha (1). Hanqame (2).Hanqayo. 3. Lokk dashshimma (1). Hanqame (2).Hanqayo. 4. Hroore damunsimma (1). Hanqame (2).Hanqayo. 5. Menti orachchi xig dunamimma (1). Hanqame (2).Hanqayo. 6. Xiiq gafechchi lophimma (1). Hanqame (2).Hanqayo. 7. Huxxisimma (1). Hanqame (2).Hanqayo. 99. Mulekk yoolas………
408	Kido’ne hawojj afuta’n maha isitakamo?	1.Abashsh qara’l man beyo sawoommo 2. Hegeeq amo’ qasiisa’n beyyo maroommo 3.Faya’oom egechch mine maroommo 4.Hanom maroomoyyo 88. Maisoomdae laoomoyyo 99. Mulek yoolas….
409	Lam foor amoina hakii’m minene uwakam awaaduwa laqakammo?	1.Eeyya lanqoommo 2.Lanqoomoyyo
410	Laqqakaman ihulass kulehee. ** Do’luwa qanana’lakote.	1. Fayaoo’m losanno sogitanoo (1).Lanqoommo (2). Lanqoomoyyo 2. Xiiq mirmara (1).Lanqoommo (2). Lanqoomoyyo 3. Amoiinse ciiluwane higoo jabo hoo’ilanchchina (1).Lanqoommo (2). Lanqoomoyyo 4. Kitibaata aa’imina (1).Lanqoommo (2). Lanqoomoyyo 5. Xiiq hofechcha hooro kiniina

		(1).Lanqoommo (2). Lanqoomoyyo 6.Qachch li'ino awonima (1).Lanqoommo (2). Lanqoomoyyo 7. Qai'll beyo, gudo'oo sogitanoo (1).Lanqoommo (2). Lanqoomoyyo 99. Mulekk yoolas

Baxanchchi Onto, amo'mochcha keeno xamichchuwa

Xigo	Xamichcha	Dabachchi	
501	Qai'll ilage isakam fayaoo'im egechch horiyem lobakata awaadohane	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
502	Qaill ilage isakam fayaoo'im egechcha xale'I fayao'm egechch minene isim hasisookko.	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
503	Fayaoo'm egechchi minene lam foor amoina uwakam awaad hundichchim lobakata awaadohane	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
504	Lamfooro'm awaadoo Luxx sas aga'n worone Ashsheerim lobakata hasisookko.	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
505	Qai'll ilage isakam fayaoo'm egechcha hoogako beyyone soor	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4	

	kore xale'i addi'l(mangist) fayaoo'm egechch minene isimm hasisookko	3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
506	Fayaoo'm egechch minene awaado uwoo baxxaanimii muutimii danaamisa Yookko.	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
507	Fayaoo'm egechch minn qa'll ilage isakam fayaoo'm egechchina hundisinem makka.	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
508	Fayaoo'm egechch mine yoo fayaoo'm baxxaani uwammoo awaadii mana awaadamooissii liransohane	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
509	Goon fayaoo'm baxann lam foor aamoina fayaoo'm awaado uwuta'n maham qedd bee'e	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	
510	Kannii lasage lam foor ikakolas qa'l illage isakam fayaoo'm egechchaisitakamok xale'i fayaoo'm egechch minenete.	1.Horiyem iitamommo -----------5 2.Iitammomo ---------------------4 3.Mahayome -------------------3 4.iitamomoyo ------------------2 5.Horiyem iitamommoyo -------1	

ANNEX III: FGD Guide line.

FGD guide for mothers who have less than one year child.

Greeting

Hello! My name is ___________ __ from hosanna health center. We are conducting a study on mother's antenatal care attendances during pregnancy and factors affecting utilization of these services. You are kindly requested to be included in this study, which will have an importance in improving maternal and child health services. The discussion will take about 60-90 minutes. No information concerning you, as individual or a group will be passed to another individual or institution without your agreement. Your participation is voluntary and you have the right not to participate fully or partially. We have also a tape recorder for information this is also based on your permission. Only honest answers would contribute to improvement of health planning. If you agree to be included in this study I will start my questions.

The study has approval from Jimma University. "May I continue?"

If agreed, give codes and start.

Kebele FGD conducted …………………

Date of FGD conducted: …………………………..

1. Tell me about ANC in the area you come from.

Do you know what ANC mean?

From where have you heard about this?

2. Where did usually or during last pregnancy go to get ANC services?

Why?

Who did told you to go the above mentioned place?

Why this place?

3. What do you feel about attending ANC service from health institution?

Is there any problem if you attend ANC from HI only?

What problems?

What do you think/ feel about service providers? (Pobe)

4. Are there any one in your community, house, neighbor who hinder you to go HI for ANC? (Probe)

Who are they?

What do they say?

Do you think they are right?

Any cultural/social or other religious reasons ?

Anyone who support or facilitate to go HI at home or community?

Who are they?

Whose support do you need more?

5. Do you tell me the gestational age you/ most women in your area started attending ANC services?

• Why at the time you have mentioned?

Who did you told about attending at this time?

Do you think this is the right time to start ANC?

Why?

What do you think if you start earlier than the time you have mentioned?

What do you think about disclosing pregnancy at early stage?

What will happen? Probe cultural, religious, social issues

What traditional believe are there?

What cultural practices?

Who say or did this?

How is the process?

What do you feel about their services?

What advice or services do traditional birth attendants give in your community for pregnant mothers?

What do you feel about them?

What role does elderly / others peoples play when a woman becomes pregnant in the society?

What do they do?

Who are they?

What role does health development army's /HDAs/ play concerning ANC?

6. Can you comment on how ANC clinics / health institutions/ Health posts by HEW are being run at the place you come from?

What do you suggest about the service being provided?

Whom do you prefer to assist? Male or female care providers?

Why?

Are there any additional things that make you not to attend ANC at HI / need to be improved concerning ANC service utilization?

Finally thank you for your cooperation by giving this valuable information!!

ANNEX IV: Health Extension Workers In-depth Interview Guide

Greeting

Hello! My name is ____________ from hosanna health center. We are conducting a study on mother's antenatal care attendances during pregnancy and factors affecting utilization of these services. You are kindly requested to be included in this study, which will have an importance in improving maternal and child health services. The discussion will take maximum of about 30-60 minutes. No information concerning you, as individual will be passed to another individual or institution without your agreement. Your participation is voluntary and you have the right not to participate fully or partially. Only honest answers would contribute to improvement of health planning.

The study has approval from Jimma University. "May I continue?"

Date of interview: …………………………

Name of facility/ health post/……………………………

Facility code number……………………

Name of health post ……………

A: Demographic data of HEW

1. Age in years……………….
2. Ethnic group……………..
3. Religion……………………
4. For how long have you been working in this kebeles as HEW?

B: HEW Role in ANC and challenges

1. What do you feel about ANC in this kebele?
2. Where did pregnant women go for ANC in this kebeles? Why?
3. Why do women not use ANC from health institution only in this area?
4. What role do you play in the care of ANC client? How?
5. What were the challenges when you give these services? How? Why?
6. What problems do you encounter in assisting ANC clients? Probe
7. How are the Community attitudes towards heath care providers and ANC service?

8. What are the social, cultural and religious barrier that hinders/affect ANC service provision and utilization here?

C. Referral linkage

1. Is there anyone who support or refer women to take ANC service and who had linking practice with you? Is it important?

3. What is the role of HDAs in ANC service?

4. What challenges have you faced when you do this?

5. is there any opportunity or support source?

6. What is your comment on women's utilization of the antenatal services and associated factors or challenges?

7. What is your recommendation to address such gaps? Thank you!!

ANNEX V: In-depth interview guide for HDAs leaders

Date of Interview ____________________

Name of the Village _______________________

A. Demographic data

1. Sex of person being interviewed Male [ ] Female [ ]
2. Age in years………………….. 3. Ethnic group………………..
4. Religion____________________
6. For how long have you been in this area?

b: ANC utilization practices

1. How do you look at ANC services utilization in this area?
2. In this area where do women go for Antenatal care checkup?
3. Give reasons for the chosen place.
4. In this area who is influential in deciding the place for pregnant Women where to get care? Probe, why…how…
5. Whom do you think women prefer to assist them during ANC? Probe
6. What are reasons for choosing them?
7. As a HDAs leader what complaints have you heard from women who attend ANC in the mentioned place or at health institution?
8. How are women in this community referred to the health facility for ANC?
9. What role do others play in ANC service utilization by pregnant women? Who are they?

10. What role do you play in ANC service utilization by pregnant women? How?

11. What are the challenges for you and pregnant women regarding ANC service utilization from health institution?

12. What are cultural or religious barriers that hinder women to seek ANC care/

13. What do you suggest about health care providers in health institution/ about HEW?

14. Do you have any additional comments concerning ANC service utilization and factors affecting?

Thank you for participating in the study

<u>Hadiyisa version duide line(FGD) /ANNEX III/</u>

1. Ki'nnuwwi hegeeqqi hoongi amo'i 'qa'l illa'qqi fayya'oo'm egechchi' bikkina Kure.

Hoongi amo'i 'qa'l illa'qqi fayya'oo is egechchi' bikkina laqqoo?

Kaka hannii macceesitto?

2.ka gundanne qatitti amma'n hoongenne 'hoongi amo'i qa'l illa'qqi fayya'oo'm egechcha' hannonne aa'illitto?

Eekke'e mattona ayyi kurukko?

Mahina eebeyyo doo'llitto?

3.fayya'ooma egechchi minneewwanne 'qa'l illa'qqi fayya'oo'm egechcha' aa'immanne mah macceesamoo?

Fayya’oomi egechchi minneewwanne‘qa’l illa’qqi fayya’oo’m egechcha’ aa’illittaare mah qeddi yookko?

Yoolas, mah mah?

4.ki ambanne (minenettem ihukko olla’anne) fayya’oomi egechchi minneewwanne ‘qa’l illa’qqi fayya’oo’m egechcha’ aa’illoobee’isa issoo manni yoo’onne?

Yoommamelas, ayyaamo?

Maha yamookkok?

Ixxuwwi gag hanqi ihamukkosa amma’nnamoo?

Mulli heechchiqqqnqinne, mateeyyi heechchinnee amma’nnatinne exxaakkoo mashka’uwwi yoo’onne?

ki ambanne fayya’oomi egechchi minneewwanne ‘qa’l illa’qqi fayya’oo’m egechcha’ aa’illoo’isina hara’mmoo manni yoo’onne?

Yoolas, ayyaam?

Ayyi hara’mmato ati lonsitaa hassoo?

5.Atettem ikkitto xigonne lophphoo ki’nnuwwi hegeeqqi amo’I ‘qa’l illa’qqi fayya’oo’m egechcha’ aa’imma asheeramoo hoongi ihamukki hinkaa’nni ammanina?

Mahina ee ammane asheettakkamo?

Ee ammanenne asheettakkona kurukko ayyette?

Asheerimmina hanqo’i ammanee yitaa sawwitoo?

Mahina?

Kutti ammanii gaassitaa asheettittaa maha ihookko yitaa sawwitoo?

Hoongatti ihimma, qachchi afuurukkisam kurimmi bikkina mayyitoo?

Eed issakko’aa mah ihoo? Heechchi qaanqisinne, amma’nnaxxisinne, mateeyyi heechchisinne?

Loshshinne (annii beeto dillukkuuyya) amma’nnakkam luwwi mah yookko?

Heechchi qaanqisanne issakkam luwwuwwa hinka keeno?

Ayye kaka yukko te’im baxukkok?

Hinkide baxakkamok?

Eekee’nni awwaaxxi bikkina maha sawwitoo?

Loshshinne qasiisamoo cireessuwwi, ki’nnuwwi ambanne,hoongi amo’o mayyamaa sogamoo?

Hoongi amo,I bikkina maha sawwamoo?

Lommannii mulli keenimii ixxuwwi hegeegonne mat ama hoongatti ikkamaare maha issamoo?

Maha baxamoo?

Ookeen ayyi ayyaamo?

Fayya’oo’mmi lichchi waardiyyuwwi minneewwanne ‘qa’l illa’qqi fayya’oo’m egechchi’bikkina maha issamoo?

6.At waatitti hegeeqqi fayya’ooma haraasimmi baxaancho, fayya’oomi egechchi minenne baxxam baxonne sawwita uwwitoo?

Uwwitam awwaaxxi bikkina mah sawwita uwwitoo?

Ayyi hara’imona hassoo? Landinnee gooni hara’mmaan?

Mah mah axisamona hasisoo?

Kannii mullek fayya’oomi egechchi minneewwanne ‘qa’l illa’qqi fayya’oo’m egechcha’ aa’illoobee’isa issoo luwwi te’im axisanchi laboo mahi yookko?

Lasaanchonne, ka lobakata awwaadoo sawwite uwwiteena iittittaanina araqa galaxxoommo!

ANNEX IV Fayya'ooma haraassimmi baxaa'nni xillaalli xa'mmichchanee dabachchi awwonsa

Xummaato

Xa'mmichchanee dabachchi ayyaamo____________________

Fayya'oo'm mi'n summi___________________________

Fayya'oo'm mi'n annannaaxxi mare'i (xig)_________________

A: Fayya'ooma haraassimmi baxaancho demograafe'e

1.Umur (hiinchinne)……………………………..

2.Giir giichchi…………………………………………

3.Amma'nnat………………………………………..

4.kaqabale'nne ka baxo asheettittaanniinse hinkaa'nna ihaa?

B: Fayya'ooma haraassimmi baxaancho 'qa'l illa'qqi fayya'oo'm egechchanne baxxam baxxuwwaa tiramu bee'I hawwuwwa

1.Ka qabale'I 'qa'l illa'qqi fayya'oo'm egechchi' bikkina mayyitoo?

2.ka qabale'I hoongi amo'i qabale'i 'qa'l illa'qqi fayya'oo'm egechchina' hanno maramoo? Mahina?

3.ka hegeegonne amo'i 'qa'l illa'qqi fayya'oo'm egechcha' fayya'oo'm egechchi minneewwanne xale'enne aa'amoo bee'ek mahina?

4. 'Qa'l illa'qqi fayya'oo'm egechcha' awwaaxxamoo amo'ina maha issitoo? Hinkide?

5. kaka issitittuuyya tiramubee'I qedduwwi mahimaha? Hinkide? Mahina?

6. 'Qa'l illa'qqi fayya'oo'm egechcha' awwaaxxamoo amo'o awwaaddittuuyya mah qeddi afaa?

7. Fayya'oo'm egechchi baxaanina 'Qa'l illa'qqi fayya'oo'm egechchi' bikkinahegeeqqi minaadaphphi sawwit hinkide?

8.keyyenne ‘qa’l illa’qqi fayya’oo’m egechchai awwaado’ laso gatisoo mateeyyi heechchi, heechchi qaanqikii amma’nnaxxi qolattuwwi mahmaha?

C. Mulli beyyo assechcha (riifeeraa’lli) sono’o

1.Amo’I ‘qa’l illa’qqi fayya’oo’m egechchi’ awwaado massameena ki beyyo waaramona hara’mmoo te’im asse’oo te’im edansimmi baxo baxoo manni yoo’onnihe?

2.Kuk hasisoohanennihe?

3.Fayya’oo’m li’ishshi waardiyyuwwi ‘qa’l illa’qqi fayya’oo’m egechchi’ awwaaxxi bikkina mah hara’mmato issamoo?

4.kaka baxxittuuyye titteena kee’immu qeddi maruchcho?

5.kannii mulli hara’immaxxi bu’i te’im makki duuha’I yoo’onnihe?

6.Amo’I ‘qa’l illa’qqi fayya’oo’m egechchi’ awwadonnee eekkanninne edamaakko luwwuwwanne tiramu bee’I hawwuwwanne yitoo luwwi yoo’onnihe?

7.Eedo’i hawwuwwa tirimmina mahi eranee yita kuttoo te’im soggoo?

Galaxxoommo!

ANNEX V Fayya’oo’m lichchi waardiyyuwwi awwonsaanchi xillaalli xa’mmichchaa dabachcha

Xa’mmichchii dabachchii issamu ayyaam____________________________

Gandis summa________________________

A.Demograafe’e

1.Xa’mmamoo manchi albachchi   Goonchо[ ] Meentichcho [ ]

2. Umuri(hiinchinne)…………………..

3.Giirgiichchi……………………………

4.Amma’nnat_________________________

6.Hinkaa'nni ammanina kabeyyo hee'llaa?

B. 'Qa'l illa'qqi fayya'oo'm egechcha' awwaaxximmi loshsha

1.ka hegeeqqi 'qa'l illa'qqi fayya'oo'm egechcha' awwaaxximma hinkide moo'lloo?

2.ka heggeeqqi hoongi amo'I 'qa'l illa'qqi fayya'oo'm egechcha' xassimmina hanno maramoo?

3.Doo'llamu beyyi mahii ki'ukkane?

4.ka hegeegonne hoongi amo'i 'qa'l illa'qqi fayya'oo'm egechcha' awwaaxximmina maroo beyyo qoodoo ayaamo? Mahina? Hinkide?

5.Amo'i ayyi hara'immimma doo'llamoo?

6. Eekeeno doo'llamo issoo mashika'i maha?

7. Mat fayya'oo'm lichchi waardiyyuwwi awwonsaanchisa 'qa'l illa'qqi fayya'oo'm egechchi' awwaadonne qaraa'llamoo te'im birbinnamoo maruchchonnette?

8.ka hegeegonne amo'I 'qa'l illa'qqi fayya'oo'm egechcha' awwaaxxammona ayye asse'oo?

9.Mulli keen kannonne maha issamoo?

10.Ookeen ayyaamo?

11. kiinam ihukko amo'ina fayya'oo'm egechchi beyyuwwanne 'qa'l illa'qqi fayya'oo'm egechcha' awwaaxxammanne tiramubee'I hawwi mah yoo'o?

12.Heechchi qaanqii te'im amma'nnatii ki'aakkoo 'qa'l illa'qqi fayya'oo'm egechchi' awwaado qoloo sawwit mahi yookko?

13. Fayya'oo'm haraassimmi baxaaanchona te'im egechchi baxaanina mahi sawwite te'im sogitano uwwitoo?

14. 'Qa'l illa'qqi fayya'oo'm egechcha' awwaaxxammi bikkinaa ixxo haraassoo te'im hawwodoo luwwuwwi bikkinaa kannii mulleka eddoo(yitoo) luwwi yoo'onne?

Ka saarayyanne anga edittaanina araqa galaxxoommo!