MAGNITUDE AND FACTORS ASSOCIATED WITH LATE ANTENATAL CARE BOOKING AMONG PREGNANT WOMEN IN DIRE DAWA HEALTH FACILITIES, EASTERN ETHIOPIA

MSC THESIS

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Magnitude and Factors Associated with Late Antenatal Care Booking among Pregnant Women in Dire Dawa Health Facilities, Eastern Ethiopia.

A Thesis Submitted to School of Nursing and Midwifery,
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APPROVAL SHEET
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I hereby certify that I have read and evaluated this Thesis entitled Magnitude and Factors Associated with Late Antenatal Care Booking among Pregnant Women in Dire Dawa Health Facilities, Eastern Ethiopia prepared under my guidance by Alekaw Sema. I recommend that it be submitted as fulfilling the thesis requirement.

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BIOGRAPHICAL SKETCH

My name is Alekaw Sema. I was born in 1991 at Digo kanta, Bibugn Woreda, East Gojjam Zone, and Northern Ethiopia. I completed my elementary education at Alemayehu Bezabih Primary School, Bibugn from 1997-2005 and secondary education at Zewude Liyew Asres Secondary and Preparatory School from 2006-2009. I joined to University of Gondar in 2010 for tertiary education. After four years of education in Midwifery at the University of Gondar, I graduated in Midwifery in 2012. Then, I joined as a graduate assistant II in Dire Daw University, Midwifery Department. After two years of work experience, I joined to Haramaya University for the second degree education in Maternity and Neonatal Nursing in 2016.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
AOR	Adjusted Odd Ratio
BEMONC	Basic Emergency Obstetric and Newborn Care
CI	Confidence Interval
COR	Crude Odd Ratio
C/S	Cesarean-Section
EBR	Ethiopian Birr
EDHS	Ethiopian Demographic Health Survey
GA	Gestational Age
HIV	Human Immune Deficiency Virus
IHRRC	Institutional Health Research Ethics Review Committee
LNMP	Last Normal Menstrual Period
MMR	Maternal Mortality Rate
SPSS	Statistical Package for Social Sciences
STI	Sexual Transmitted Infection
TTI	Tetanus Toxoid Infection
WHO	World Health Organization

ABSTRACT

Introduction: The World Health Organization recommends that four antenatal care visits in low risk pregnancies and prescribes the evidence based content for each visit to reduce maternal and neonatal morbidity and mortality. Pregnant women who start the first antenatal care visit at or after 16 weeks of gestation are considered as late antenatal care booking that makes difficult to implement effective routine antenatal care strategies to enhance wellbeingness of maternal and child health. Therefore, this study was aimed to assess the magnitude and factors associated to late antenatal care booking among pregnant women.

Methods: The study was conducted in Dire Dawa City from February 01 to March 02, 2017. An institutional based cross-sectional study design was applied to study 406 pregnant women. Participants were selected using systematic random sampling methods. Data were collected using pre-tested face-to-face interviewer administered questionnaire by six diploma midwifery/ Nurses. The data were entered, cleaned and edited by EpiData version 3.1 and exported to SPSS version 22.0 for analysis. Bivariate and multivariable logistic regression with 95% confidence interval was applied and variables at p-value less than 0.05 were identified as statistically significant.

Results: A total of 406 pregnant women were included in the study yielding to a response rate of 99.5%. The magnitude of late antenatal care booking was found to be 55.9%% (95%CI: 51.1%, 60.80%). Multivariate analysis revealed that pregnant women with poor knowledge on the time and importance of antenatal care [AOR=2.83, 95% CI: 1.78, 4.49], did not get Advice on antenatal care [AOR=1.63, 95%CI:1.10, 2.52], late antenatal care booking for previous pregnancy [AOR=4.01, 95%CI: (1.52, 10.58], age of women 25 years and above [AOR=1.82, 95%CI: 1.12, 2.87] and being employed [AOR=1.87, 95%CI: 1.19, 2.93] were more likely to book in late time of pregnancy compared to their counter parts.

Conclusion: Generally more than half of pregnant women attended the first antenatal care visit in late time of pregnancy, so increasing their knowledge by providing health education on timing of antenatal care booking and the importance of early antenatal care booking is very important.

Key words: Antenatal care, late booking, timely booking, pregnancy.

1. INTRODUCTION

1.1. Background

Antenatal Care (ANC) is a complex of interventions that a pregnant woman receives from an organized health care service with the objective of assuring every pregnancy to terminate in the delivery of a healthy child without impairing the health of the mother (FMOH, 2013). It is one of the key strategies to reduce maternal morbidity and mortality by assisting in determining gestational age, identifying high-risk pregnancies, detecting and monitoring pregnancy related hypertension, assessing fetal wellbeing, promote mother's awareness and increase acceptability of skilled birth attendance (WHO, 2002).

The main aim of antenatal care is prevention and treatment of any complications, emergency preparedness, birth planning, satisfying any unmet nutritional, social, emotional and physical needs of pregnant woman. It also includes provision of health education, including successful care and nutrition of the newborn, identification of high risk pregnancy, encouragement of male partner involvement in antenatal care. The care should be appropriate, cost-effective and based on individual needs of pregnant women (FMOH, 2010).

A systemic review in different parts of African Countries, such as, Kenya, Tanzania and Ethiopia indicated that ANC has a positive correlation with delivery of pregnant women in the health facility. It demonstrates that woman attending antenatal care have more than 7 times increased chance of delivering their baby in a health facility. In addition to this pregnant women get essential service such as; Tetanus Toxoid Injections (TTI), iron and folate supplementation, screen for syphilis, urine test for infection and protein, Human Immune Virus (HIV) screening test and treatments for malaria, Sexual Transmitted Infection (STI) and other disease. It also serves as a gateway to inform and educate pregnant women on a variety of issues related to pregnancy complications, where to seek care if complication arises and birth preparedness (UNPF, 2012; Yifru and Asress, 2014).

World Health Organization (WHO) recommends that four antenatal care visits in low risk pregnancies and prescribes the evidence based content for each visit. The visit is used to classify pregnant women into two groups based on previous history of pregnancy, current pregnancy state and general medical conditions. These are those eligible to receive routine ANC (basic component)

and the others are those who need special care of ANC (WHO, 2002). According to Ethiopian Basic Emergency Obstetric and Newborn Care (BEMONc) training manual the first ANC visit is recommended before 16 weeks; the second, 24- 28 weeks; the third 30- 32 weeks and the fourth visit between 36 and 40 weeks for low risk pregnancies. Pregnant women who start the first ANC visit at or after 4 months (≥16 weeks) are considered as late antenatal care booking (FMOH, 2013).

1.2. Statement of the problem

Globally, there are an estimated 303,000 maternal deaths in 2015, yielding a Maternal Mortality Ratio (MMR) of 216 deaths per 100 000 live births. Maternal mortality are reduced by nearly 44% over the past 25 years from 1990-2015 to an estimated 216 maternal deaths per 100 000 live births in 2015, from a MMR of 385 in 1990. Developing regions account for approximately 99% of the global maternal deaths in 2015, with 66% sub-Saharan Africa. Global annual reduction was only 2.3% per year and countries such as; Southern Asia reduced MMR more than 5% per year over the past 15 years. Even though there was a high progress of reducing MMR, it is still high in some developing countries (WHO, 2015a). To bring a remarkable change on MMR Countries targeted a new strategy called Sustainable Development Goals (SDGs), which includes the target of reducing global maternal mortality to less than 70 deaths per 100000 live births by 2030, with no individual country exceeding a MMR of 140 maternal deaths per 100000 live births (WHO, 2015b).

In Ethiopia MMR is reducing from 676/100,000 in 2011 to 420/100,000 in 2013 and to 353/100,000 live births in 2015. Even though there is a progress in reducing MMR, it is still high compared to the global estimates which is 216/100,000 deaths per live births and other developing and developed countries in 2015 (CSA, 2012; AU, 2014; WHO, 2015a). Although pregnant women are recommended to attend the first ANC visit in the first trimester, majority of ANC attendants start the first visit in late time of pregnancy. Studies conducted in different countries revealed that the majority of ANC attendants in Nigeria, Zambia and Australia were booked in late time of pregnancy with the magnitude of 82.6%, 68.6% and 52.6% respectively (Thuy and Rubin, 2006; Banda et al., 2012; Aung et al ., 2016).

In Ethiopia also majority of pregnant women start the first ANC visit in late time of pregnancy. According to 2014 Ethiopian DHS report, only 41% of pregnant women were received ANC

service from skilled health professions and, only 18% pregnant women booked in the recommended time of visit (CSA, 2014). Studies done in Ethiopia also revealed that late ANC booking at the first ANC visit was 86.8% and 68.8% in Ambo and Kembata respectively (Tesfalidet and Balcha, 2014; Tolera, 2015). This late booking of ANC in the first ANC visit is associated with various factors such as; maternal age, parity, types of pregnancy (wanted or unwanted), maternal educational attainment, place of residence, previous ANC, family monthly income and availability of information (Feleke, et al., 2015; Aung et al**.,** 2016).

Pregnant women who starte the first ANC visit in late time of pregnancy develop maternal and fetal complications such as; hypertension, Diabetes, anemia, Antepartum hemorrhage and preterm labor and Intra uterine fetal death. In addition to these, women that are booked in late time of pregnancy and don't take folic acid in the first trimester will develop congenital neural tube defect, Small to GA ,deliver preterm, sever language delay and even are at high risk for mortality. Not only these but also pregnant women who don't screen for syphilis and HIV in early time of pregnancy will transmit the disease to the fetus and it results an adverse out come to the fetus (Roth et al., 2011; WHO, 2012; Aman, 2015).

There is a limited information about the magnitude and associated factors of late ANC boonk in the Eastern parts of Ethiopia.Therefore, this study aims to determine the magnitude and associated factors of late ANC booking in private and public institutions which will help to come up with strategies that improve ANC service provision and timing of first ANC booking.

1.3. Significance of the study

Timely booking for ANC service have a great importance for early screening for HIV Infection and syphilis, health promotion for disease prevention and identifying and treating of preexisting abnormalities to reduce maternal and newborn mortality. There is no research conducted in Dire Dawa administrative city related to late ANC booking. So this study will give information about magnitude and factors associated to late ANC booking for Dire Dawa Heath Bureau, Hospitals, health Centers and other non-governmental Organizations who work in collaboration with the health facilities to plan for reducing of late ANC booking. The results of this study is also helpful for policy makers, educators and researchers to improve or strengthen policies related to provision of ANC. It is also used as a base line for researchers for further study.

1.4. Objectives

1.4.1. General objective

- To assess the magnitude and factors associated with late Antenatal Care booking among pregnant women in Dire Dawa health facilities, Eastern Ethiopia, from February 01 to 30, 2017.

1.4.2. Specific objectives

- To determine the magnitude of late antenatal care booking.
- To identify factors associated with late antenatal care booking.

2. LITERATURE REVIEW

2.1. Magnitude of late ante natal care coverage

Antenatal care (ANC) coverage provides a measure of access to the health system and is critical to identify maternal risks and improve health outcomes for the mother and the newborn or most important intervention in reducing maternal mortality. The Global antenatal care coverage were 72% while 68% and 98% in developing and industrialized countries respectively (WHO, 2003).

A cross -sectional hospital based study in Malaysia on late initiation of ANC and predictors in 2014, revealed that the mean gestational age of pregnant women in the first ANC visit was 18.23 ±4.9 weeks. In this study, 56.2% of pregnant women started the first ANC visit in late time of pregnancy while 43.8% of them attended in the recommended time (Aung et al , 2016). In a similar study conducted in Australia in 2004, the mean and median time of first ANC visit was 12.8 and 12 weeks respectively. In this study, 83.6% of women started their first ANC visit within 17 weeks while 16.4% received ANC care after 17 weeks of gestation. From those who attended the first ANC visit with in 17weeks, 41% of them had started within the first trimester of pregnancy (Thuy and Rubin ,2006).

Across Africa South of Sahara, nearly 69% of pregnant women attended at least one antenatal care visit. The percentage of women who attended all four recommended visits, however, falls considerably to 44% meaning more than half of pregnant women are not getting the full benefits of antenatal care (AU, 2014). A Study done in Nigeria in late ANC booking in 2006, the mean gestational age at the first ANC booking was 20.3± 6.2 weeks, and 82.6% of the respondents were starting their first ANC visit in late stage of pregnancy (Adekanle, and Isawumi, 2008).

A similar cross-sectional studies done in Cameroon (2014-2015) and Zambia (2012) the magnitude of late ANC booking among pregnant women in the first ANC visit was 84.5% in Cameroon and 72% and 68.6% in Zambia urban and rural area respectively. The mean gestational age of the first ANC visit in Cameroon was 19.2±4.2 weeks and 15.5% of the respondents started ANC at or before 14 weeks (Banda et al., 2012; Halle et al. , 2015).

In Ethiopia according to 2014 Ethiopian DHS report, 41% of pregnant women received ANC service from skilled health professionals and the median time of follow up was 4.9 months. Of

those 82% of them came in their late pregnancy for the first antenatal visit while the rest 18% before 4 months in the recommended time of visit (CSA, 2014).

Across-sectional study done in the southern parts of Ethiopia in Arba Minch City in 2014 revealed that 82.6% of the respondents booked their first ANC visit in late time of pregnancy (at or after 16wks of gestation), while 17.4% of them booked in the recommended time of visit or before 16wks of gestation. The mean time of gestation among respondents in the first ANC booking was 5±1.5 months (Feleke, et al. ,2015). Another study done in Kembata Tembaro in 2014 on factors associated to late ANC booking revealed that 68.6% respondents booked in late time of pregnancy (after 16 wks. of gestation) while the remaining 31.4% were booking in the recommended time. The mean time of first ANC booking was 5.5±1.8 months of gestation (Tesfalidet and Balcha, 2014).

Across-sectional study conducted in Addis Ababa in 2008 revealed that 59.8% pregnant women attended their first ANC visit in late time of pregnancy while 40.2% in the early period of pregnancy (Alemayehu et al.,2010). Another study conducted in Ambo in 2012 on timing of first ANC booking and it's predictors showed that late entry of the 1st ANC booking were 86.8% in Ambo with the mean time of the 1st ANC booking 4.3 months (18.3 weeks) (Tolera, 2015).

2.2. Factors Associated to late Antenatal care booking

2.2.1. Socio Demographic characteristics of the women

In a study conducted in Australia in 2004, pregnant women with the age of less than 20 and 20-29 years were 3 and 1.6 times more likely to attended ANC in late time of pregnancy compared to those who were 30-39 years with [AOR=2.99,95% CI (2.76,3.23) and [AOR=1.59,95%CI (1.54,1.64)] respectively (Thuy and Rubin, 2006). Other studies in Nigeria (2006), Kembata (2012) and Gondar (2012), pregnant women with the age group of greater or equal to 25 years old were 8, 3 and 1.4 times more likely to attend ANC in late time of pregnancy compared to those individuals who were below 25 years old at [AOR= 8.306, 95%CI (1.101, 62.653)], [AOR=3.04, 95%CI (1.05, 8.81)] and [AOR=1.41, 95% CI, (0.92,2.15)] respectively (Adekanle and Isawumi, 2008; Tesfalidet and Balch, 2014; Temesgen, 2015).

In a study done in Mekelle Northern parts of Ethiopia on the assessment of Antenatal care utilization in 2013, maternal age was found to be associated with use of antenatal care service that pregnant women between 25-34 years old were more likely to use antenatal care service which was 95% than the old age (35+)(Kalayou et al. , 2014).

Across-sectional study in Kembata Tembaro Zone in 2012, showed that pregnant women with no or lower educational status were 4.6 times more likely to book in late time of pregnancy compared to those with higher educational status (AOR= 4.62, 95%CI =1.5 ,14.24) (Tesfalidet and Balcha,2014). In a similar study conducted in Ambo in 2012, revealed that women who had no education were 2 times more likely to attend the first ANC in late time of pregnancy compared to those educational status grade 12^{th} and above [AOR= 2.10; 95%CI: 1.13, 5.82] (Tolera, 2015). Another study in Gondar indicated that women who had formal education were more likely to attend ANC in the early time of pregnancy compared to those who had no formal education [AOR= 1.06, 95% CI (1.03,7.6)] (Tadesse et al., 2014).

Study conducted in Ambo in 2012, showed that pregnant women whose occupation was house wife and farmers were 4 and 5 times more likely to attend the first ANC visit in late time of pregnancy compared to civil servants at [OR=3.77,95% CI (1.13, 12.62)] and [OR=4.57,95% CI(1.91,22.88] respectively (Tolera, 2015). Similar study conducted in Gondar in 2012 showed that employed pregnant women were 2.3 times more likely to attend the first ANC visit in the recommended time of visit compared to non-employed women [OR=2.28, CI 95% (0.71, 10.2)] (Tadesse et al., 2014).

Another study conducted in Zambia on factors associated to late ANC booking in 2012, indicated that pregnant women from rural were 4.2 times (AOR 4.258, 95% CI 1.631, 11.119) more likely to book in late time of pregnancy compared to urban (Banda et al., 2012). Another study in Ekiti Nigeria on socio demographic factors in 2013 to determine the adequacy of antenatal care among pregnant women revealed that pregnant women from rural were more likely to booked in late time of pregnancy at [AOR=8.87,95% CI,(5.37, 14.65)] compared to those who were in urban (Ajayi and Osakinle, 2013). In study done in Zambia in 2012, marital status had a significant association with the time of first ANC booking that (57.1%) single women had their 1^{st} ANC visit in the 1^{st} trimester of pregnancy compared with married (39.6%) (Banda et al. 2012).

2.2.2. Obstetrics Characteristics of the mother

Across-sectional study conducted in Malaysia in 2014 revealed that parity had a significant association with time of ANC visit. In this study multigravida (para 1 and 2 or above) women were 1.8 and 2 times more likely to booked in late time of pregnancy in the first ANC visit compared to nullipara women at [AOR=1.85, 95%CI (1.07, 3.22)] with p=0.029 and [AOR=2.17, 95%CI (1.02, 4.61)] with p=0.045 respectively. In this study also Gravida two and above were 1.37 and 2.5 times more likely to book in late time of pregnancy at [(AOR=1.3,95%.CI (82, 2.30)], p=0.227 and [AOR=2.49 ,95%CI(1.38, 4.48)], p=0.0022 respectively (Aung et al **.,** 2016).

In a similar study conducted in Australia (2004) revealed that para 2 and 3 or more were 1.5 and 2 times more likely to book in late time of pregnancy in the first ANC visit compared to those primipara at [AOR=1.38,95%CI (1.32,1.44)] and [AOR=2.17,95%CI (2.05, 2.30)] respectively (Thuy and Rubin, 2006). Study in Debre Birhan in 2012, Nulliparous women were 3.65 times more likely to start the first ANC visit in early period of pregnancy [AOR = 3.65, 95% CI (2.14, 6.24)] as compared to those who had at least one history of birth (Amtatachew et al. , 2013).

Study done in Zambia (2012), Kembata (2012), Arba Minch (2014) and Malaysia (2014) indicated that women with unplanned pregnancy had 3 ,4, 2 and 4.5 times more likely to booked in late time of pregnancy at (AOR =3.103, 95% (CI 1.261, 7.641)], [AOR= 3.80, 95%CI (1.19-12.15)], [AOR=1.86, 95%CI (1.09, 3.18)] and (AOR = [4.49,95% CI: ((2.162, 9.353)] compared to those pregnant women who had planned pregnancy respectively (Banda et al., 2012; Tesfalidet and Balch, 2014; Feleke et al., 2015; Aung et al **.,** 2016). Another cross-sectional study done in Debre Birhan on the prevalence and associated factors of early ANC booking revealed that pregnant women with planned pregnancy were more likely at [AOR = 1.66, 95% CI (1.06, 2.61)] to attend ANC in early time of pregnancy than those who had unplanned pregnancy (Amtatachew et al, 2013).

Study done in Zambia (2012) showed that pregnant women with the last child of age 2-5 and above 5 years were 2 and 3 times more likely to start the first ANC visit in late time of pregnancy at (AOR 2.003, 95% CI 1.079, 3.724) and (AOR 3.222, 95% CI 1.338, 7.761)) compared to those pregnant women with last child less than 2 years old (Banda et al. ,2012).

Another study conducted in Arba Minch Halaba kulito (2015), revealed that pregnant women who had previous history of antenatal care use were 2.4 times more likely to attend ANC in early period of pregnancy at (AOR=2.39, 95%CI: 2.23, 9.86) compared to those who didn't have previous history of ANC service utilization (Mekdes et al., 2016). In Kembata in 2012 also revealed that women who did not attend previous ANC were 16 times more likely to attend late ANC in the first ANC visit at [AOR=15.64,95%CI(1.99-122.95)] compared with those who had previous ANC visit history (Tesfalidet and Balcha**,** 2014).

Study done in Gondar in 2012 on timing and associated factors of first ANC booking indicated that having decision power to use ANC service were 2.4 times more likely to book in early time of pregnancy at [AOR=2.43, 95% CI (1.18, 4.99)] compared to those who haven't decision power on ANC (Temesgen et al., 2014). In other study conducted in Arba Minch pregnant women who perceived the right time [AOR= 2.48,95% CI: 1.01, 6.09] and getting information when to book (AOR= 2.55, 95% CI: 1.33, 4.87) have shown significant association with timely booking of ANC (Mekdes et al. ,2016).

Also similar studies in Gondar (2012) and Ambo (2012) revealed that perceived the right time to book at ANC beyond 12 weeks of pregnancy at [AOR=3.79, 95%CI (2.20, 6.54)] and not autonomous to use ANC service at (AOR=2.34, 95%CI (1.14, 4.83)] were more likely to book in late time of pregnancy compared to counter parts (Temesgen, 2015).

Pregnant women who booked within the recommended time of visit for the previous pregnancy were 2.4 times (AOR = 2.39, 95% CI: 2.23, 9.86) more likely to book early for the current pregnancy compared to those who booked in late time of pregnancy for previous pregnancy. (Tadesse et al., 2014).

Another cross-sectional study that conducted in Gam Gofa Zone in 2014 revealed that pregnant women who didn't advice on the recommended time of ANC booking were 3 times [AOR = 3, 95%CI (1.476, 6.244)] more likely to book in late time of pregnancy compared to those who were received advice on the recommended time of visit (Feleke, et al., 2015).

2.2.3. Knowledge of pregnant women about ANC

Study done in Zambia in 2012, pregnant women who had poor knowledge about ANC were 2.2 times more likely to attend ANC in late time of pregnancy compared to their counter parts [AOR= 2.205, 95% CI (1.021, 4.759)]. In this study the perception of no benefits derived from commencement of ANC early was 4 times more likely to attend ANC in late time of pregnancy compared to their counter parts [AOR= 3.98, 95% CI (1.37, 11.63)] (Banda et al. ,2012). Another studies done in Ambo (2012) and Gondar town (2012), women who didn't get information on the time of ANC visit were 4 and 2 times more likely to attend ANC in late time of pregnancy compared to those who got health information on time of ANC visit at [AOR= 4.25; 95% CI:(1.93, 10.73)] and (AOR=1.80, 95%CI (1.01, 3.23)] respectively (Temesgen, 2015; Tolera, 2015).

Study done in Benin in 2014 on low utilization of ANC service indicated that women getting a wrong knowledge on the time of ANC visit had 5 times more likely to underutilize the services compared to counter parts at [AOR = 5.131, 95%CI (1.972, 13.353)] while pregnant women with poor knowledge on the benefits of ANC were 4 times underutilization of ANC services compared to counter parts [OR = 4.031, (1.401, 11.594)] (Edgard et al., 2015). Similar study done in Debre Birhan in 2012 revealed that pregnant women who had good knowledge on timing of the first ANC visit were about 3 times more likely to start their first ANC visit in the early period of pregnancy (AOR = 3.10, 95% CI: 1.80, 5.33) as compared to their counterparts (Amtatachew et al., 2013).

2.2.4. Health care factors

Study done in Zambia in 2012 revealed that waiting time had significantly association with times of ANC visit. Pregnant women who spent longer time to get the service were 2 times more likely to start the first ANC visit in late time of pregnancy at [AOR= 1.909, 95%CI (0.707, 5.158)]. In this study pregnant women who had perceived health care providers with bad attitude were 2 times more likely to book late in the first ANC visit compared to their counter parts [AOR=1.83, 95%CI (0.40, 8.27)] (Banda et al., 2012).

Across-sectional study conducted in Japan (2008) revealed that cost of service had positively association with the time of ANC visit. Pregnant women who were paid more for ANC follow up were 4.6 times [AOR =4.6, 95% CI (2.2, 9.6)] more likely to book in late time of pregnancy compared to those who paid less cost (Yang et al., 2010).

2.3. Conceptual frame work

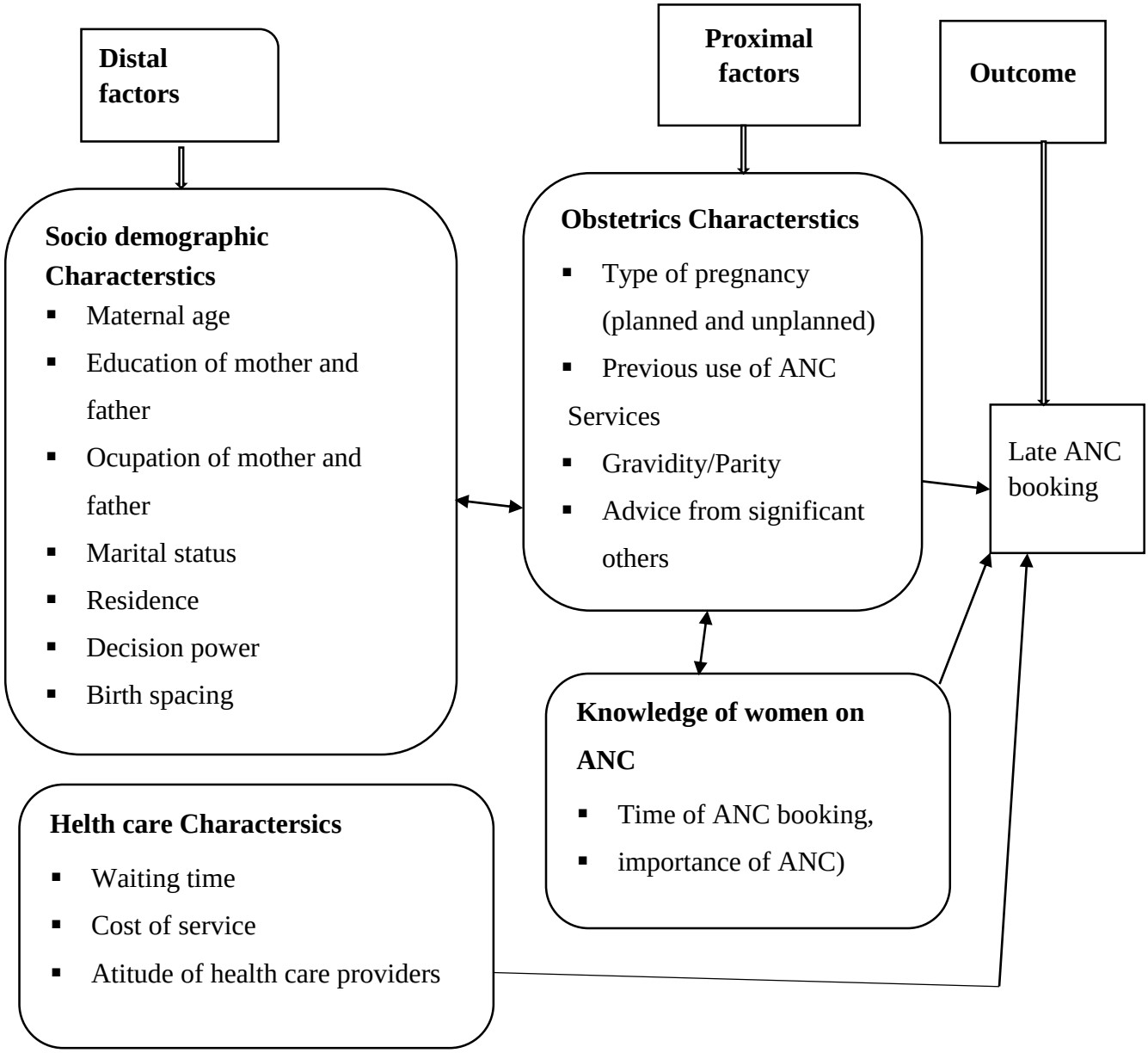


Figure 1: Conceptual Frame- work on factors associated to late antenatal care booking among pregnant women in Dire Dawa health facilities, Eastern Ethiopa, 2017.

3. METHODS AND MATERIALS

3.1. Study area and period

The study was conducted in Dire Dawa Administrative city from February 01-30, 2017. Dire Dawa is located 515 kilometers far away from the capital city of Addis Ababa and 47 kilometers from Harar town. It has hot temperature with a mean of 25 degree centigrade.

According to 2007 Ethiopian census, the total population of the City was 233,224. Of which 49.8% of them are males and 50.2% females. The total number of women in reproductive age group (15-49 years) is 52673, which accounts 15.4% of the total population (CSA, 2008). It has 9 urban kebeles (small administrative unity of Ethiopia) and 38 rural kebeles.It has a total of 972 health profesionals with 45% and 55% females and males respectively .In terms of distribution of health facilities, the City has two governmental and 4 private hospitals and 8 health centers. This study was conducted in two governmental, one private hospitals and three health centers.

3.2. Study Design

Quantitative institutional based cross-sectional study design was used.

3.3. Population

3.3.1. Source population

All pregnant women who came for antenatal care in Dire Dawa city health facilities in 2017.

3.3.2. Study population

All pregnant women who attended ANC in selected health facilities of Dire Dawa City from February 01 to 30, 2017.

3.4. Inclusion and exclusion criteria

3.4.1. Inclusion criteria

All pregnant women who came for ANC service in selected health facilities included in the study.

3.4.2. Exclusion criteria

Pregnant women who attended the first ANC visit in other health facilities and came to that institution in referral base and pregnant women who were severely ill and in labor pain were excluded.

3.5. Sample size determination

3.5.1. Sample Size Determination for the first objective

The sample size for this objective was determined using a formula for single population proportion ($n = (Z\alpha/2)^2pq/d^2$) with the following assumptions:

- Confidence level at 95%=1.96
- Margin of error 5% (0.05)

Where n= desired sample size

$Z\alpha/2$= the value of standard score at 95% confidence interval (1.96)

P = Population proportion of late antenatal care booking

d= marginal of error= 5% (0.05)

The sample size for different magnitude was summarized (**in table 1**) below from different studies.

Table 1: Sample size calculation for the magnitude of late antenatal care booking among pregnant women in Dire Dawa City, 2017.

Magnitude of late ANC	**Calculated sample size**	**Reference**
59.8%	369	Alemayehu et al.,2010
68.6%	331	Tesfalidet and Balcha, 2014
72%	310	Banda et al., 2012
82.6%	223	Feleke et al.,2015
86.8%	176	Tolera, 2015

3.5.2. **Sample Size Determination for the Second Objective**

Double population proportion formula was used to determine the sample size for the factors associated with late antenatal care booking. Sample size was calculated for some of the associated factors obtained from different literatures by using Epi Info statistical software version 7 with the following assumptions:

- Confidence level = 95%

- Power = 80%
- The ratio of unexposed to exposed almost equivalent to 1:1

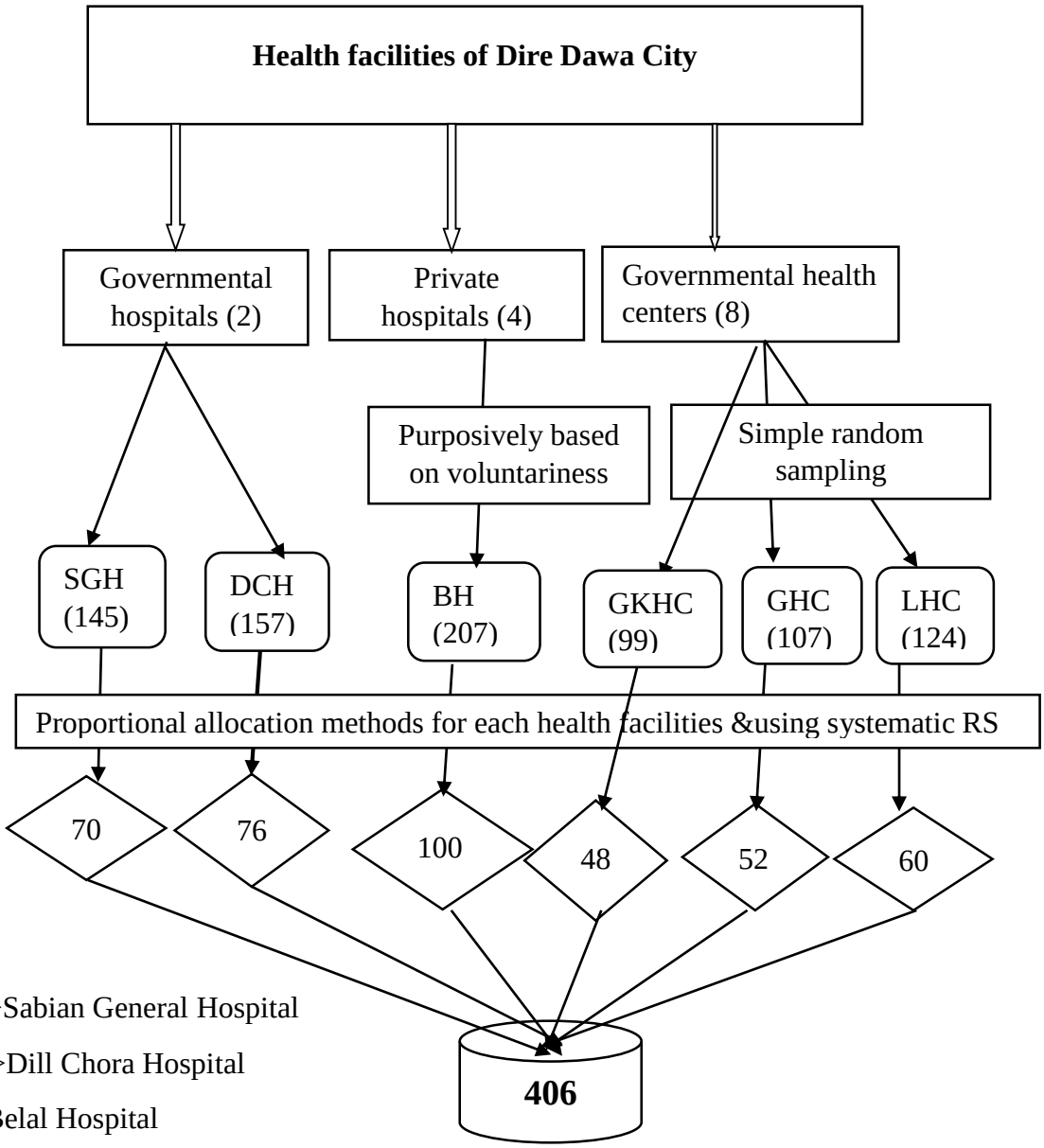
Table 2: Sample size calculation for different factors associated to late ANC booking among pregnant women in Dire Dawa City, 2017.

Variables	Magnitude of late ANC		Sample size	Reference
	Exposed	Non-Exposed		
Residence	19% (urban)	49%(rural)	90	Tesfalidet and Balcha ,2014
Maternal education	21.9%(had formal education)	78.1%(Had no formal education)	30	Amtatachew et al.,2013
Parity	53.8%(multipara)	28.9%(Nullipara)	138	Feleke et al., 2015
Previous ANC use	65.6%(yes)	34.4%(No)	92	Temesgen, 2014
Decision on current ANC	62.1%(yes)	79.9%(No)	224	Temesgen, 2014

Generally, the sample size had been calculated for the first and the second objectives and the largest sample size was found to be from the first objective, which was 369 and by adding 10%, nonresponse rate the final sample size was 406.

3.6. Sampling technique and procedures

One non-governmental hospital was selected purposively based on positive response of the owner of the hospital. Two governmental hospitals were taken purposively based on the number of case flow while three governmental health centers were selected by simple random sampling method. Monthly client flow was determined by taking the average ANC attendants from previous records in the last quarter year, and it was 839 in six health facilities. The total sample was allocated to each health facilities based on proportional to their previous client flow. Finally, the samples in each health facility were selected using systematic random sampling technique. The first sampling unit was selected randomly then every other (k=2) was employed based on their order of entry. The steps of selection was stated below in **figure 2**.



SGH=>Sabian General Hospital

DCH=>Dill Chora Hospital

BH=>Belal Hospital

GKHC=>Gende Kore Health Center

LHC=>Legehare Health Center

GHC=>Goro Health Center

Figure 2: Schematic presentation of the sampling procedure.in Dire Dawa City, Eastern Ethiopia, 2017.

3.7. Data collection tools

Face to face interviewer administered questionnaire was developed from different relevant literatures in the context of the study area. It was prepared originally in English and translated to

Amharic, Afan Oromo and Somali language and then translated to English for checking the consistency of the questionnaire. The questionnaire include socio demographic variables, obstetrics history, and knowledge about ANC and health service factors.

3.8. Data collectors and procedure

Data collection was carried out with pretesting questionnaire by six diploma midwifery/Nurse data collectors with two BSc Midwifery/Nurse supervisors for a period of one month. All pregnant women who were selected and fulfill the inclusion criteria were interviewed and gestational age was determined by LNMP. Fundal height measurements, ultrasound report, quickening and client's record were used if they did not remember their LNMP. Data collection was conducted in a private and calm environment after completing the service to ensure confidentiality.

3.9. Study variables

3.9.1. Dependant variable

- Late antenatal care booking(Yes, No)

3.9.2. Independent variables

- Socio demographic characteristics**:** Age, marital status, Ethnicity, religion, residence, occupation and educational status
- Obstetrics history: Previous ANC follow up, Gravidity, parity, history of abortion & still birth, birth spacing, types of pregnancy (unplanned and planned), mode and place of previous delivery, acceptance of pregnancy by significant others, and experience of previous obstetrics complications.
- Health care factors: waiting time, financial cost, attitude of health care providers, and quality of the service, types of health facility (private or public).
- Knowledge on ANC: importance of ANC, time of first ANC visit, danger signs of pregnancy.
- Decision power of the women to use ANC service

3.10. Operational definitions

Late ANC booking: refers initiating of ANC at or after 16^{th} weeks of gestation (FMOH, 2013).

Knowledge: Pregnant women's awareness about the time and the importance of ANC booking.

Good knowledge: Pregnant women who scored greater or equal to the mean score value of knowledge measuring questions.

Poor knowledge: Pregnant women who scored below the mean score value of knowledge measuring questions.

3.11. Data quality control

The questionnaire was first prepared in English and translated to Amharic, Affan Oromo and Somali then translated back to English in order to ensure its consistency. Training was provided to the data collectors and supervisors about the data collection tools and the data collection procedure for 2 days. Then the questionnaire was pretested before the actual data collection period on 5% of the sample size out of the study area to ensure its consistency and validity. The questionnaire was corrected after pretest. Data collectors was supervised closely by the supervisors and the principal investigator. Completeness of each questionnaire was checked by the principal investigator and the supervisors in a daily base. Double data entry was done by two data clerks and consistency of the entered data was cross checked by comparing the two separately entered data on EpiData. Finally, multivariate analysis was run in the binary logistic regression model to control the confounding factors.

3.12. Data analysis and interpretation

Data was coded, entered, cleaned and checked by EpiData statistical software version 3.1 and analysis was done by using SPSS version 22. Descriptive statistics of different variables was presented by frequency and percentage using tables, texts and bar graphs**.** For descriptive numerical variables mean and standard deviation was determined. Knowledge was measured by calculating the mean of knowledge related questions and categorized as poor knowledge and good knowledge. To calculate the mean first the variables of knowledge related questions recoded one for correct and zero for incorrect answers. After recoding, the sum of correct answers were calculated for each respondents, and then mean was calculated. Finally, the frequency and percentage of respondents were calculated that scored at or above and below the mean. Hosmer Lemshow and Omnibus tests was done to test for model fitness. In the Hosmer-Lemeshow test, the Pearson's chi-square should not be significant but it should be significant in Omnibus test if the model said to be fitted. Multi-collinearity was checked to see the linear correlation among the

independent variables by using variance inflation factor and standard error. Variables with variance inflation factor >10 and standard error of > 2 were dropped from the multi-variable analysis. Bi-variate analysis at 95% confidence interval was used to infer an association between the independent and outcome variables by using binary logistic regression model. All variables with p-value ≤ 0.25 was taken into the multivariable model to control for all possible confounders and the variables was selected by enter method. Then an adjusted odds ratio (AOR) with 95% confidence interval was calculated for the significant predictive variables, and statistical significance was accepted at (P< 0.05). Variables which were statistically significant at p-value <0.05 identifed as factors of late antenatal care booking and logistic regression tables was used to present the results.

3.13. Ethical considerations

Before starting the data collection process, ethical clearance was secured by Haramaya University Institutional Health Research Ethics Review Committee (IHRERC). Official letter was written to each selected health facilities of Dire Dawa city by Haramaya University College of health and medical sciences and delivered to each health facilities directors to get permission. Participants was informed about the purpose of the study and the privacy of the information. Informed written consent from participants in the study was obtained before conducting the interview. For this, a page of participants' information sheet and a page of consent letter form was attached with each questionnaire. Name of the respondents was not addressed for the sake of confidentiality.

3.14. Plan for Dissemination of findings

First, the result will be submitted and presented in the final defiance of Haramaya University. After presentation, it will be disseminated to Dire Dawa city hospitals, health centers, health posts and the regional health bureau by hard copies. In addition to this, attempt will be made to disseminate through presentation in the regional and national wide workshop and conference. Besides, publication on peer-reviewed journal will be considered.

4. RESULTS

4.1. Socio-demographic characteristics of respondents

A total of 404 pregnant women were included in the study with response rate of 99.5%. The mean (±SD) age of pregnant women were 26.26 (± 5.51) years. The majority, 274 (67.8%) of pregnant women were in the age group of 20-29 years. Majority, 384 (95.5%) of the respondents were married (Table 3). Three hundred fifty (87.9%) of the respondents were from urban areas.

Table 3. Socio-demographic characteristics of pregnant women that attended ANC at Dire Dawa Health facilities, Eastern Ethiopia, 2017 (n=404).

variables	Frequency	Percentage (%)
Age		
15-19	29	7.2
20-29	274	67.8
30-39	86	21.3
>=40	15	3.7
Marital status		
Married	384	95.0
Single	13	3.3
Others*	7	1.7
Religion		
Muslim	231	57.2
Orthodox	140	34.7
Protestant	31	7.7
Others**	2	0.5
Ethnicity		
Oromo	164	40.6
Amhara	127	31.4
Somali	82	20.3
Others***	31	7.7
Educational Status		
No formal education	127	31.4
Primary level	92	22.8
Secondary level	101	25
College & above	84	20.8
Occupation		
Employed	154	38.1
Unemployed	250	61.9

*Divorced, Widowed **Catholic *** Tigray, Kembata

4.2. Past Obstetric Characteristics

Among the total respondents 243 (60.1%**)** of them were multigravida. From those who were multigravida 52 (21.4%) had at least one history of abortion. Twenty three (5.7%) and 37 (9.2%) respondents had at least one history of child death and still birth respectively. Among respondents who had previous history of pregnancy, 55 (22.6%) of them had complication for previous pregnancy (Table 4).

Table 4. Obstetric characteristics of pregnant women attending ANC service in Dire Dawa health facilities, Eastern Ethiopia, 2017.

variables	Timing of first ANC booking		Total
	Early booking	Late booking	
	Number (%)	Number (%)	Number (%)
Gravidity(n=404)			
Prim gravida	69(38.8)	92(40.7)	161(39.9)
Multi gravida	109(61.2)	134(59.3)	243(60.1)
Parity(n=404)			
Para Zero	69(38.8)	95(40.2)	164(40.6)
Para one and above	109(61.2)	131(58)	240(59.4)
Ever had abortion(n=243)			
Yes	24(22.0)	28(20.9)	52(21.4)
No	85(78.0)	106(79.1)	191(78.6)
Types of abortion(n=52)			
Spontaneous	14(58.3)	17(60.7)	31(59.6)
Induced	10(41.7)	9(32.1)	19(36.5)
Both	0	2(7.1)	2(3.8)
History of child death(n=404)			
Yes	8(4.5)	15(6.6)	23(5.7)
No	170(95.5%	211(93.4)	381(94.3)
History of still birth(404)			
Yes	23(12.9%)	14(6.2)	37(9.2)
No	155(87.1)	212(93.8)	367(90.8)
Number of children alive(n=404)			
No child	77(43.3)	98(43.4)	175(43.3)
One or more children	101(56.7)	128(56.6)	229(56.7)
Birth spacing for preceding the current pregnancy(n=243)			
Below two years	26(23.9)	17(12.7)	43(17.7)
Two years and above	83(76.1)	177(87.3))	200(82.3)

4.3. Past history of ANC and delivery service utilization

Among respondents who had previous history of pregnancy, 199 (81.9%) had ANC service utilization for previous pregnancy. Of those who had previous history of ANC service utilization, 112 (77.8%) had started the first ANC visit before four months preceding the current pregnancy. Nearly half, (55.3%) of the respondents attended ANC follow up four and above times for preceding the current pregnancy. Majority, 209 **(**86%) of the respondents gave birth in health institution for preceding the current pregnancy. Among those, 161 (77.0%) gave birth in governmental institution (table 5).

Table 5: Past Obstetrics, history among pregnant women attending ANC service in Dire Dawa health facilities, Eastern Ethiopia, 2017.

Variables	**Timing of first ANC booking**		**Total**
	Early booking	**Late booking**	
	Number (%)	**Number (%)**	**Number (%)**
Previous utilization of ANC preceding the current(n=243)			
Yes	83(76.1)	116(86.6)	199(81.9)
No	26((23.9)	199(81.9)	44(18.1)
Time of ANC visit for previous pregnancy (n=144)			
< 4 months of GA	61(87.1)	51(68.9)	122(77.8)
>=4months of GA	9(12.9)	23(31.)	32(22.2)
Number of ANC visit for previous pregnancy (n=197)			
One	2(2.4)	8(7.1)	10(5.1)
Two	5(6.0)	18915.9)	23(11.7)
Three	28(33.3)	27(23.9)	55(27.9)
Four and above	49(58.30	60953.1)	109(55.3)
Problem during previous pregnancy (n=243)			
Yes	28(25.7)	28(20.9)	56(23)
No	81(74.3)	106(79.1)	187(77)
Previous institutional delivery (n=243)			
Yes	94(86.2)	115(85.8)	209(86.0)
No	15(13.8)	19(14.2)	34(14.0)
Place of delivery for previous pregnancy (n=209)			
Governmental health facility	72(76.6)	90(78.3)	161(77.0)
Private health facility	22(23.4)	25(21.7)	48(23.0)
Previous history of caesarian section (n=243)			
Yes	14(12.8)	17(12.7)	31(12.8)
No	95(87.2)	117(87.3)	212(87.2)

4.4. Knowledge of respondents on ANC

A total of 270 (66.8%) of the respondents perceived that ANC is important for the mother as well as the fetus. About 264 (65.3%) of them had awareness about the recommended time of ANC booking. Two hundred sixty eight (66.3%) of the respondents perceived that four and more ANC visits were necessary throughout the whole period of pregnancy (table 6). The mean knowledge of the respondents were 4.7 and 250 (61.9%) of them had good knowledge about antenatal care.

Table 6 : Percentage distributions of knowledge on ANC among pregnant women in Dire Dawa health facilities, Eastern Ethiopia, 2017 (n=404).

Variables	**Timing of first ANC booking**		**Total**
	Early booking	**Late booking**	
	Number (%)	**Number (%)**	**Number (%)**
For whom ANC is important			
Fetus	20(11.0)	49(22.2)	70(17.4)
Mothers	12(6.6)	52(23.5)	64(15.8)
Both	150((82.4)	120(54.3)	270(66.8)
Perceived time of first ANC booking			
Before four months	129(72.5)	135(59.7)	264(65.3)
At or after four months	49(27.5)	91(40.3)	140(34.7)
Number of visit for the entire pregnancy			
Below four	55(30.9)	81(35.8)	136(33.7)
Four and more	123(69.1)	145(64.2)	268(66.3)
Does ANC used health promotion and disease prevention?			
Yes	166(93.3)	168(74.3)	334(82.7)
No	12(6.7)	58(25.7)	70(17.3)
Does healthy pregnant women need to attend ANC?			
Yes	172(96.6)	196(86.7)	368(91.1)
No	6(3.4)	30(13.3)	36(8.9)
Awareness on danger signs of pregnancy			
Yes	144(80.9)	177(78.3)	321(79.5)
No	34((19.1)	49(21.7)	83(20.5)
Did ANC used for birth preparedness			
Yes	169((94.9)	164(72.6)	333(82.4)
No	9(5.1)	62(27.4)	71(17.6)

4.5. Health institution Characteristics

One hundred seventy nine (44.3%) and (43.6 %) of the respondents perceived that the quality of ANC service was very good and good respectively, while 5 (1.2%) perceived that ANC service was poor. Majority, 368 (91.1%) of the respondents believed that ANC service providers had good respect for pregnant women and 173 (42.8%) of the respondents said that the approach of ANC service providers were very good. Nearly half, 200 (49.5%) of the respondents had paid to get ANC service (table 7).

Table 7. Percentage distributions of respondents on institutional characteristics at Dire Dawa health facilities, Eastern Ethiopia, 2017.

variables	Timing of first ANC booking		Total
	Early booking	Late bbooking	
	Number (%)	Number (%)	Number (%)
Felling about quality of ANC service (n=404)			
Very good	79(44.4)	100(44.2)	179(44.3)
Good	74(41.6)	102(45.1)	176(43.6)
Satisfactory	23(12.9)	20(8.8)	43(10.6)
Poor	2(1.1)	4(1.8)	6(1.4)
Had health care providers respect you (n=404)			
Yes	167(93.8)	201(88.9)	368(91.1)
No	11(6.2))	25(11.1)	36(8.9)
Approach of ANC service providers (n=404)			
Very Good	73(41)	100(44.2)	173(42.8)
Good	88(49.4)	107(47.3)	195(48.3)
Fair	13(7.3)	16(7.1)	29(7.2)
Poor	4(2.3)		7(1.7)
Payment for ANC service (n=404)			
Yes	77(43.3)	123(54.4)	200(49.5)
No	101(56.7)	103(45.6)	204(50.5)
Maximum payment for a visit (n=200)			
<=50EBR	19(24.7)	42(34.1)	61(30.5)
51-100EBR	9(11.7)	15(12.2)	24(12)
>100EBR	49(63.6)	66(53.7)	115(57.5)
Had any service missed due to cost (n=200)			
Yes	5(6.5)	10(8.1)	15(7.5)
No	72(93.5)	113(69.1)	187(92.5)

4.6. History of current pregnancy and timing of first ANC visit

Out of the total respondents, 336 (83.2%) had planned pregnancy. Majority, 330 (98.2%) of the respondents made the plan in consultation with their husbands. Among respondents who had unplanned pregnancy 41 (60.3%) were wanted their pregnancy. From those who had unplanned pregnancy 15 (21.7%) wanted to terminate pregnancy. Majority, 332 (82.2%) of respondents were able to decide ANC follow up by themselves while the rest 72 (17.8%) had no autonomous to attend ANC follow up.

Among the respondents, 176 (43.6%) of them had received advise about ANC service before starting the first ANC booking from different sources while 228 (56.4%) of them did not get advice from any one.

Among those respondents who had received advice, 119 (67.2%) had got information about the time of first ANC visit. From those who received advice, 61 (95.3%) got information on the recommended time of visit before 4 months. In addition to this majority, 342 (84.7%) of the respondents got education about danger signs of pregnancy. According to respondents report, 368 (91.1%) of pregnant women's husband had positive attitude towards ANC service (table 8).

Table 8. History of current pregnancy by timing of first ANC booking at Dire Dawa health facilities, Eastern Ethiopia,2017.

Variables	Time of first ANC booking		Total
	Early booking	Late booking	
	Number (%)	Number (%)	Number (%)
Types of pregnancy (n=404)			
Planed	148(83.1)	188(83.2)	336(83.2)
Unplanned	30(16.9)	38(16.8)	68(16.8)
Is the planned include your husband (n=336)			
Yes	146(98.6)	184(97.9)	330(98.2)
No	2(1.4)	4(2.1)	6(1.8)
Is this pregnancy wanted by you (n=68)			
Yes	19(63.3)	22(57.9)	41(60.3)
No	11(36.7)	16(42.1)	27(39.7)
If unwanted have you wanted abortion (n=68)			
Yes	4(13.3)	10(26.3)	15(21.7)
No	26(86.7)	28(73.7)	54(78.3)
Had decision power to attend ANC (n=404)			
Yes	14(80.9)	188(83.2)	332(82.2)
No	34(19.1)	38(16.8)	72(17.8)
Had advice to start the first ANC visit(n=404)			
Yes	86(48.3)	90(39.8)	176(43.6)
No	92(51.7)	136(60.2)	228(56.4)
Had advice on time of first ANC Booking(N=177)			
Yes	64(74.4)	55(60.4)	119(67.2)
No	22(25.6)	36(39.6)	58(32.8)
Time of advice to start ANC visit(N=119)			
Before 4 months	61(95.3)	43(78.2)	104(87.4)
At or after 4months	3(4.7)	12(21.8)	15(12.6)
Husband's attitude towards ANC (N=404)			
Positive	167(93.8)	201(88.9)	370(91.6)
Negative	11(6.2)	25(11.1)	34(8.4)

Among respondents who got advice, 46.60% received from community health workers before starting the first ANC visit. Pregnant women who got advice from their husbands and their mothers to start the first ANC visit were 29% and 6.30% respectively (Figure 3).

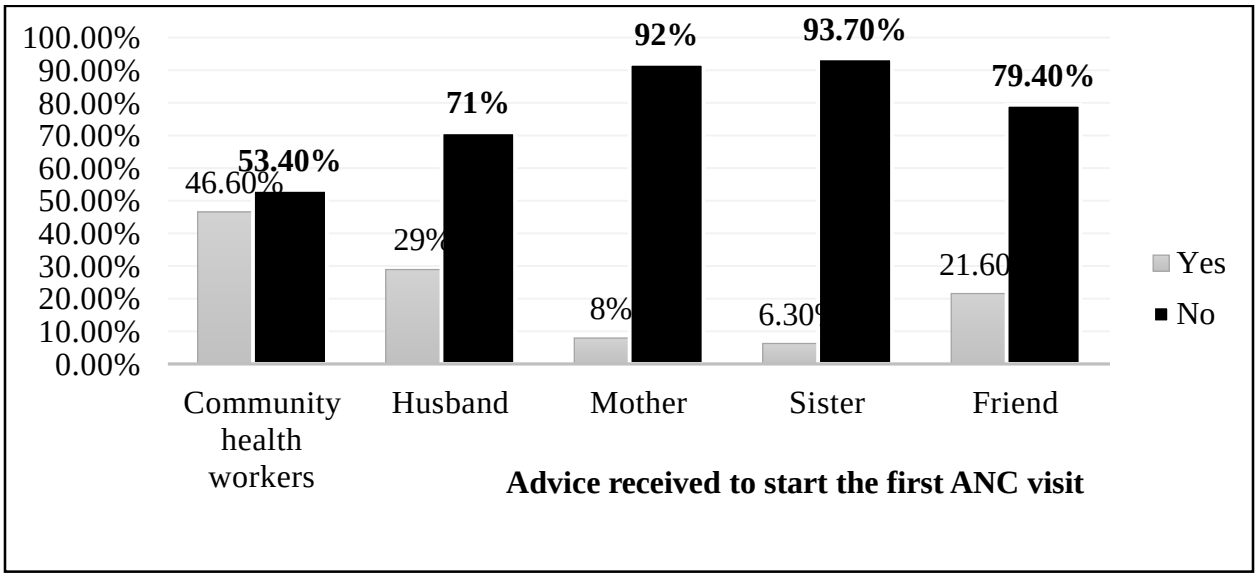


Figure 3: Percentage distributions of pregnant women that received advice to start the first ANC visit in Dire Dawa health facilities, Eastern Ethiopia, 2017.

4.7. Timing of first ANC booking for current pregnancy

From the total respondents more than half, 55.90 % (95%CI: 51.1%, 60.80%) were booked in late time of px while the rest 44.10% booked with in the recommended time .The mean (± SD) of the respondents gestational age was 16±6.99 weeks at the first ANC booking. From the respondents 23% started the first ANC visit at 4 months of gestation (figure 4).

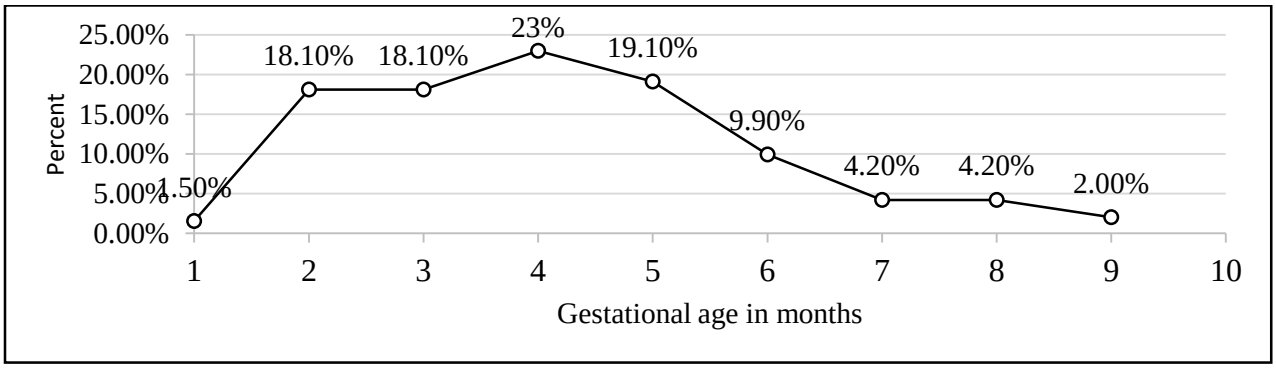


Figure 4: Percentage of respondents by weeks of gestation at the first time of ANC visit, Dire Dawa health facilities, Eastern Ethiopia, 2017.

From respondents who were coming to assure pregnancy 50.60% were booked on the recommended time of visit followed by unplanned pregnancy (48.90%) (Figure 5).

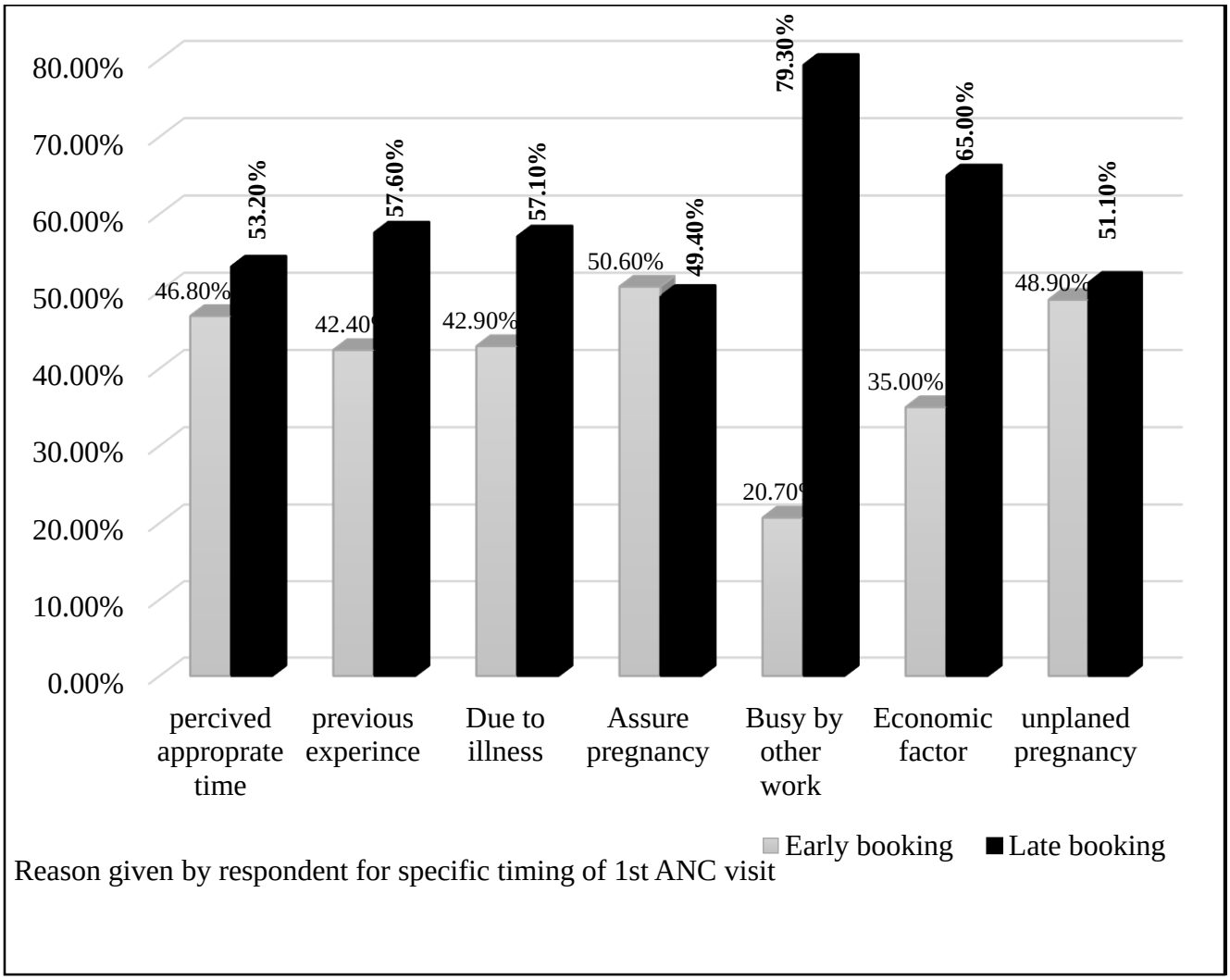


Figure 5: Reasons given by respondents for specific timing of first ANC booking, Dire Dawa health facilities, Eastern Ethiopia, 2017.

4.8. Factors associated to late ANC Booking

The result from the multivariable analysis revealed that pregnant women who were in the age group of at or above 25 years old were around 2 times [AOR=1.82, 95%CI: 1.12, 2.87] more likely to book in late time of pregnancy in the first ANC visit compared to respondents with the age group of below 25 years. Pregnant women who were employed were 2 times [AOR=1.87, 95%CI: 1.19, 2.93] more likely to book in late time of pregnancy in the first ANC visit compared to unemployed pregnant women. Respondents with previous history of still birth were around 2.60 times [AOR =2.59, 95%CI: 1.22, 5.50] more likely to book in late time of pregnancy compared to those who had no history of still birth.

Pregnant women who had started previous ANC follow up on late time of pregnancy were 4 times [AOR=4.01, 95%CI: (1.52, 10.58] more likely to book in late time of pregnancy compared to those who had started on the recommended time of visit. Women who had poor knowledge on the time and importance of ANC were 3 times [AOR=2.83, 95%CI: 1.78, 4.49] more likely to book in late time of pregnancy compared to respondents who had good knowledge on the time and importance of ANC.

Women who didn't get advice on time of ANC follow up were around 1.6 times [AOR=1.63 95%CI: 1.10, 2.52] more likely to book in late time of pregnancy compared to those who got advice (table 9).

Table 9: Factors associated to late ANC Booking among pregnant women at Dire Dawa health facilities, Eastern Ethiopia, 2017.

Variables	Time of first ANC booking		COR(95%CI)	AOR(95%CI)
	Late booking (>= 16 weeks)	Early booking (<16 weeks)		
Marital status				
Married	210(54.7)	174(45.3)	1	1
Unmarried	16(80.0)	4(20.0)	3.31(1.1, 10.1)	1.98(0.60, 6.48)
Occupation				
Employed	103(62.4)	62(37.6)	1.57(1.02, 2.35)	1.87(1.19, 2.93)*
Unemployed	123(51.5)	116(48.5)	1	1
Age				
<25 years	73(49.0)	76(51.0)	1	1
>=25 years	153(60.0)	102(40.0)	1.56(1.03, 2.35)	1.82(1.12, 2.87)**
Residence				
Urban	191(53.8)	164(46.2)	1	1
Rural	35(71.4)	14(28.6)	2.15(1.1, 4.13)	1.53(0.75, 3.12)
History of still Birth				
Yes	14(37.8)	23(62.20)	**1**	**1**
No	212(57.8)	155(42.2)	2.25(1.12, 4.51**)**	2.59(1.22, 5.50)**
Birth interval				
< 2years	17(39.5)	26(60.5)	1	1
>=2years	117(58.5)	83(41.5)	2.16(1.10, 4.23)	1.14(0.53, 2.46)
Time of previous ANC follow up				
< 4months	51(45..5)	61(54.5)	1	1
>= 4 months	23(71.9)	9(28.10)	3.06(1.23,7.20)	4.01(1.52, 10.58)*
Total number of visit for previous px				
< four	66(64.7)	36(35.3)	1.87(1.06, 3.32)	1.52(0.78, 2.99)
>=four	47(49.5)	48(50.5)	1	1
Knowledge of respondents on ANC				
Good Knowledge	116(46.4)	134(53.6)	1	1
poor knowledge	110(71.4)	44(28.6)	2.89(1.88, 4.44)	2.83(1.78, 4.49)*
Any one advice you to start the first ANC visit				
Yes	90(50)	90(50)	1	1
No	136(60.7)	88(39.3)	1.55(1.04 , 2.30)	1.63(1.10, 2.52)**
Have you got education on danger signs of px				
Yes	184(53.8)	158(66.2)	1	1
No	42(67.7)	20(32.3)	1.80(1.02, 3.20)	1.11(,0.58, 2.11)
Husband's Attitude towards ANC service				
Positive	201(54.3)	169(45.7)	1	1
Negative	25(73.5)	9(26.5)	2.34(1.06, 5.14)	1.68(0.71, 3.96)

Significant at *=p-value<0.01, **=P-value<0.05

5. DISCUSION

The magnitude of late ANC booking was found to be 55.9% (95%CI: 51.1%, 60.80%).The mean gestational during the first ANC booking was 16±6.99 weeks. Pregnant women with poor knowledge on the time and importance of ANC [AOR=2.83, 95% CI: 1.78, 4.49], did not get Advice on ANC [AOR=1.63, 95%CI:1.10, 2.52], late ANC booking for previous pregnancy [AOR=4.01, 95%CI: (1.52, 10.58], age of women 25 years and above [AOR=1.82, 95%CI: 1.12, 2.87] and being employed [AOR=1.87, 95%CI: 1.19, 2.93] were more significantly associated with late ANC booking.

This magnitude of late ANC booking in this study was consistent with the study conducted in Addis Ababa where 59.8% of pregnant women made their first ANC booking in late time of pregnancy (Alemayehu et al., 2010). This might be due to similarity in socio-demographic and service accessibility, since both were conducted in urban setting. On the other hand, it was lower than 2014 Ethiopian DHS report (82%) (CSA, 2014) and other studies conducted in other parts of Ethiopia such as; Kembata (68.6%) (Tesfalidet and Balcha, 2014), Arba Minch (82%) (Feleke, et al., 2015) and Ambo (86.8%) (Tolera, 2015). This difference could be due to difference in educational, socioeconomic status and level of awareness about ANC booking among study populations. In addition to this, it might be due to as a result of the present national health given emphasis on ANC that includes the up-to-date trainings of health professionals on ANC follow up. The time gap may also increase women's awareness on ANC and decrease the chance of coming late for the first ANC visit.

Mean gestational age of pregnant women in this finding was higher than study conducted in Australia that the mean gestational age of pregnant women was 12.8 weeks (Thuy and Rubin , 2006). This difference might be due to difference in study population, socio economic and socio cultural difference between the two countries. On the other hand, it was lower than studies conducted in Cameron and Nigeria where the mean gestational age was 19.2±4.2 and 20.3±6.2 weeks respectively (Adekanle, and Isawumi, 2008; Halle et al.,2015). This findiing was also lower than studies conducted in Ethiopia such as; Arba Minch city, Kembata and ambo that the mean gestational age was 5.5 ± 1.5 months, 5.5± 1.8 months and 18.3 weeks respectively (Tesfalidet and Balcha, 2014; Feleke, et al. 2015; Tolera, 2015).

Employed pregnant women were two times more likely to attend ANC in late time of pregnancy in the first ANC visit compared to their counter parts. In the contrary other studies conducted in Ambo and Gondar revealed that pregnant women who were unemployed were more likely to book in late time of pregnancy compared to their counter parts (Tadesse et al., 2014; Tolera, 2015) .This might be due to employed pregnant women would have work load and time constraint to start the first ANC visit on the recommended time.

Ages of pregnant women were significantly associated with the time of ANC visit. Pregnant women who were in the age group of 25 and above years were 2 times more likely to book in late time of pregnancy compared to respondents below 25 years. This is in line with studies conducted in Kembat and Gondar (Tesfalidet and Balch, 2014; Temesgen, 2015).This might be due to younger women were more educated than older women and had awareness about the timing and importance of early ANC booking. In addition to this, younger women can easily accept the information that were given through different media.

Knowledge of pregnant women on ANC was significantly associated with the time of ANC visit. Women who had poor knowledge on ANC were three times more likely to book in late time of pregnancy compared to their counter parts. This is in line with studies conducted in Zambia and Debre Birhan (Banda et al., 2012; Amtatachew et al., 2013). This might be due to pregnant women who had poor knowledge on ANC didn't know the recommended time of first ANC visit and importance of early ANC booking to the fetus as well as herself.

Pregnant women who did not get advice on ANC were 1.6 times more likely to book in late time of pregnancy compared to their counter parts. This is similar with the study conducted in Arba Minch city (Feleke, et al., 2015). This could be due to advice increase the women's awareness about ANC by providing information on the time of first ANC booking as well as the importance of early booking both her fetus as well as herself.

Respondents who had started previous ANC follow up on late time of pregnancy were four times more likely to book in late time for the current pregnancy compared to their counter parts. This finding is consistent with the study conducted in Gondar (Tadesse et al., 2014). This might be due to pregnant women were informed on time of booking through counseling during previous pregnancies. This increased respondents' awareness on the time of visit for the next pregnancy.

6. LIMITATION AND STRENGTH OF THE STUDY

6.1. Strength

- The results of this study could serve as a baseline data, since there is no study in the study area.
- It was able to meet its aim and the objectives and provided an understanding of the different predictors that significantly determine the time of first ANC booking.

6.2. Limitation

- Since the study was institutional based, selection bias may be employed.
- Gestational age was determined based on women's reports of their last normal menstrual period (LNMP). Ultrasound scan to confirm gestational age was not performed; hence, this may give inaccurate measure of gestational age.

7. CONCLUSION AND RECOMMENDATION

7.1. Conclusion

The result of this study revealed that slightly higher than half of pregnant women started the first ANC visit in late time of pregnancy. This finding showed that there is an improvement of early ANC booking in the study area compared to previous similar studies conducted in Ethiopia. In this study respondents' occupation, knowledge of pregnant women on timing and importance of ANC visit, advice about the importance and timing of visit, still birth, timing of previous ANC visit and age of respondents were significantly associated with late ANC booking. Pregnant women who had good knowledge about ANC were positively affected the time of ANC visit in the first ANC follow up. In addition to this providing of advice before starting, the first ANC visit improves timely booking.

7.2. Recommendation

The regional health Bureau should give concern to increase community awareness about the time and use of early ANC booking through media and health education.

Institutions should give emphasis to improve health care providers counseling ability through training and supervision during service provision. In addition to this, institutions should prepare health education sessions for pregnant women at the time of service provision.

Awareness creation and strengthening on the importance and time of early ANC booking need to be emphasized at the time of service .provision. Hence, ANC service providers should give adequate information for ANC attendants to increase their awareness on the importance and timing of early ANC booking.

Future study supported by qualitative method should be conducted to enhance timing of first ANC booking.

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ANNEXES

Annex I: Information sheet and informed voluntary consent form for Heads.

My name is _____.I am working as a data collector for the study being conducted in this institution by Alekaw Sema who is studying for his Master's degree at Haramaya University, College of Health and Medical Sciences. I kindly request you to lend me your attention to explain you about the study and your institution being selected as the study setting.

Purpose of the study: The findings of this study can be important for the health care providers working in antenatal care unit to identify the major areas for late booking and to take appropriate modification strategies to improve the effectiveness of health facility antenatal care follow up. It can also provide important information to policy makers, and program managers to address such issues in the future. Besides this, the aim of this study is to write a thesis as a partial fulfilment of a master's program in Maternity and Neonatal Nursing for the principal investigator.

Procedure and duration:

I will be interviewing pregnant mothers using a questionnaire to provide me with pertinent data that is helpful for the study. There are 52 questions to answer where I will fill the questionnaire by interviewing you. The interview will take about 30 minutes, so I kindly request you to spare me this time for the interview.

Risks and benefits:

The risk of participating in this study is very minimal, but only taking few minutes from pregnant mothers time. There would not be any direct payment for participating in this study. But the findings from this research may reveal important information for the local health planners.

Confidentiality:

The information that we will be provided will be kept confidential. There will be no information that will identify the participants in particular. The findings of the study will be general for the study community and will not reflect anything particular of individual persons. The questionnaire will be coded to exclude showing names. No reference will be made in oral or written reports that could link participants to the research.

Rights:

Participation for this study is fully voluntary. The participants have the right to declare to participate or not in this study. If they decide to participate, they have the right to withdraw from the study at any time and this will not label them for any loss of benefits which they otherwise are entitled. They do not have to answer any question that they do not want to answer.

Contact address:

If there, are any questions or enquires any time about the study or the procedures, please contact: Mobile phone of investigator: +251920255576 (Alekaw Sema) Email address of investigator: alekaw10@@gmail.com; Institutional research ethics review committee (IRERC) Haramaya University: Office phone: 0256661899: P.O.BOX: 235, Harar.

Declaration of informed voluntary consent:

I have read the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that participants have the right to withdraw from the study at any time or not to answer any question that they do not want. I am also informed that the Hospital has the right to stop this study from being conducted in the Hospital if any misdeeds and unethical procedures are observed during the data collection process in the Hospital's premises. Therefore, I declare my voluntary consent on behalf of hospital management to allow this study to be conducted in the Hospital with my initials (signature).

Name and Signature of Head of the Hospital: _____

Name and Signature of Data Collector: _____

Thank you for your cooperation!

Annex II: English Version of the Participant Information Sheet and Voluntary Consent Form

My name is _____. I am working as data collector for the study being collected by Alekaw Sema who is studying his Master's degree at Haramaya University, College of Health and medical Sciences. I kindly request you to help me by giving information about the study and being selected as the study participant.

The study title: Magnitude and factors associated to late antenatal care booking among pregnant mothers in Dire Dawa health facilities, Eastern Ethiopia.

Purpose of the study: The findings of this study will be aimed for Dire Dawa town Regional Health bureau and health facilities to plan intervention programs to reduce late antenatal care booking in the first visit. Moreover, the aim of this study is to write a thesis as a partial requirement for the fulfillment of a Master's program in Maternal and Neonatal Nursing for the principal investigator.

Procedure and duration: I will be interviewing you using questionnaire to provide me with pertinent data that is helpful for the study. There are 52 questions to be answered where I will fill the questionnaire by interviewing you. The interview will take about 30 minutes, so I kindly request you to spare me this time for the interview.

Risk and benefits: The risk of being participated in this study is very minimal, but only taking few minutes from your time. There would not be any direct payment for participating in this study but the findings from this research may reveal important information for Dire Dawa city, Regional Health bureau and health facilities in planning of their future work.

Confidentiality: The data you will provide us will be confidential. There will be no information that will identify you in particular. The findings of the study will be general for the study population and will not reflect anything particular of individual person. The questionnaire will be coded to exclude showing names. No reference will be made in oral or written reports that could link participants to the research.

Rights: Participation in this study is fully voluntary. You have the right to declare to participate or not in this study. If you decide to participate, you have the right to withdraw from the study at

any time and this will not label you for any loss of benefit which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

Contact address: If there, are any questions or enquires any time about the study or the procedures, please contact me:

Alekaw Sema: Mobile number (+251)-920-25-55-76

Email Address: alekaw10@gimal.com

Institutional Health Research Ethics Review Committee: Phone Number (+251)-025-466-07-08, P.O.Box 235, Harar

Declaration of informed voluntary consent: I have read/was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues to confidentiality, the rights of participating and contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to stop the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to allow this study to be conducted with my initials (signature).

Name and signature of the participant: _____

Name and Signature of data collector: _____

Annex III: English Version of the Questionnaire

Date of interview (date/month/year):_____

Name of the health Institution's: _____

Code number of the questionnaire: _____

Interviewer's name & signature: Name: _____ Signature_____

Supervisor's name & signature: Name: _____ Signature_____

Part I : Socio-demographic variables			
Sr.N	Questions	Option/Response	Remark
101	What is your age?	_____(in years)	
102	What is your marital status?	1. Married 2. Single 3. Widowed 4. Separated 5. Divorced	
103	What is your religion?	1. Orthodox 2. Protestant 3. Muslim 4.Others(specify)----------	
104	What is your ethnicity?	1. Oromo 2. Somali 3. Amhara 4. Others(specify)----------	
105	What is your occupation?	1. Governmental Employee 2. Self-Employee 3. House wife 4. Student 5. Others[specify]----------	
106	What is your educational Status?	1. Unable to read and write 2. able to read and write 3. Attend primary school(Grade 1-8) 4. Attend secondary school(Grade 9-12) 5. College diploma and above	
107	What is your place of residence?	1. Rural 2. Urban	

Part II: Obstetrics History			
201	How many times have you been pregnant? Including the current.	Number of Pregnancies:_____ if 1st px	→ 301
202	How many times did you give birth?	1. Number of children alive:_____ 2. Number of children died:_____ 3. Number of still birth:_____	
203	Did you have previous abortion?	1. Yes 2. No	→ 205
204	If your answer is yes for Q 203 What was the types of abortion?	1. Spontaneous 2. Induced 3. Both	
205	How old is the last child?	_____(Years)	
206	Have you ever attended ANC for preceding the current pregnancy?	1. Yes 2. No	→ Q209
207	If you attend ANC for the preceding pregnancy, when did you start follow up for that pregnancy?	1._____ months 2.I don't know	
208	What was the total number of visits for that pregnancy?	1. One 2. Two 3. Three 4. Four and more 5. Do not remember	
209	Did you experience a health problem during the last pregnancies?	1. Yes 2. No 3. Don't remember	
210	Have you ever given birth in health institution for the most recent pregnancy?	1.yes 2.No	→ Q212
211	Where did you give birth for that pregnancy?	1. Governmental hospital 2. Private hospital 3. Governmental health center 4. Private clinic 5. Others specify----------	
212	Did you have previous C/S?	1.Yes 2.No	
213	Did you have any complications during previous deliveries?	1.Yes 2.No	

Part III Knowledge on ANC and Pregnancy related complications			
301	For whom ANC is important?	1. Fetus 2. Mother(me) 3. both 4. Don't know	
302	Do you think that ANC is used for health promotion and disease prevention?	1. Yes 2. No 3. Don't know	
303	Do you think that ANC is used for birth preparedness?	1. Yes 2. No 3. Don't know	
304	Should a healthy pregnant women need to attend ANC clinics?	1. Yes 2. No 3. Do not know	
305	When does the appropriate time to start first ANC visit?	1. _____ months 2. I don't know	
306	How many ANC visits should pregnant women attend to the entire period of pregnancy?	1. One 2. Two 3. Three 4. Four and above 5. I don't know	
307	Do you know danger signs of pregnancy?	1. Yes 2. No	
Part IV Health service factors			
401	What do you fell about the quality of the care that you get?	1. Very good 2. Good 3. Satisfactory 4. Poor 5. I don't know	
402	Do health providers give respect?	1. Yes 2. No 3. I don't know	
403	How do you rank the approach of ANC services providers?	1. Very Good 2. Good 3. Fair 4. Bad	
404	How long did you wait in the facility to get ANC service in a visit?	_____hours	
405	Do you think that waiting time was a problem while you were attending ANC?	1. Yes 2. No 3. Don't know	
406	Is there any payment you were asked for ANC follow up?	1. Yes 2. No →	501

407	If you paid for any service charge, what is the maximum money you paid for a visit?	_____EBR	
408	Did you miss any service due to cost constraint in the previous or present visit?	1. Yes 2. No	
Part V History of current pregnancy			
501	Is this pregnancy planned?	1. Yes 2. No →	Q503
502	If yes for Q 501, did the plan include your husband?	1. Yes 2. No	
503	If this pregnancy is not planned, was it wanted by you after conception?	1. Yes 2. No	
504	If this pregnancy is not planned was it wanted by your husband after conception?	1. Yes 2. No	
505	If the current pregnancy is unplanned or unwanted, do you want to undertake abortion?	1.Yes 2. No	
506	Who will decide to you attend ANC Care?	1. My husband 2. Me 3. Both 4. My mother 5. Others specify	
507	To whom did you tell you become pregnant for the first time?	1. Your Husband 2. Your Mother 3. Your Sister 4. Your Friend 5. Other [specify]_____	
508	Did anyone advice you to start the first ANC visit?	1. Yes 2. No →	512
509	If yes for Q 508, from whom you get advice?	1. Health extension Worker 2. Husband 3. Mother 4. Sisters 5. Friends 6. Others[specify]_____	
510	If you were advised to attend ANC by someone, Did he/she informed you when to start?	1. Yes 2. No →	512
511	When does he/she advice you to start the first ANC visit?	_____months after Amenorrhea	

512	What is your husband's or partner's attitude towards ANC?	1. Positive 2. Negative 3. Don't know	
513	When did you start ANC follow up for the current pregnancy?	1. After _____Weeks of amenorrhea	
514	Why did you decide to start ANC follow up at this time? (More than one answer is possible)	1. perceive it is appropriate time 2. From my previous Experience 3. Due to illness 4. To assure pregnancy 5. Busy by other works 6. Economic factor [money constraints] 7. Because of unplanned pregnancy 8. Others [specify]_____	
515	When did you appoint for the next visit after the first visit?	1._____ weeks	
516	Did you get counseling on birth preparedness?	1. Yes 2. No	
517	Did you get any educations on danger sign of pregnancy? That requires you to come to health institution soon.	1. Yes 2. No	

Thank you for your cooperation!

Annex IV: Afaan Oromo of the Participant Information Sheet and Voluntary Consent Form

Maqaan Koo _____ jedhama. Anis sassaabaa/duu daataa qo'annoo ganda keessan irrati barataa digrii lammaffaa Yuniversitii Haramayaa kan tahe Alaqaa Sammaa dhaan geeggeeffamuuti. Isinis garee qo'annoo keenyaa taatanii waan filatamtaniif waa'ee qo'annoo kanaa isiniif ibsuuf gurraa fi qalbii keessan akka naaf kennitan kabajaan isin gaafadha.

Mata-duree qo'annichaa: Bayyinaa duubatti haafiinsa hadholiin ulfaa tajaajila hordoffii da'umsa duraa jalqabaa godhanii fi wantoota/sababoota isa waliin walqabataani jiran irratti dhaabbilee Fayyaa muraasa magaaala bulchiinsa Federaalaa addaa Dirre Dawaa keessa ,Bara 2017 filamaan irrattii adeemsifamudhaa. Lixaa Eti'oophiyaa, Bara 2017

Kaayyoo qo'annichaa: Argannoon qorannoo kanaa waajjiira fayyaa fi bufataalee fayyaa Magaalaa Dirre Dawaa keessa jiraaniif akkaa turtii hordoffii da'umsa duraa jalqabaa hirdhisuuf sagaantaa murtoo gadii dhaabaniifi tajaajilu danda'aa. Kanaan alattis, kaayyoon qorannoo kanaa, qorataan qo'annoo kanaa digrii lammaffaa isaa kunuunsaa hadhooliif da'iimanii jedhuu irratti fudhaataa tureef uulaagaa Eebbaaf isa barbaachisu guuttachuuf isa gargaara.

Haala adeemsaa fi yeroo fudhatu: Hirmaachuuf fedhii kan qabduu yoo ta'e gaffiiwwan garaa garaa qo'annoo kanaaf qopha'an asii gadiidtti siif dubbisuuf deebii barbaachisaa qorannoo kaanaaf ta'aan akka naaf deebiftun kabajaaniin si gaafadhaa. Baay'inni gaaffii walii galatti 52 kan hin caalle yoo tahu daqiiqaa 30 duwwaa fudhata.

Faayidaa fi miidhaa qo'anichaa: Rakkinni qo'annoo kana keessatti hirmaachuu keessaniin isin quunnamu baay'ee xiqqaa yoo tahu, innis yeroo keessan muraasa (daqiiqaa 30) qofaa fudhachuu taha. Qo'annoo kana irratti hirmaachuu keessaniin kaffaltiin kaffalamu tokko iyyuu hin jiru. Garuu bu'aan qo'annoo kanaa ragaawwan haarawaa biiroo fayyaa magaalaa Dirre Dawaa fi waajjiralee fayyaa magaalaa keessaniifi qooda fudhattoota biroof bu'aa guddaa ni argamiisa

Iccitii eeguu: Odeeffannoon isin nutti himtan hundi iccitiin qabama. Gaaffiin enyuumma keessan maqaan ibsu hin jiru. Argannoon qo'annaa kanaa hawaasa qo'annaa kana irratti hirmaatan akka walii galaatti kan ibsu yoo tahu, karaa kamiinuu dhimma nama dhunfaa hin calaqqisiisu. Haala

kamiinuu namoota dhunfaa qo'annaa waliin walqabsiisuuf afaaniiniis tahe barreeffamaan ragaa hin waamsiifnu.

Mirga: Hirmaannaan qo,annoo kana keessatti gootan guutuummaan guutuutti fedhii irratti kan hundaa'e. Mirga hirmaachuu fi hirmaachuu dhiisuu ni qabdu. Hirmaachuuf yoo murteessitsn, mirga yeroo barbaaddanitti qo'annoo kanaa keessaa bahu yommuu qabaattan kana gochuu keessaniifis faayidaan isiin argachuu qabaattanii fi dhabdan tokko iyyuu hin jiru. Gaaffii deebisuu hin barbaadne deebisuufis hin dirqamtan.

Teessoo: Gaaffii yookiin qeeqa qo'annoo kana ilaallatuu kamiifuu, teessoo armaan gadiin gaafachuu fi quunnamuu ni dandeessu:

Aleqaaw Semma: Lakkofsi Bilbilaa (+251)-920255576

Email Adresiin: alekaw10@gimal.com

Waajjira dhimma naamusaa qo'annaa fayyaa dhaabbatichaa (IHRERC) lakk. Bilbilaa (+251)-025-466-07-08 Yookiin lakk.Poostaa 235, Harar.

Unkaa walii galtee fedhii irratti hundaa'ee: Unkaan walii galtee hirmaattootaa naa dubbifameera/ dubbiseera. Kaayyoo qo'annichaa, haala adeemsa qo'aanichaa, faayidaa fi midhaa, dhimmi icitii eeguu, mirga hirmaachuu fi teessoon qo'ataa illee natti himamee jira. Wanta ifa hin taane akkan gaafadhuuf carraan naaf keennamee jira. Akkan yeroo barbaade qo'annicha adda kutee bahuu dandahu yookiin gaaaffii deebisuu hin barbaannee deebisuu hin dirqamnes natti himameera. Kanaafuu, akkan qo'annaa kana irratti feedhii kootiin hirmaadhe mallattoo koo armaan gadiin nan mirkanneessa.

. Maqaa hirmaattuu _____ Mallattoo hirmaattuu_____

Mallattoo odeeffannoo sassaabaa/duu_____

Annex V: Afaan Oromo Version of the Questionnaire

Guyyaa odeffanoon funaname (Guyyaa /ji'a /wagga):_____

Maqaa egumsa fayyaa _____

Malatto lakkosa gaffilee: _____

Maqaa fi mallatoo odeffanno Maqaa: _____ Malattoo_____

Funane

Maqaa fi mallatoo suprivizi Maqaa: _____ Malattoo _____

Kutaa I : Safartoo hawaasummaa			
T.Lakk.	Gaafilee	Filannoo/Deebii	Yaada adda
101	Umuriin kee meeqa?	_____(Waggaan)	
102	Haalli ga'ila kee maali?	1. Heerumeera 2. Hin heerumne 3. Abban mana koo narraa du'eera 4. kopha kophaa jirra 5. walhiikeera	
103	Amantiin kee maali?	1. Ortodoksii 2. pheenxee/protestaantii 3. Muslima 4. kan biraa (haa ibsamu)----------	
104	Sabummaan kee maali?	1. Oromoo 2. Somaale 3. Amharaa 4. kan biraa(haa ibsamu)----------	
105	Hojiin/dalagaan kee maali?	1. Hojjettu mootummaa 2. Hojii dhuunfaa 3. Haadha mana 4. Barattuu 5. Kan biraa[haa ibsamu]----------	
106	Sadarkaan barumsa kee maali?	1. Hin baranne (barreessuf dubbisuu hin danda'u) 2. Baradheera (barreesuf dubbisuu nan danda'a) 3. Sadarkaa tokkoffaa 4. Sadarkaa lammaffaa 5. Dipiloomaa kolleejiifi isaa ol	
107	Bakki jireenyaa/qubannaa kee eessa?	1. 1.Baadiyyaa 2. 2.Magaalaa	

kutaa II: Seenaa da'umsaa/Ulfaa			
201	Yeroo meeqaaf ulfoofte/garaatti baatte/si hafee/?	1.Lakkofsa walii galaa ulfoofte:_____yeroo duraaf yoo ta'e gara	→ 301
202	Yeroo meeqa da'ima deesse/dhalte?	1. Lakkoofsa ijoolle lubbun jirani:_____ 2. Lakkoofsa ijoole si jalaa du'aani:_____ 3. Lakkoofsa da'ima duute dhalatee:_____	
203	Kanaan dura olfi sirraa ba; e turee?	1. Eyyee 2. Lakki →	205
204	Yoo debbiin kee eeyyee yoo ta'e malittu siin qunqmee?	1 .offii issa 2.offiin barbaddee ofira baase 3. lamanuu ni ta'u	
205	Umuriin Daa'ima kee dhumaa meeqa?	_____(Waggaan)	
206	Ulfa kanaan duraa irratti hordoffii da'umsa duraa gootee beektaa?	3. Eyyee 4. Lakki →	209
207	Ulfa dhumaaf yoo hordoffi da'umsa duraa gooterta ta'eef yoom hordoffi kana jalqabde?	1. _____ Ji'aan 2. Hin yaadadhu	
208	Daa'ima kee dhumaaf Hordoffii walii gala meeqa goote?	1. Yeroo tokko 2. Yeroo lama 3. Yeroo sadii 4. Afuriifii isaa ol 5. Hin yaadadhu	
209	Ulfa dhumaa irratti rakkinni fayyaa si mudatee turee?	1. Eyyee 2. Lakki 3. Hin yaadadhu	
210	Dhaabbata fayyaati deessee beektaa?	1. Eyyee 2. lakki →	212
211	Eyyee yoo jette dhaabbata fayyaa kamitti deesse?	1. Hospitaala Mootummaatti 2. Hospitaala dhuunfaatti 3. Buufata fayyaa mootummaatti 4. Kiliinika dhuunfaatti 5. Kan biraa(haa ibsamu)----------	
212	Opiraasoniidhaan/baqaqfadheen	1. Eyyee Lakki	
213	Da'umsa/Ulfa jalqabaa irratti waanti cimaan si mudatee turee?	2. Eyyee 3. Lakki	

Kutaa III Beekumsaa hordoffi da'umsa/ulfaa duraafi rakkinoota walxaxaa ulfa waaliin dhufaan irratti qabdu			
301	Hordoffiin da'umsa duraa eenyuuf barbaachisa jetta?	1. Daa'ima ulfaaf 2. Haadholiif/Anaaf 3. Lamaanuufu 4. Hin beeku	
302	Hordoofiin da'umsa duraa fayyaa jajjabeesuu fi dhukkuba ittisuuf fayyada jettee Yaadda?	1. Eyyee 2. Lakki 3. Hin beeku	
303	Hordoffiin da'umsa duraa da'umsaaf qophaa'uuf nama fayyada jettee yaadda?	1. Eyyee 2. Lakki 3. Hin beeku	
304	Haati fayyaalettin tokko dirqama hordoffii da'umsa duraa gochuu qabdi jetta?	1. Eyyee 2. Lakki 3. Hin beeku	
305	Hordoffii da'umsa duraa eegaluuf yeroo sirridha jettu yoomi?	1. _____ Ji'aan 2. Hin beeku	
306	Haati tokkoYeroo Ulfa guutuutti hordoffii da'umsa duraa meeqa gochuutu qabdi jetta?	1. Tokko 2. Lama 3. Sadii 4. Afurii fi isaa ol 5. Hin beeku	
307	Mallatolee ulfaa hamoo beektaa?	1. Eyyee 2. Lakki	
Kutaa IV Gufuuwwaan tajaajila fayyaa			
401	Qulqullina tajaajila argatuu irratti maaltu sitti dhaga'aama?	1. Bayyee gaaridha 2. Gaaridha 3. Quuphsaadha 4. Gadheedha/dadhaabaadha 5. Hin beeku	
402	Hojjetootni fayyaa kabajaan si keessumeessu?	1. Eyyee 2. Lakki 3. Hin beeku	
403	Haala dhiheenya hojeetootni hordoffii da'umsa duraa irratti tajaajila kennaanii akkamitti madaalta?	1. Bayyee gaariidha 2. Gaariidha 3. Hanga tokko gaariidha 4. 4.Badaadha	
404	Tajaajila hordoffii da'umsa duraa argachuuf Dhabataa /bakka kana dhuftee hangam turta?	_____sa'aatiin	
405	Yeroon atii hordoffii da'umsa duraa kana argachuuf asitti eegdu rakkina qaba jetee yaadda?	1. Eyyee 2. Lakki 3. Hin beeku	
406	Ilaallamuuf/cheekaappiif gatii gaafatamtee beektaa?	1.Eyyee 2. Lakki →	501

407	Yoo tajaajila kamiifu kafalti kafalteeta ta'ee, kafaltiin guddaa atii hordooffiif kafaltee meeqaa?	_____BET	
408	Rakkina Gatii tajaajiilaaf jettee hordoffii kanaan duraa ykn ammaa atii addaan kutee jiraa?	1.Eyyee 2. Lakki	
kutaa V: Seenaa ulfa ammaa			
501	Ulfi kana itti yaaddeetu ulfooftee?	1. Eyyee 2. Lakki →	503
502	Deebiin kee gaafii 501 eyyee yoo ta'ee, abbaa manaan kee irratti walii galee ture?	1. Eyyee 2. Lakki	
503	Yoo ulfi kun kan itti hin yaaddamne ta'ee, sana booda ulficha amantee fudhatte turtee?	1. Eyyee 2. Lakki	
504	Yoo ulfi kun kan itti hin yaaddamne ta'ee, sana booda ulficha Abbaa manaan kee amanee fudhatte turtee?	1.Eyyee 2.Lakki	
505	Ulfiii kee kunni yoo itti karorifane ta'e offi irra basisuuf barbada?	1.Eyyee 2.Lakki	
506	Hordoffii da'umsa duraa kana akka gootuuf eenyutu siif murteesse?	1. Abbaa mana koo 2. Anuma 3. Nu lamaanuu 4. Soddaa koo 5. kan biraa (haa ibsamu)_____	
507	Ulfa ta'uu kee jalqaba eenyutti himte ture?	1. Abbaa mana kee 2. Haadha kee 3. Obbolettii kee 4. Hiriyaa kee 5. Kan biraa(haa ibsamu)_____	
508	Hordoffii da'umsa duraa kana akka gootuuf namni sigorse jiraa?	1. Eyyee 2. lakki →	512
509	Deebiin kee gaafii 601f eyyee yoo ta'ee, eenyutu si gorse ture?	1. Hojjetoota Ekstenshiinii fayyaa 2. Abbaa manaa koo 3. Harmee koo 4. Obboleettii koo 5. Hiriyaa koo 6. Kan biraa (haa ibsamu)_____	
510	Yoo gorsa hordoffi da'umsa duraa kana namni biraa sii gorseera ta'ee yoom akka jalqabduuf si gorsaan turee?	1.Eyyee 2.Lakki →	512

511	Yoom akka jalqabdu sitti himaan/gorsan?	laguu booda ji'aa _____	
512	Ilaalchi Abbaan manaa /hiriyaa kee hordoffii da'umsa duraa kanarratti qabuu maali?	1. Posetiiviindha/gaariidha 2. Negatiiviidha/badaadha 3. Hin beekuu	
513	Ulfa ammaa kanaaf hordoffii yoom jalqabde?	1.Laguu booda torban _____	
514	Yeroo kanatti hordoffii da'umsa duraa kana maaliif eegalte? (deebiin tokkoo ol ni danda'aama)	1. Yeroo sirrii jedhee waanan fudheef 2. Muuxannoo koo duraarraa ka'uun 3. Waan na dhukkubeef 4. Ulfa ta'uu koo mirkaneefachuuf 5. Hojii biraatiin waanaan sardamuuf 6. Maallaqa waanaan hin qabneef 7. Ulfichii waan itti hin yaadamneef 8. Kan biraa (haa ibsamu_____	
515	Hordofii yeroo jalqaba booda yoomitti sibeelaman?	Hordoofii jalqabaa booda gaafa ji,a----------	
516	Qophii Da'umsaaf gorsii siif kennameeraa?	1. Eyyee 2. Lakki	
517	Akka daftee mana yaalaa dhuuftuuf Mallatoolee ulfaa hamoo irratti barumsi siif kennamee beekaa?	1. Eyyee 2. Lakki	

Gargaarsa keetiif baayyee galatoomii!!!

Anex VI: Somali Version of the Participant Information Sheet and Voluntary Consent Form

Magacaygu waa _____. Waxaan u shaqeynaya sida ururiyaha xogta waxbarasho e u ururiyey Alekaw Sema kaasoo wax ka barta shahaadada heerka labaad ee Jaamacadda Haramaya, qeybta caafimaadka. Anigu waxaan si naxariis leh kaga codsanaya inaad caawimaad iga siiso warbixin ku saabsan daraasadan iyo in laguu xusho ka qeybgalka daraasaddan.

Cinwaanka Daraasaddan: muhiimadda iyo arrimaha xidhiidhaya waxa keena daahitanka diiwaanka daryeelka caafimadka hooyada uurka leh ama hooyooyinka uurka leh ee xarumaha caafimaadka Dirir Dhabe, bariga Itoobiya.

Ujeedada daraasadan: Natiijada daraasaddan waxaa loogu talagali doonaa magaalada Dirir Dhabe Xafiiska Caafimaadka ee ismaamulka dirir dhabe iyo xarumaha caafimaadka si ay u qorsheeyaan barnaamij faragelin ah si loo yareeyo daahitaanka daryeelka hooyada uureyda e diiwangalinti ugu horeysay booqashadeedii koowaad. Iyo weliba, ujeedada daraasaddan waa in laga qoro shahada da qabyo qoraaleedka laga rabo imu buuxiyo dhammaystirka shahaadada heerka labaad ee barnaamijka baaritaanka kalkaaliyaha Hooyada iyo Dhalaanka.

Habka iyo waqtiga ay soconeyso: Waxaan ka wareysan doonaa iyadoo la isticmaalayo weydiimahan inad i siiso macluumaadka ugu muhiimsan e waxtarka u leh baadhitaankan. Waxaa jira 52 su’aalod o laga jawaabayo meesha aan su'aalaha ka buuxin doono aniga o ku wareysanaya. Wareysiga waxa uu qaadan doonaa illaa 30 daqiiqo, sidaas darteed waxaan si naxariisi ku dheehantahay kaaga codsanaya inaad wareysigan iigu hurtid waqtigaga.

Halista iyo faa'iidooyinka: Halista ay leedahay ka qaybqaadashada baadhitaankani waa mid aad u yar, balse kaliya xoogaa dhowr daqiiqo inan waqtigaagaka kaa qaato. Ma jiri doonto wax lacag toos ah ka qaybqaadashada daraasaddan laakiin natiijooyinka ka soo baxa cilmibaadhistan waxey daaha ka rogi kartaa macluumaad muhiim u ah magaalada Dirir Dhabe, Xafiiska Caafimaadka ee ismaamlulka iyo xarumaha caafimaadka ee qorshaynta shaqada mustaqbalkooda.

Qarsoodiga: xogta aad na siin doontaan wexey noqon doontaa mid qarsoodi ah. Ma jiri doonto xog si gaar ah idiin kala saari doonto. Natiijada daraasaddan waxay noqon doontaa mid si guud u quseyso bulshada mana tuseyso wax gaar ah oo qof ama shaqsi ah. Weydiimaha waxaa lagu suntan

doonaa si looga saaro wax muujinaya magacyo. Wax tixraac ah laguma sameyn doono oraah ahaan ama qoraal ahaan taasoo ka qaybgalayaasha ay xiririn Karto cilmibaadhistan.

Xuquuqda: Ka qayb qaadashada daraasaddan waa mid si buuxda iskaa wax u qabso ah. Waxaad xaq u leedahay inaad sheegto inad ka qaybqaadato ama aadan ka qayb qaadan daraasaddan. Haddii aad go'aansato in aad ka qaybqaadato, waxaad xaq u leedahay in ad ka baxdo daraasadan waqti kasta mana lagugu calaamadeeyn doono khasaare ama faaiido aad si kale xaq ugu yeelatay. Ma aha in aad ka jawaabto su'aal kasta oo aadan Rabin in ad ka jawaabto.

Cinwaanka lagala xiriri karo: Haddii ay jiraan wax su'aalo ah ama codsi ah oo ku saabsan daraasaddan ama nidaamka, fadlan igala soo xiriir:

Alekaw Sema: Lambarka Mobile (+251) -920255576

Cinwaanka iimeeylka: alekaw10@gimal.com

Guddiga machadka cilmibadhista caafimadka sharciga iyo qiimeynta: Lambarka Telefoonka (+251) -025-466-07-08, P.O.Box 235, Harar.

Baaqa ogolaanshaha iskaa wax u qabso: Waan akhriyey / akhristay warqada xogaha kaqaybgalnimada. Si cad u ayan fahamay ujeedada cilmi baarista, nidaamka, halista iyo faa'iidooyinkeeda, arrimaha qarssodiga, xuquuqda ka qaybgalnimada iyo codsiga cinwaanka xiriirka. Waxaa la isiiyey fursad an su'aalo ku weydiiyo sheyga anan cadeyn. Waxaa la igu wargeliyay in aan xaq u leeyahay inaan joojiyo daraasaddan waqti kasta ama in aanan ka jawaabin su'aal kasta oo aanan rabin. Sidaa darteed, waxaan sheegayaa oggolaanshahayga iskaa wax u qabso si loo suurtogeliyo in daraasaddan la sameeyo o u ugu horreeyo (saxiixeyga) sida hoos ku xusan.

Magaca iyo saxeexa ka qaybgalaha: _____

Saxiixa ururiyaha xogta: _____ Taariikhda: _____

N.B: tani wa in joogitaanka xog ururiyaha fool ka fool la saxiixa

Anex VII: Somali versions of the Quesionnaire

Taariikhda wareysiga (maalinta/ bil / sanad): _____

Magaca xarunta: _____

Suaalaha lumberka suntashada: _____

Magaca waresystaha: saxiixa: _____ Saxiixa _____

Magaca dabagalaha: magaca: _____ saxiixa_____

Qeybta 1:			
Sr.N	Su'aalaha	fursad/jawaabta	Remark
101	Waa imisa da'dada?	_____(da' ahaan)	
102	Heer ma leedahay?	1. guursaday 2.kali ah 3. carmali 4. kala tag 5. la furay	
103	Diintaadu waa maxay?	1. muslim 2. masiixi 3. kirishtaan(orthodox) 4.kuwa kale (kala saar)----------	
104	Jinsiyadaadu waa maxay?	1. soomaali 2.oroomo 3.Amxaaro 4. kuwa kale (kala saar)----------	
105	Shaqadaadu waa maxay?	1. Shaqaale dowladeed 2. Iskii u shaqeysto 3. Guri joog 4. Arday/ardayad 5. Kuwa kale [kala saar]----------	
106	Wa maxay heerka aqoontaada?	1. Aan akhriyi/qori karin 2. Akhriyi/ qori kara 3. Dhigtay (fasalka 1-8) 4. Dhigtay (fasalka 9-12) 5. Kulliyad diblooma iyo wax ka sarreya	
107	Waa maxay halka aad degantahay?	1. Baadiyaha 2. baladka	
Qeybta II: xaalada uurka			
201	Imisa jeer ayaad uur noqotay? Marka lagu daro xilligan.	1. Tirada uurka :_____(1) →	301

202	Imisa jeer ayaad dhashay?	1.Tirada ilmaha nool:_____ 2.Tirada ilmaha dhintay:_____ 3.Tirada ilmaha dhicisoobay/dilan:_____	
203	Horey wax dilan ah ma u lahayd?	1. haa 2. maya	
204	Hadii jawabtaadu tahay haa su'asha 203 waa maxay nooca dilanka?	1.inta caadiga ah 2. inta si ula kac ah	
205	Wa imisa jir ilmihii kuugu danbeeyay?	_____(sanad ahan)	
206	Wali ma tagtay daryeelka xanaanada hooyada uurkaagii hore?	1.Haa 2.maya →	Q208
207	Hadii aad tagtagy daryeelka iyo xanaanada hooyada uurka leh ilmahaagii kuugu danbeeyay goormaad bilowday la socodka uurkaa?	1._____ bil 2. ma aqaano	
208	Guud ahaan imisa jeer ayaad booqatay daryeelka iyo xaanada hooyada ilmahaagii kuugu danbeeyay?	1. Hal mar 2. Laba mar 3. Sedex mar 4. Afar mar 5. Ma xusuusto	
209	Ma lakula kulantay caafimaad darro xiligii aad uurka ahayd?	1. Haa 2. Maya 3. Ma xusuusto	
210	Waligaa xarun xaafimaad ma ku dhashay?	1. haa 2. maya →	sua212
211	Xageed ku dhashay uurkaa?	1. cusbitaal dowladeed 2. cusbitaal gaar loo leeyahay 3. xarun caafimaad dowladeed 4. kiliinic gaar loo leeyahay 5. kuwa kale kala saar ----------	
212	dhalmada jeexitaanka caloosha	1. haa 2. maya	
213	Miyaad la kulantay wax caqabado?	1. haa 2. maya	

Qeybta III Aqoonta dhanka daryee daryeelka caafimadka hooyada uurka leh ama hooyooyinka uurka leh ee xarumaha caafimaadka iyo caqabadaha la xidhiidho			
301	Midkee ugu muhimsan daryeelka xannaanada hooyada uurka ah?	1. ilmaha uurka ku jiro 2. hooyada(aniga) 3. labadaba 4. Don't know	
302	Ma u maleyneysaa in daryeelka hooyada lo isticmaalo inu keeno caafimaad kana hortago xanuunada?	1. haa 2. maya 3. 3ma garanayo	
303	Ma u maleyneysaa in daryeelka xanaanada hooyada loogu diyaar garoobo dhalmada?	1. haa 2. maya 3. maya garanayo	
304	Ma qasabbaa haweeney uur caafimaad qabta in ay u baahnatahay iney booqato xarunta dayeelka xanaanada hooyada?	1. Haa 2. maya 3. ma aqaano	
305	Goorma (waqtiga) ayaa ugu munaasabsan in ay hooyadu bilowdo daryeelka xanaanada hooyada uurka leh?	1. _____ bil 2. Ma aqaano	
306	Imisa jeer ayaa haweeneydu booqan kartaa xarunta daryeelka xanaanada hooyada uurka guud ahaan inta ay sido uurkaa?	1. Hal 2. Laba 3. Sedex 4. Afar iyo wixii ka sarreyo 5. Ma aqaaano	
307	Ma taqaana calaamadaha khatarta aha xilliga uurka?	1. Haa 2. maya	
Part IV caqabdaha adeega caafimaadka			
401	Maxaad tayada daryeelka ad hesho ka dhihi lahyd?	1. Aad u fiican 2. fiican 3. ma xuma 4. wu xunyahay 5. ma aqaano	
402	Miyeey shaqaalha daryeelka caafimadka ku siiyaan tixgalin?	1. Haa 2. Maya 3. Ma aqaano	
403	Sidee baad ukala qiimeyn lahyd kuwa bixiya adeega daryeelka xanaanada hooyad uurka leh?	1. aad u fiican 2. fiican 3. ma xuma 4. xunyahay	

404	Intee in le'eg ayaad sugta adeega si ad u heshid adeega daryeelka xanaanada hooyada uurka leh?	_____saacadood	
405	Ma u maleyneysaa in sugutaanka saacadaha ay dhibooto tahay inta adeega lagu siinayo?	1. Haa 2. Maya 3. Ma aqaano	
406	Ma jirtaa wax qarash ah o lagu weydiiyay xiliga baadhitaanka?	1. Haa 2. Maya →	Su'asha 501
407	Hadi ad biixisay adeeg qarash waa imisa qarashka ugu badan e ad booqashada ku bixisay?	_____lacagta itoobiya	
408	Wax adeeg ah miyu kugu dhaafay caqabad jiro aged ama caqabad d qarashka ah booqashadaadii hore iyo middan hadda ah?	1. Haa 2. Maya	
Part V History of current pregnancy			
501	Uurkan ma mid qorsheysan baa?	1. Haa 2. Maya →	Su'asha 503
502	Hadii haa tahay su'asha 501, qorshaha ma ka qeyb galisay seygaagadid?	1. Haa 2. Maya	
503	Hadi uurka an la qorshayn rimitaanka kadib ma ubaahantahay uurkaa?	1. Haa 2. Maya	
504	Hadii Aydan qorsheysan uurkan dhanka seygaaga ma ubaahanyahay uurkan?	1. Haa 2. Maya	
505	Haadi uurka waqtigan uusan qorsheysneyn ama an larabin, ma iska so xaaqi lahayd uurkaa?	1. Haa 2. Maya	
506	Kuma ayaa go'aminaya inad ka qeybqadato daryeelka xanaanada hooyada urrka leh?	1. seygeyga 2. aniga 3. labadayuba 4. hooyadeey 5. kuwa kale caddee_____	
507	Kuma ayaad usheegeysaa marka ugu horreysa hadi ad uur qaado?	1. Seygaaga 2. hooyadaada 3. walaashaada 4. saaxibadda 5. Other [specify]_____	
508	Cid kuugu waanisay miyeey jirta bilibaabitanka booqashada daryeelka xanaanada hooyada?	1. Haa 2. Maya →	Su'asha 512

509	Hadii haa tahay su'asha 508, kuma ayad waanada ka heshay?	1. Xirfadlaha caafimadka wareega 2. Seygeyga 3. Hooyadey 4. Walaashey 5. Saaxibada 6. Kuwa kale [caddee]_____	
510	Hadii qof kugu waaniyey ka qeybgalka daryeelka xanaanada hooyada uurka leh miyu/miyey ku ogeysiyay/yeen xiliga ad bilabeysid?	1. Haa 2. Maya →	Su'asha 512
511	Goorma ayuu/eey kugu waanisay booqashada koowaad inad bilowdo?	_____bil kadib xiliga ay caada iga istaagto	
512	Wa maxay dabeecadaha seygaga/ lamaankaagu ka heysto arrimaha daryeelka xanaanada hooyada uurka?	1. Arrin fiican 2. Arrin qaldan 3. Ma garanayo	
513	Goorma yaad bilowday uurkaagan hadda ah daryeelka xanaanada hooyada uurka leh?	1. Isbuuc kadib _____xiliga ay caadada iga istaagtay	
514	Maxaad u go'ansatay xiligan inaad bilowdo la socodka daryeelka xanaanada hooyada uurka leh? (hal jawab wax kabadan ba macquul ah)	1. Iska dhaadhiciyay waa xiliga ugu munasbsan 2. Ka yimid Khibradaheygii hore 3. Xanuun sababtii 4. Si an u xaqiijiyo uurkeygan 5. Shaqooyin kale mashquul ku ahaa 6. Xaalado dhaqaale[caqabdo qarash] 7. Uur an qorsheysneyn sababtii 8. Kuwa kale [caddee]_____	
515	Goorma ayaa lagu ballamiyay booqashada labaad kadib booqashadii koowaad?	1._____ bil kadib booqashadii koowaad	
516	Wax talo ah ma heshay isu diyaarinta dhalmada?	1. haa 2. maya	
517	Wax waxbarasho ma heshay calamadaha qatarta e uurka? Taasoo ad ugu baahatay inad tagto xarun caafimaad.	1. haa 2. maya	

Waad ku mahadsantahay caawimaadaada!!!

Annex VIII: Amharic Version of the Participant Information Sheet and Voluntary Consent Form

ስሜ……እባላለሁ፡፡ አሁን እየሰራሁኝ ያለሁት በዚህ ማህበረሰብ ለሚደረገው ጥናት መረጃ ሰብሳቢ ሆኜ ለአቶ አለቃው ሰማ በሐረማያ ዩኒቨርሲቲ በእናቶችና ህጣናት በማስተርስ መረጃ ለመመረቂያ የሚሆን ጥናት ለማካሔድ ነው፡፡ ስለዚህ እንዴት ተሳታፊ መሆን እንደቻሉና ስለጥናቱ በተመለከተ ማብራሪያ እንድሰጥዎት የተወሰነ ጊዜ እንዲሰጡኝ በአክብሮት እጠይቃለሁ፡፡

የጥናቱ ርዕስ፡በድሬ ዳዋ ከተማ ውስጥ ባሉ ጤና ተቋማት ለቅድመ ወሊድ ክትትል(ምርመራ) ዘግይተው የሚመዘገቡ ነፍሰ ጡር እናቶች እና ተዛማጅ ምክንያቶች

የጥናቱዓላማ፡ የዚህ ጥናት ግኝት የድሬ ዳዋ ከተማ ጤና ት/ቤት እና ጤና ተቆማት ለቅድመ ወሊድ ክትትል ዘግይቶ መምጣትን ለማሻሻል ለሚያደርጉት ጥረት ከፍተኛ ጠቀሜታ ይኖረዋል፡፡ ከዚህ በተጨማሪም ለዋና አጥኚው የማስተርስ ትምህርቱን ለማጠናቀቅና የመመረቂያ Îሁፍ ለማዘጋጀት ይጠቅመዋል፡፡

የጥናቱ ሂደት እና ጊዜ፡ ለጥናቱ የሚያገለግሉና መረጃ ሊሰጡ የሚችሉ ጥያቄዎች ተዘጋጅተዋል እነዚህ ጥያቄዎች ጠቅላላ 52 ሲሆኑ በቃለ ምልልስ ጥያቄዎቹን ለመመለስ በግምት 30 ደቂቃ ይፈጃል፡፡ ስለዚህ አሁንም በድጋሚ ጊዜዎትን እንዲሰጡኝ በአክብሮት እጠይቃለሁ፡፡

ጉዳትና ጥቅም፡ በዚህ ጥናት መሳተፍዎ ትንሽ ጊዜዎትን ከመውሰድ በስተቀር የሚደርስብዎት ጉዳት በጣም አነስተኛ ነው፡፡ በዚህ ጥናት በመሳተፍዎ የሚያገኙት ቀጥተኛ ጥቅም የለም ነገር ግን ከጥናቱ የተገኙት ጠቃሚ መረጃዎች ስለጤና እና ጤናን በተመለከተ ለሚያቅዱ የሚመለከታቸው ባለድርሻ አካላት ይጠቅማቸዋል፡፡

ምስጢር አጠባበቅ፡ የሚሰጡን መረጃ ሁሉ ምስጢርነቱ የተጠበቀነው። ለዚሁም እርስዎን የሚገልጽ ምንም ነገር የለም፡፡ የጥናቱ ውጤት በግለሰብ ሳይሆን ለሁሉም ህዝብ ነው፡፡ ጥያቄው መለያ ምልክት አለው ፤ስም የሚገጽ ነገር የለውም እናም ስለተሳታፊዎች የሚገልጥ የቃልም ይሁን የጥሁፍ በጥናቱ ውስጥ የለም።

የተሳታፊው መብት፡ በዚህ ጥናት ለመሳተፍ ሙሉ ፈቃደኝነት ያስፈልጋል፡፡ በዚህ ጥናት የመሳተፍ ወይም ያለመሳተፍ ሙሉ መብትም አለዎት፡፡ ላለመሳተፍ ከፈለጉ ደግሞ በማንኛውም ጊዜ በመሀል ራስዎን ከጥናቱ ማግለል(ማቋረጥ) ይችላሉ፡፡ ካቋረጥኩኝ ጥቅም ይጎልብኛል ብለው አያስቡ፡ ፡መመለስ የማይፈልጉትን ማንኛውም ጥያቄ አለመመለስ መብትዎ ነው፡፡

አድራሻ፡ ስለጥናቱ አካሄድ ወይም ስለጥናቱ መጠይቅ ወይም ደግሞ ጥናቱን በተመለከተ ማንኛውም ጥያቄ ካሎት የሚከተሉትን አድራሻ ይጠቀሙ፡፡

አለቃው ሰማ-(+251)-920255576፣ ኢሜይል-alekaw10@gmail.com

ተቋማዊ የጤና ምርምር ስነ-ምግባር ግምገማ ኮሚቴ፡ ስልክ-(+251)-025-466-07-08፣ ፖ.ሳ.ቁ-235 ሀረር

በፈቃደኝነት ላይ የተመሰረተ የስምምነት ማረጋገጫ፡ የተሳታፊውን መረጃ ፎርም አንብቤዋለሁ ወይም ተነቦልኛል፡፡ የጥናቱ ዓላማ፤ ያለውን ጉዳትና ጥቅም ፤ምስጢር አጠባበቅ የመሳተፍ እና ያለመሳተፍ መብት እንዲሁም ችግር ካለ ከማን ጋር መገናኘኘት እንዳለብኝ ሁሉ ተገልጾልኛል፤ ጥያቄ ካለኝ ደግሞ እንድጠይቅ እድል ተሰጥቶኝ በመሀል ደግሞ ጥናቱን ለማቆም ከፈለኩኝ በማንኛውም ጊዜ ከጥናቱ /ከተሳታፊነት/ መውጣት እንደምችል በመጨረሻም መመለስ የማልፈልገውን ጥያቄ አለመመለስ መብቱ እንዳለኝ ከተረዳሁኝ በኋላ በሙሉ ፈቃደኝነት በዚህ ጥናት ለመሳተፍ የወሰንኩኝ መሆኔን ከዚህ በታች በተቀመጠው ፊርማዬ አረጋግጣለሁ፡፡

የተሳታፊ ስም …… ፊርማ ……. ቀን……...

የመረጃ ሰብሳቢ ስም …… ፊርማ ……. ቀን……

Annex IX: Amharic Version of the Questionnaire

ቃለ መጠይቁ የተካሄደበት ቀን (ቀን/ወር/ዓመት):_____
የጤና ድርጅቱ ስም: _____
የመጠይቅ መለያቁጥር:_____
የቃለመጠይቅ አቅራቢዉ ስምና ፊርማ: ስም:_____ ፊርማ፡_____
የተቆጣጣሪዉ ስምና ፊርማ: ስም፡_____ ፊርማ:_____

ተ.ቁ	ጥያቄ	ምላሽ	ዝለል
ክፍልአንድ: የማህበራዊ ባህሪያት መረጃ			
101	እድሜዎት ስንት ነው? (በሙሉ አመት)	_____ዓመት	
102	የጋብቻ ሁኔታዎ?	1. ያገቡ 2. ያላገቡ 3. የፈቱ 4. የሞተባቸው 5. ሌላ ካለ (ይተቀስ)----------	
103	ሃይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌላ ካለ /ይጥቀሱ/.....	
104	ብሔር	1. ኦሮሞ 2. ሶማሊ 3. አማራ 4. ሌላ ካለ (ይጥቀሱ)----------	
105	የትምህርት ደረጃዎት	1. ማንበብ እና መፃፍ አልችልም 2. ማንበብ እና መፃፍ እችላለው 3. የመጀመሪያ ደረጃ (1-8) 4. ሁለተኛ ደረጃ(9-12) 5. ኮሌጅ እና ከዚያ በላይ	
106	ስራዎት ምንድን ነው?	1. የመንግስት ሰራተኛ (ተቀጣሪ) 2. በግል የሚሰራ 3. የቤት እመቤት 4. ተማሪ 5. ሌላ ካለ [ይገለጽ]_____	
107	የመኖሪያ ቦታ	1. ከተማ 2. ገጠር	
ክፍል ሁለት፡ የወሊድ መረጃ			
201	ስንት ጊዜ አርግዘው ያውቃሉ? [የአሁኑን ጨምሮ]?	የእርግዝና ብዛት_____ የመጀመሪያ(1) ከሆነ →	301
202	ስንት ጊዜ ወልደው ያውቃሉ?	1. በህይወት ያሉ ብዛት ____ 2. ከተወለዱ በኋላ የሞቱ ብዛት __ 3. ሞተው የተወለዱ ብዛት__	
203	ከዚህ በፊት አስዎርዶዎት ያውቃል	1. አዎ 2. አያውቅም →	205
204	ለጥያቄተ.ቁ.203 መልስዎ አዎ ከሆነ የውርጃው አይነት ምን ነበር	1. በራሱ የወረደ 2. በፍላጎት የወረደ 3. በሁለቱም	
205	ይህን እርግዝና ከዚህ በፊት ከነበረው እርግዝና ከስንት አመት በኋላ ነው ያረገዙት?	ከ_____ _አመት	

206	ከዚህ እርግዝና በፊት ለነበረው እርግዝና የቅድመ ወሊድ (የነፍሰጡር) ምርመራ አድርገው ያውቃሉ?	1. አዎ 2. አላውቅም →	209
207	ከዚህ እርግዝና በፊት ለነበረው እርግዝና የቅድመ ወሊድ ክትትል ካደረጉ የወር አበባዎ በቀረ በስንተኛው ጊዜ ነበር?	1. ከ----------ወር በኋላ 2. አላስታውስም	
208	ከዚህ በፊት ለነበረው እርግዝና በጠቅላላ ስንት ጊዜ ተከታትለው ነበር?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት ጊዜ 4. አራትና ከዚያ በላይ ጊዜ 5. አላሰታዉስም	
209	ከዚህ በፊት ለነበረው እርግዝናዎ ችግር ገጥሞዎት ያውቃል?	1. አዎ 2. አያውቅም 3. አላስታውስም	
210	ከዚህ እርግዝና በፊት ያረገዙትን በጤና ተቋም ነው የወለዱት?	1. አዎ 2. አይደለም →	212
211	ለተ.ቁ 210 መልስዎ አዎ ከሆነ የት ነበር?	1. መንግስት ሆስፒታል 2. .የግል ሆስፒታል 3. የመንግስት ጤና ጣቢያ 4. የግል ክሊኒክ 5. ሌላ ካለ (ይጠቀስ)----------	
212	ከዚህ በፊት በቀዶ ህክምና ወልደው ያውቃሉ ?	1. አዎ 2. አልወለደኩም	
213	ላለፉት እርግዝና በወሊድ ጊዜ ችግር ገጥሞዎት ያውቃል	1. አዎ 2. አያውቅም	
ክፍል -3 ፡የቅድመ ወሊድ ክትትል እና ከእርግዝና ጋር ተዛማጅ ችግሮች እውቀት			
301	የቅድመ ወሊድ ምርመራ የሚጠቅመው ለማን ነው ብለው ያስባሉ	1. ለህጻኑ 2. ለእናት 3. ለሁሉም 4. አላውቅም	
302	የቅድመ ወሊድ(የነፍሰጡር) ምርመራ በሽታን ለመከላከል እና ጤናን ለማሻሻል ይጠቅማል ብለው ያስባሉ	1. አዎ 2. አላስብም	
303	የቅድመ ወሊድ(የነፍሰጡር) ምርመራ ለወሊድ ዝግጅት ይጠቅማል ብለው ያስባሉ	1. አዎ 2. አላስብም	
304	ጤናማ የሆነች ነፍሰጡር እናት የቅድመ ወሊድ ክትትል ማድረግ አለባት ብለው ያስባሉ?	1. አዎ 2. አይደለም 3. አላውቅም	
305	የነፍሰጡር /ቅድመወሊድ/ ምርመራ የወር አበባዎ በቀረ መቼ ቢጀመር ጥሩ ነው ብለው ያስባሉ?	1._ከ_____ ወር በሆላ 2.አላዉቅም	
306	በአንድ እርግዝና ባጠቃላይ ስንት ጊዜ ክትትል ቢያደርጉ በቂ ነው ብለው ያስባሉ?	1. አንድ 2. ሁለት 3. ሶስት 4. አራት እና ከዚያ በላይ 5. አላውቅም	
307	ከእርግዝና ጋር በተያያዘ ሊመጡ የሚችሉ አደገኛ የጤና ችግሮችን (እንከኖችን) ያውቃሉ?	1. አዎ 2. አላውቅም	401
ክፍል - 4 የጤና አገልግሎት ችግሮች			
401	ስለነፍሰ ጡር /የቅድመ ወሊድ/ ምርመራ አገልግሎት ጥራት ምን ይሰማዎታል?	1. በጣም ጥሩ 2. ጥሩ 3. በቂ ነው	

		4. ደካማ 5. አላውቅም	
402	የጤና ባለሙያዎች ነፍሰጡር እናቶችን በምርመራ ጊዜ ያከብራሉ?(በቅድመ ወሊድ ምረመራ ወቅት)	1. አዎ 2. የለም 3. አላውቅም	
403	የቅድመ ወሊድ ምርመራ የሚሰጡትን የጤና ባለሙያዎች እንዴት ደረጃ ያወጣሉ?	1. በጣም ጥሩ 2. ጥሩ 3. በቂ ነው 4. ደካማ 5. አላውቅም	
404	የነፍሰጡር /ቅድመወሊድ/ ምርመራ ለማግኘት የወሰደበዎት ጊዜ?	_____ሰዓት	
405	በነፍሰ ጡር /ቅድመወሊድ/ ምርመራ ጊዜ ብዙ ሰዓት መጠበቅ ችግር ነው ብለዉ ያምናሉ?	1. አዎ 2. የለም 3. አላውቅም	
406	ለነፍሰ ጡር /ቅድመወሊድ/ ምርመራ ገንዘብ ከፍሎ ነበር?	1. አዎ 2. አላውቅም →	501
407	ለጥያቄ ተ.ቁ. 406 መልስዎ አዎ ከሆነ ለምን አገልግሎት ነበር የከፈሉት?	1. ለማማከር (ለካርድ እና ለምርመራ) 2. ለላብራቶሪ 3. ለአልትራሳውንድ 4. ለመድኃኒት 5. ሌላ ካለ [ይገለጽ]_____	
408	ለነፍሰጡር /ቅድመወሊድ/ ምርመራ የከፈሉት ገንዘብ ካለ በአንድ ክትትል የከፈሉት ከፍተኛ የገንዘብ መጠን ስንት ነበር	----------ብር	
409	በገንዘብ እጥረት ምክንያት ያላደረጉት ምርመራ አለ?	1. አዎ 2. የለም →	501
410	ለጥያቄ ተ.ቁ. 411 መልስዎ አዎ ከሆነ የትኛውን ምርመራ ነው ያላደረጉት?	1. ለማማከር(ለካርድ እና ለምርመራ) 2. ለላብራቶሪ 3. ለአልትራሳውንድ 4. ለመድኃኒት 5. ሌላ [ይገለጽ]_____	
ክፍል - 5 የአሁኑ እርግዝና መረጃዎች			
501	ይህን እርግዝና አቅደው ነው?	1.አዎ 2.አይደለም →	503
502	ለጥያቄ ተ.ቁ. 501 መልስዎ አዎ ከሆነ ያቀዱት ከባለቤትዎ ጋረ ነዉ?	1.አዎ 2.አይደለም	
503	ይህ እርግዝናዎ ያለእቅድ ከሆነ ከተረገዘ በኋላ እርስዎ ፈልገውታል ?	1. አዎ 2. አልፈልገውም	
504	ይህ እርግዝናዎ ያለእቅድ ከሆነ ከተረገዘ በኋላ ባለቤትዎ ይፈልጉታል?	1. አዎ 2. አይፈልገውም	
505	ይህ እርግዝናዎ ያለእቅድ እና ያለፍላጎት ከሆነ ለማስወረድ አስበው ነበር	1. አዎ 2. አላሰብኩም	

506	የእርግዝና ክትትል እንዲጀምሩ የሚወስን ማን ነው	1. ባለቤትዎ 2. እርስዎ 3. ሁሊታችሁም 4. እናትዎ ሌላ ካለ(ይጠቀስ)_____	
507	መጀመሪያ ማርገዝዎትን የነገሩት ለማን ነው?	1. ለባለቤትዎ 2. ለእናትዎ 3. ለእህትዎ 4. ለጓደኛዎ 5. ለሌላ ካለ[ይገለጽ] _____	
508	የመጀመሪያውን የቅድመ ወሊድ /የነፍሰጡር/ ምርመራ እንዲጀምሩ ምክር የሰጠዎት ሰው ነበር?	1. አዎ 2. የለም →	512
509	ለጥያቄ 508 መልስዎ አዎ ከሆነ ምክሩን የሰጠዎት ማን ነው?	1. ጤና ባለሙያ 2. ባለቤትዎ 3. እናትዎ 4. እህትዎ 5. ጓደኛዎ 6. ሌላ ካለ /ይገለጽ/ _____	
510	ምክር የሰጠዎት ሰው መቼ ምርመራ ማድረግ [መጀመር] እንዳለበዎት ነግሮዎታል	1.አዎ 2.አልነገረኝም →	.512
511	የመጀመሪያ የነፍሰ ጡር ምርመራ የወር አበባዎ በቀረ መቼ መጀመር እንዳለብዎት ነገረዎት?	ከ----------ወር በኋላ	
512	የነፍሰጡር ምርመራን በተመለከተ የባለቤትዎ አመለካከት ምን ይመስላል?	1. ይደግፋል 2. አይደግፍም 3. አላዉቅም	
513	የአሁኑን የነፍሰጡር ምርመራ (ክትትል) የወር አበባዎ ከቀረ ከስንት ሳምንት በኋላ ነው የጀመሩት?	ከ----------ሳምንት በኋላ	
514	በዚህን ጊዜ ምርመራ ለማድረግ ለምን ፈለጉ?(ካንድ በላይ መምረጥ ይቻላል)	1. ትክክለኛ የምርመራ ጊዜ በመሆኑ 2. ከዚህ በፊት በዝህ ጊዜ ምርመራ ስለማደርግ 3. ስላመመኝ 4. እርግዝናን ለማረጋገጥ 5. ጊዜ ስለሌለኝ 6. በገንዘብ ችግር 7. እርግዝናው የታቀደ ባለመሆኑ 8. ሌላ [ይገለጽ] _____	
515	ለመጀመሪያ ጊዜ ለምርመራ ከመጡ በኋላ ቀጣዩን ክትትል መቼ እንዲመጡ ተነገርዎት?	1. ከመጀመሪያው ክትትል ከ___ ወር በኋላ 2. አላውቅም	
516	በእርግዝና ክትትል ወቅት ለመወልድ ዝግጅት እንዲያደርጉ ተመክሮዎታል	1. አዎ 2. አልተመከርኩም	
517	ወደ ጤና ተቋም ቶሎ እንዲመጡ በእርግዝና ወቅት ስለሚደርሱ አደገኛ ምልክቶች ትምህርት ተሰጥቶዎታል	1. አዎ 2. አልተሰጠኝም	

ስለትብብርዎ አመሰግናልሁ