ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH

Maternal Satisfaction on Delivery Service in Public Health Centers: Facility Based Cross Sectional Study Addis Ababa, Ethiopia.

By: Woinshet Mehari Alemu

Advisers:

1. **Meselech Assegid. (MPH, ASSISTANT, PROFESER, PHD CANDIDATE).**
2. **Bezawit Ketema. (MPH)**

A THESIS SUBMITED TO ADDIS ABABA UNIVERSTY COLLEGE OF HEALTH SCIENCE, SCHOOL OF PUBLIC HEALTH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH.

November 14, 2019

Addis Ababa

Approval by the board of examiners

This thesis by **Woinshet Mehari Alemu** is accepted in its present form by the Board of Examiners as Satisfying thesis requirements for Degree of Masters in Public Health

Place: Addis Ababa University, College of Health Sciences, Department of Public Health.

Internal Examiner

Full Name	(Rank)	Signature	Date
_____	_____	_____	_____

Research advisor:

Full Name	(Rank)	Signature	Date
_____	_____	_____	_____

Co-advisor

Full name	(Rank)	Signature	Date
_____	_____	_____	_____

ACKNOWLEDGMENT

I would like to thank my advisers Meselech Assegid and Bezawit Ketema who gave me the necessary guidance, close flow up and support for the study.

I would like to express my deep gratitude to Addis Ababa health bureau, Gandhi memorial hospital, Yeka, Arada and Gulele sub city health office for their willingness to gave all information about health center, and hospitals in the Addis Ababa that helped me to get the necessary information to develop the proposal.

I would like to express my appreciation to the study health centers, participant mothers and data collectors for their cooperation.

Finally, I would like to give thanks for my family, my child, my husband and all my friends who give uncreditable supports and encouragement during study.

ACRONYMS/ABBREVIATION

AAU Addis Ababa University

ANC Antenatal Care

EHCRIG Ethiopia Hospital Reform Implementation Guideline

EDHS Ethiopia demography health survey

FMOH Federal Ministry of Health

HMIS Health Management Information System

HSTP Health Sector Transformation Plan

MDG Millennium Development Goal

MMR Maternal mortality ratio

MWH Maternal waiting home

PHC Primary Health Care

SDP Sustainable Development Plan

SPSS Statistical Package for Social science

UNFPA United Nations Population Fund

UNICEF United Nations Children's Fund

WHO World Health Organization

TABLE OF CONTENT

CONTENTS

LIST OF TABLE

LIST OF FIGURES

ABSTRACT

Introduction Maternal satisfaction used as one evaluating tool for quality of maternal health care given in health facilities and help to improve quality of care given to delivery mothers as well as decrease maternal mortality.

Objectives: This study aimed to assess level of maternal satisfaction on delivery service and its associated factor among women who gave birth in selected public health center in Addis Ababa city Administration.

Methods: A facility based cross sectional study was conducted from March to April 2019 in Addis Ababa city. Systematic random sampling technique was used to select 582 mothers who gave birth within the study period. The satisfaction of mothers was measured using 27 questions that were adopted from Donabedian quality assessment framework. Multivariate logistic regression was fitted to identify independent predictors of maternal satisfaction.

Result: The overall satisfaction on delivery service of the respondent mothers was 89.7%. Process related delivery mothers' satisfaction was 94.5%, whereas mothers' satisfaction in relation to structure of the health centers was 68.6%. There was no significant predictor for process based delivery services. For structural bases, educational status (AOR 95% CI: 1.96(1.112-3.45), type of transport (AOR 95% CI: 0.39(0.19, 0.78), time of admission from 6am-12am (AOR 95% CI: 2.142(1.16-3.94), status of pregnancy (AOR 95% CI: 2.34(1.16, 4.69) and long waiting time (AOR 95% CI: 0.426(0.27, 0.66) were significant factors for delivery mothers' satisfaction. However, short waiting time (AOR 95% CI: 6.07 (2.1-17.15), wanted pregnancy (AOR 95% CI: 3.98(1.60-9.90) and time of admission from 6am-12am (AOR 95% CI 3.26(1.023-10.38) and from 0 pm-6pm (AOR 95% CI 2.56(1.077-6.09) were factors that had positive association for overall delivered mothers' satisfaction.

Conclusion: This study revealed that the overall satisfaction of mothers on delivery service was found to be good. Wanted pregnancy; waiting time and time of admission were independent predictors of maternal satisfaction. Thus, there is a need of an intervention on shortening waiting time, provide good service during night time and increase access and awareness of family planning mothers to reduce and prevent unplanned pregnancy.

.

1 INTRODUCTION

1.1 Background

Globally, more than 830 women died within a day with cases related to pregnancy and childbirth problems , in 2017 (1). Of which, 99% of the death is happened in developing country and 66%in sub-Saharan Africa nations. In 2015, 216 maternal deaths per 100, 000 live births were estimated globally. Of these, more than half had occurred in Africa(2). In Ethiopia, the magnitude of maternal mortality is very high and one of the most crucial problems of the country(3).In 2016, the number of maternal mortality in Ethiopia was 416 from 100,000 live birth and its neonatal mortality was 27 from 1000 new born(3).

Improving maternal health is one of the eight Millennium Development Goals (MDGs) adopted by the international community in 2000.(4). Under MDG, five countries committed to reducing maternal mortality by three quarters between 1990 and 2015, and Ethiopia is one of those countries which has been already achieved a lot(5). In Ethiopia, maternal mortality has been reduced substantially from 1067 to 416per 100,000 births in 2000 and 2016 and skilled birth attendant coverage rate increased from 60% in 2014/15 to 72.7% 2015/16 (3, 4,6). As reduction of maternal mortality is one of the sustainable development goal that will end in 2030, Ethiopia is expected to reduce maternal mortality ratio (MMR) from 416 per 100 000 live births in 2016 to 199 per 100 000 live births by 2030.The World Health Organization promotes skilled attendance at every birth to reduce maternal mortality and recommends that women's satisfaction be assessed to improve the quality of health care(7).

In order to improve maternal health care services, maternal satisfaction with care provided be needs to be assessed for appropriate intervention (8). Every women's labor and delivery experience has unique sensitivity to environmental factors(8). Moreover, events and the interactions occurring during labor have powerful psychological effects. Therefore a positive childbirth experience is desirable for the benefit of both the parturient woman and her child(8).Maternal satisfaction has been widely recognized as one of the indicators of the quality and the efficiency of the health care systems(8). Several studies were conducted on maternal satisfaction assessment in different parts of the world with differences of maternal satisfaction across continents, countries, and health facilities. A study done in Pakistan and South Australia

indicated that the level of maternal satisfaction on delivery care was 61% and 86.1%, respectively (9)(10).However, the studies on the level of satisfaction of mothers in African countries found that only 56% and 51.9% of mothers' were satisfied with delivery services in Kenya and south Africa, respectively (11)(12).

World Health Organization recommends that there should be monitoring and evaluation of maternal satisfaction in health care institutions to improve the quality and efficiency of health care during pregnancy, childbirth, and puerperium(7). In Ethiopia, maternal satisfaction studies were conducted in different hospitals. The studies carried out in Amhara Referral Hospitals and Assela Hospital revealed that mothers' satisfaction were 61.9% and 80.7% on delivery services, respectively(13)(14). Similarly, studies done in St Paul's millennium and Gandhi memorial referral hospitals , Addis Ababa (15)(16).

From the studies, the factors influencing the satisfaction level have also been evaluated from structural, process and outcome dimension as well as there are other factors which determined maternal satisfaction (17).

1.2 Statement of the Problem

Ethiopia has remarkable progress in expanding of the health services through rapid expansion of infrastructure, increased availability of the health workforce; increased budget allocation and improved financial management. But, quality of the service provision and utilization is a big challenge until now(18)(19). There are many things remains towards to improve quality service at each level of the health system(18). Because of that, quality health service is taken as one transformation agenda and given great attention now a days(18).

Providing suboptimal or low quality maternal health service has damaging effect on the health outcome and the subsequent public health(19). One outcome measuring tool for quality health service is high patient satisfaction rate(8). High maternal satisfaction increase willingness to return or re-attend to health institution, even they will recommend it to their family and friends to use in that health facility and reduced maternal mortality which come related with absence of ANC follow up, home delivery and delay health institution arrival.(20),(21)

According to Federal Ministry of Health policy (FMOH), Ethiopia provides a three-tiered health care system , health center is one from first level of district health system and urban health center expected to cover up to 40000 population to serve(22)(23). On the contrary, large number of deliveries were conducted in hospitals than health centers that overburden hospitals of Addis Ababa with high and over achievement(24).

According to Addis Ababa health bureau health management information system report in 2017/2018 , delivery coverage of health centers and hospitals (under Addis Ababa administration office) was 52% and greater than 90%,respectively based on their catchment area(24). Even if overall health center achievement was 52 %,there were many health center which have low delivery coverage according to HMIS report in 2017/18 report(24). Similarly, according to HMIS report, there was 42664 and 24817 delivery per year within 104-health center and five hospitals, respectively, in 2017/18. It showed how much hospitals overloaded with delivery service(24).

Reports in Addis Ababa, hospitals special focused on maternity care service showed that there are high number of self-referral (without referral paper) which indicate women's are not prefer

to give birth in health centers which might be less satisfaction by public health center service(25). For Instance, in Gandhi memorial hospital, from 2017/18 liaison report averagely of 21 mothers came for delivery service per month without visiting health center, which means they came by their own decision. (self-referral) (25).So that, it needs further assessment for the cause of low coverage of delivery service in public health center and why women prefer hospital for delivery service.

Patient satisfaction surveys represent real-time feedback for providers and show opportunities to improve services/decrease risks(26). In maternity services, mothers satisfaction has been widely recognized as one of the indicators of the quality and the efficiency of the health care systems(8). Though; some studies were done on level of maternal satisfaction and factors that affect maternal satisfaction in some hospitals in Addis Ababa (15)(16). However, there was no study done at health center.

Thus, there is a need to assess the level of maternal' satisfaction on delivery care services provided at public health centers services , and identify the factors affecting the maternal satisfaction, which is the aim of the proposed research.

1.3. Significance of the study

Much attention has been given to maternal health, and quality of maternal health service is the most important input to achieve this goal. Maternal satisfaction is one of the measurement for quality of health care provided for the mother, which increase the service uptake regarding to delivery service, and decrease delays institutional skilled birth attendance. Thus, it has been one of the great contribution to for declined maternal morbidity and mortality (18),(27)

However, level of satisfaction of mothers on delivery service and determinant factor of maternal satisfaction on delivery service in public health centre was low based on previous studies done in Addis Ababa hospital. The level of maternal satisfaction including associated factors that might be different from mothers who gave birth in hospitals in Addis Ababa because of health centre and hospital different set up: structure, process and environment.

Therefore, this study aims to assess the level of maternal satisfaction on delivery care services provided at health centers and factors affecting the maternal satisfaction that will help to fill knowledge gaps to develop appropriate plan, to improve maternal satisfaction, and increase delivery service coverage at health centers in the study area.

2. LITERATURE REVIEW

2.1. Introduction

Patient satisfaction is defined "as patient-reported outcome measure while the structures and processes of care can be measured by patient-reported experiences"(28).Maternal satisfaction also defined as positive evaluation of distinct dimension of childbirth(17). In 1990s researchers, health policy-makers and managers gave more attention to the patient perception of the quality of health services argued and developed well designed questionnaires allow to assess both the technical competence and interpersonal skills of health professionals(29).

Patients' feedbacks are essential in order to measure performance and to make healthcare professionals more aware of aspects enhancing users' satisfaction. Specially, looking at the patient characteristics as well as the contextual elements that more influence the patient experience can be helpful in order to better identify the service area to be improved(29).

Studies revealed the presence of several factors that influence the level of maternal satisfaction which include structural, process, outcome elements **(17)**. And also, Socio-demographic status, cost of the service and obstetric history of mother also the other are factor for maternal satisfaction**(17)**.

2.2 Measurement of quality of care in health facilities

Quality of care

Quality of care referred as "the extent to which actual care is conformity with present criteria for good care(30).Assessing the quality of health care is mandatory because it tells us how the health system is going on and shows the way to improved care(31).

Quality measurement can be used to improve health care by preventing: the overuse, underuse, and misuse of health care services. Similarly, it ensure patient safety, identify what works in health care—and what doesn't—to drive improvement, holding health insurance plans and health care providers accountable for providing high-quality care, measuring and addressing disparities in how care is delivered and in health outcomes, and helping consumers make informed choices about their care(31). Quality of care measured by four categories:- structure, process, outcome, and patient experience(31).

2.3 Maternal satisfaction with delivery services

Patients' satisfaction with healthcare services is a measure of the quality of care received and of the responsiveness of healthcare systems to patients' expectations(12).Maternal Satisfaction is a multidimensional construct involving interpersonal manner, quality of care, accessibility or convenience, finance of care, consistency, physical environment and availability of drug and medical supplies(16).

Overall satisfaction of mothers is concerned with the maternity services as a whole offered to the women. The Studies in Pakistan and South Australia founded that maternal satisfaction was 61% and 86.1% respectively. Similarly, studies conducted in Nairobi, Senegal, and Serbian public hospital the overall level of maternal satisfaction on delivery care was 56%, 88.4%and 82.5%,respectively (11),(32),(33). A study conducted in Nigeria referral hospital, few of the participants expressed satisfaction with the quality of care they received during antenatal, intra-partum, and postnatal care(34). Many had areas of dissatisfaction, or were not satisfied at all with the quality of care(34).According to a study in Debre markos and Hawasa hospital the overall satisfaction level of mothers with delivery services were 82% and 87.7%respectively (35),(36). And another study from Amhara region referral and Bahirdar Felege Hiwot hospital overall satisfaction level on delivery service were found to be only61.9 % and 75%(13)(37).

A recent study conducted in St Paul's millennium hospital in Addis Ababa the level of overall maternal satisfaction on delivery service were 19% (15).

2.4 Mothers' satisfaction with delivery service and associated factors

Studies conducted in different countries to understand determinants of maternal satisfaction have identified various factors influencing health service use. These factors can be categorized as, all across structure, process and outcome. Additionally, socio-economic status, cost of care, obstetric history of mother and demographic factor contribute to maternal satisfaction(17). The expected relation between the independent and dependent variables is depicted pictorially in the conceptual framework below following the detail discussion of these factors.

2.4.1. Structure

Structure measures assess the infrastructure of health care settings, including facilities, personnel, drug and medical supplies and/or policies related to care delivery(31)

Physical environment

Comfortable physical environment and good administration set up are important predictor in women's positive Assessment of the health facility and maternal care services. Those are all infrastructure in the facility which including access to drinking water, latrine, hand-washing facility, access of toilet and availability of waiting area, room space, overcrowding environment, silence of the delivery room ,availability of maternal waiting room ,distance(access) of the facility etc.)(18).The study conducted in Nepal showed overcrowding increased the likelihood of dissatisfaction, and this study suggested that health facilities should be improve, re-organization of services to eliminate delays(20). Similarly, The study conduct in Iran showed regarding the environmental factors, the lowest satisfaction was related to respecting silence in the pain room (69.5%)(38).

Similarly ,the studies conducted in Amhara, Assela and, Mekele referral hospital maternal satisfaction influenced by access to drinking water, latrine, hand-washing facility, access of toilet and availability of waiting area(13,14 ,27), and also the study conducted in west Gojjam zone, a t Bure town showed welcoming hospital environment were independent predictors for maternal satisfaction(39). Those clients who consider the hospital as welcoming environment were 3.09 times more likely to satisfy with maternal service(39). The Study in Jimma showed from Mothers who used MWH(Maternal waiting home) service prior to their delivery had 96% increased satisfaction, compared to those did not used the service and mothers admitted to MWH 87(87.0%) of them will recommend their friends or relatives to use the service in the future(40).

Cleanliness of Health facility

Most Studies showed, over all cleanliness of health institution, particularly labor and delivery room cleanness is the most determinants factor for maternal satisfaction on delivery service. These include cleanliness of delivery room and ward, toilet, showier room, hand wash room ,etc.(18).The Studies conducted in South Africa, Iran(84%),and Kenya was showed cleanliness toilet and hygiene of the delivery room were be found important structural factors affecting of maternal satisfaction(12)(41). And also, in Ethiopia ,the study conducted in Assela cleanliness of toilet during delivery service was also significant predictor of satisfaction, and dissatisfaction was reported to be highest (42.3%) by cleanliness and access of toilet(14).

Additionally, studies conducted in Gandhi ,Mekele, Debre markos hospital and Jimma public health facilities zone mothers were dissatisfied by cleanliness of delivery room and toilet(16)(27)(35)(40).

Availability of medicines, supplies and services

Availability of prescription drugs, essential equipment like blood pressure monitors or thermometers, lab services and emergency supplies like blood and transfusion services, were reported as significant predictors of satisfaction.(9).

According to the study conducted in Pakistan women were less satisfied by availability of equipment required for complete medical checkup, and also study in Kenya Mothers benefiting from the free delivery services were satisfied with drug and supplies availability (>56%)(9)(41). .

Availability and adequacy of human resources

Availability and adequacy health worker was be found the one predictor of maternal satisfaction. According to the study in Nigeria, the absence of trained health workers were to be the most determinant of dissatisfied with mother(34). And also, the study conducted in Kenya mothers who benefiting from the free delivery services were satisfied by staff availability in the delivery rooms, availability of staff in the wards (>56%)(41).

2.4.2. Health institution Process

The process of care is dominated determinant factor of maternal satisfaction those include provider behavior in terms of courtesy and non -abuse ,privacy, other aspect of interpersonal behavior include communication, staff confidence ,and competence and encouragement to laboring, respectful care and emotional support, pain management(18)

Client provider Communication

Client-provider interactions" refers to the interpersonal exchanges between a clients who receives health information and services and the clinic-based or outreach health providers who offer these services(42).

These including giving attention, adequate explanations of procedures to mother , involvement in decisions related to their care and treatment ,properly listening and response to their question, the opportunity to talk, friendly approach care from health workers(42),(43).

The study conducted in South Africa ,showed that women's were most dissatisfied with aspects concerning inadequate explanations of procedures and the lack of their involvement in decisions related to their care(12).

When we come to Ethiopia, study at Gandhi memorial hospital showed maternal satisfaction is largely influenced by the involvement of the client on the decision of her treatment, providers' explanation about client's condition and the quality of client-care provider relationship(16). On another study conducted in West Gojjam Bure town it was indicated provider/s were not properly listening and response to their question delivery service care was to be found determinants factor for decrease maternal satisfaction(39).

Other study in Debere Markos regarding with their interaction with staff showed that, more than 95% of them reported that they were satisfied with good communication with health care providers(35).Similarly, studies that done at St Paulo's hospital on factors influencing women's satisfaction; the opportunity to talk to provider were found to be significantly associated with women's satisfaction(15).

On another study at Gamo Gofa, women who complained about an unfriendly attitude or un respectful care from health workers was most predictor of .maternal satisfaction(44).

Perceived Provider Competency

Women were more satisfied with maternal health services when they perceived the technical quality of care to be 'good' or the provider to be technically competent(18). The Study in Pakistan showed women satisfactions were affected with competency of medical doctors or doctor's ability during delivery service. Overall, results showed that 44% of women were not satisfied with the technical aspect whereas 56% of women were satisfied(9).On other study in

Nigeria women were not satisfied at all with the quality of care received during intra-partum and postnatal care and recommended training and re-training of health workers(34).

Privacy and Confidentiality of provider (trust of midwifes)

Privacy also commonly refers to ‘’the privacy of a person and the rights of individuals not to be physically exposed against their will’(45)’.The Study on South Africa, mothers were mostly satisfied with the way privacy was maintained; and the thoroughness of examinations done by doctors and midwives(12).

In Ethiopia Amhara referral and Mekele hospital, Women’s satisfaction with delivery care was associated with care providers’ measure taken to assure privacy during examinations(13)(27). On another studies, in Debere Marekos showed women’s were satisfied with assurance of privacy and respecting of social norms ,about 98% and 87% of respondents, respectively(35).

The Study on Iran showed women were more satisfied whom respected their confidentiality and perceived trust from provider. (38).

Pain management

Pregnancy mothers worry about the pain which feel during labor and how to going with it. There are several ways of reducing pain mechanism(46).Accordingly Study, in South Africa; Lack of pain relief during labor was also a serious problem that causing mother satisfaction(12).Moreover, studies in Nigeria women who were poor attention in labor timeless satisfied than women who were not. In Ethiopia, study in West Gojjam zone ,at Bure Town showed proper labor pain management were 4.51 times more likely to satisfy than who answered no to proper labor pain management, according to their perception(39).

In Addis Ababa, study done in Gandhi memorial hospital indicated; pain control management was the poorest source of satisfaction with 82% reporting dissatisfaction**.** Women’s with poor pain control was found to be a leading cause of maternal dissatisfaction in this study(16)**.**

On another study that done at St Paul’s hospital factors influence women’s satisfaction; the poor labor pain management was found to be significantly associated with women’s satisfaction.(15)

DELIVERY POSITION

Delivery position is women’s position during delivery that has effect on maternal satisfaction on delivery service. Moreover, WHO recommended mothers can deliver based on their choice. The

Study in Debere Markos, women's more than 95% of reported that they were satisfied with use of delivery position of their choice and communication among health care providers(35).

Waiting time to see by provider

Waiting time is the time between admissions to the time seen by health professional, which has effect on maternal satisfaction. The study conducted in St Paulo's hospital and Amhara referral hospitals showed length of time for admission and stay in the hospital and, waiting time to see the doctor were found to be significantly associated with women's satisfaction(15).

On another study in Hawasa hospital, one of the predictors of maternal dissatisfaction was waiting time to get obstetric care providers(36).

Provider empathy and Emotional support

Empathy is the "capacity" to share and understand another's "state of mind" or emotion. Itis often characterized as the ability to "put oneself into another's shoes", or in some way experience the outlook or emotions of another being within oneself(47). The study conducted in Bangladesh found,76.6%were highly satisfied with supportiveness of the provide(48).On another Study, in Nairobi showed that the association of women's satisfaction and provider empathy was stronger among women who experienced complications compared to those who did not(11). Study in Nigeria women's were dissatfied by poor staff attitude(34). In Ethiopia, the studies conducted at Debere Markos among mothers, more than 95% of mothers were satisfied with the Helpfulness of staff(35).

SEX OF PROVIDER

Sex of Provider who attending the mothers during the delivery.(Labour attendant) .Being male and female is one of determinant factor of maternal satisfaction. The study done on Assela, the odds of maternal satisfaction who were attended by male professionals were almost two times higher than those attended by female professionals(14).

2.4.3 Outcome

Evaluates maternal and neonate condition after received health care service this means maternal satisfaction depend on their immediate condition(31).

The Study on Amhara referral hospital Women's satisfaction with delivery care were associated with immediate maternal condition after delivery. On this study showed mothers who in

favorable immediate maternal condition maternal satisfaction three times higher than who not condition after delivery(13).

2.4.4 Financial /cost of care

The cost, which paid for delivery service. In Ethiopia, study in Amhara referral hospital cost incurred for service to be associated with mothers' dissatisfaction(13). Similarly, study done in Gamo Gofa zone women who had paid for the services less satisfied than women's who not paid for the service(44).

2.4.5 Obstetric History of Women

In Ethiopia, the studies conducted on Jimma, Felege Hiwot Hospital showed ANC attendance (follow up),and women who have more frequency of visit for delivery service were significant predicators of mothers' satisfaction with the service(40)(37). On other study, in Debere Markos showed women's who having plan to deliver at health institution three times more satisfied than women's who not have plan ,and also this study showed mode of delivery are independent predictors of maternal satisfaction(35).

2.4.6 Socio Economic and Demographic Status

The Study conducted at Nepal showed that respondents from hill districts and rural areas were more likely to be satisfied in comparison to respondents from mountain, terrain and urban areas(20).

Accordingly Study, in Felege Hiwot hospital at Bahirdar showed age of women were important predictors of level of satisfaction(37).Similarly, studies conducted at Wolaita showed that middle aged (20-34) postpartum mothers were more likely to be satisfied when compared to their 35-49 counter age groups where the later might have no/wrong experience with the delivery service. Mothers with high school education (9-12) were at higher chance to be satisfied with the service in comparison with higher level of education as it might show higher demand of the more educated group or there may be underestimation of safe delivery(49).

Finally, from the literatures provides mothers' satisfaction with delivery services will be affected with multi dimensions of factors, there are contrary things about maternal satisfaction on delivery service.

Conceptual framework

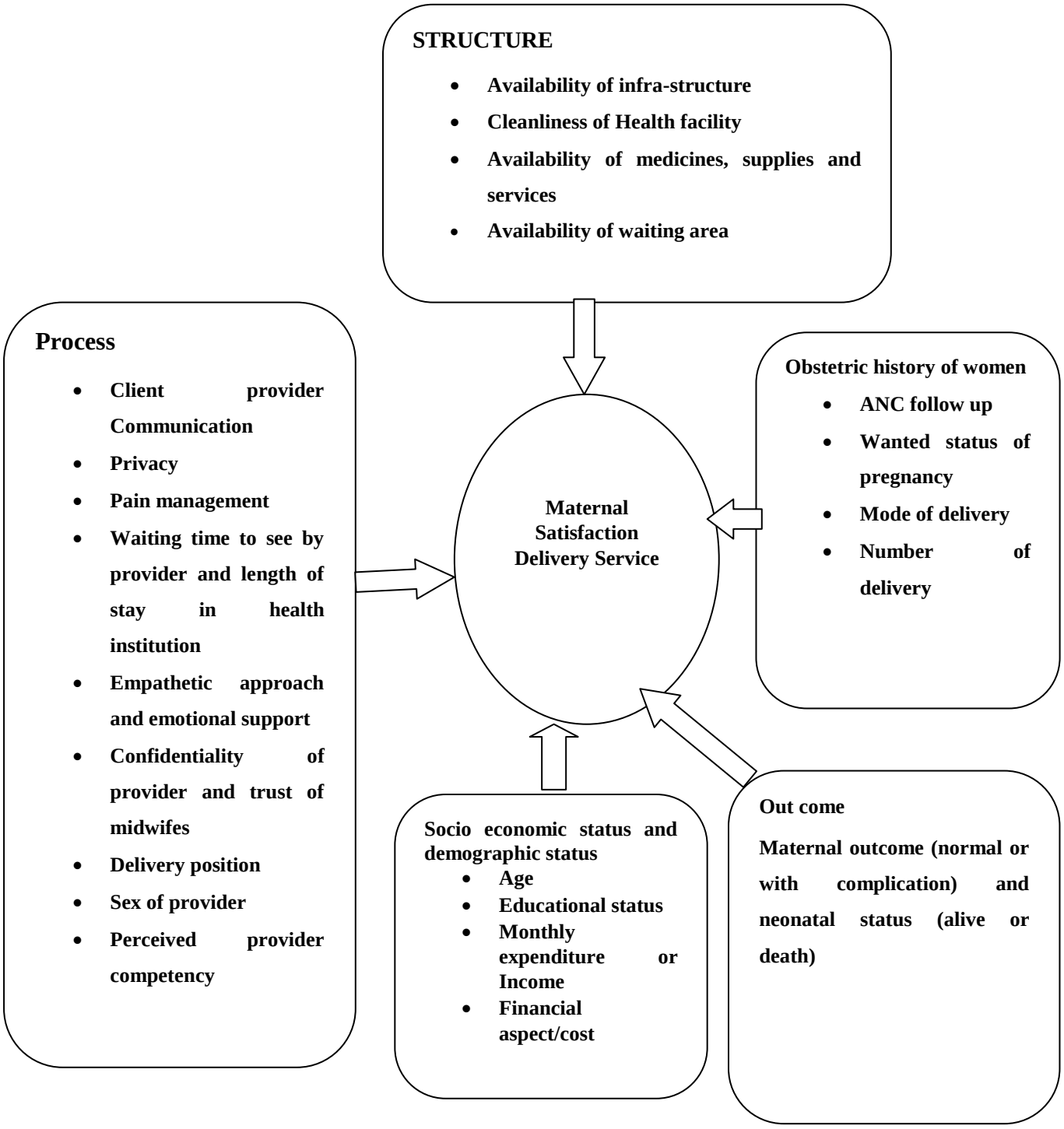

Figure 1: Conceptual framework of determinant factor maternal satisfaction on delivery services-adopted from systematic review of developing countries in determinant of maternal satisfaction on delivery service.

3. OBJECTIVES

General objective

To assess level of maternal satisfaction on delivery service among mothers who gave birth in public health centers in Addis Ababa, Ethiopia.

Specific objectives

- To determine level of maternal satisfaction on delivery service among women is who gave birth in public health center, Addis Ababa, Ethiopia.
- To identify factors associated with maternal satisfaction on delivery service among women is who gave birth in public health center, Addis Ababa, Ethiopia.

4. METHOD

4.1 Study area

The study was carried out in Addis Ababa city, capital of Ethiopia, administration public health centers. It has 174.4 km2 areas that is divided in to ten sub-cities and 117 administrative Woredas. According to the 2007 census conducted by Central Statistical Agency of Ethiopia, the Addis Ababa Region has an estimated total population of 3.55 million in 2007. There are more than 100 public health centers and around 700 private clinics out of which 75 are higher clinics and the number of females in reproductive age group constitutes 35.5% of total population, according to EDHS 2016 report.

4.2 Study design

Institutional based Cross Sectional study was carried out in selected health centers.

4.3 Source population

The source populations for this study were mothers who gave birth in the public health center in Addis Ababa from March to April 2019.

4.4 Study population

The study population was mothers who gave birth in the selected public health center in Addis Ababa during the study period that meet eligible criteria.

4.5. Inclusion and Exclusion criteria

4.5.1Inclusioncriteria

The inclusion criteria was mothers who gave birth in the selected public health centers during the study period (from 01/03/2018 to 30/04/2019)

4.5.2 Exclusion criteria

Post-natal mothers ‘who was mentally or critically ill, and mothers referred from the selected health centers to hospitals during the study period were not included in the study.

4.6 Sample size determination

The sample size was determined using single population proportion formula. Taking level of maternal satisfaction at St Paul's millennium hospital, in Addis Ababa 19 % to obtain the sample size at 95 % certainty and a margin of error 4%.The formula to determine the sample size for the first specific objective is shown below.

$$n = \frac{(Z\alpha/2)2 \times p\,(1-P)}{d2}$$

Where: n= is the size of the sample

Zα/2= is the standard normal value corresponding to the desired level of confidence

d=margin of error

P=is the estimated proportion of an attribute that is present in the population

Assumptions.

1. Prevalence of mother's satisfaction with delivery service satisfaction -19% from St Paul's millennium hospital, Addis Ababa city, Ethiopia (15).

2. Margin of error d= 4% (Because of low prevalence of the outcome from the previous study) (19%).

3. A confidence interval of 95% is assumed (Zα/2=1.96).

$$n = \frac{(1.96)2 \times 0.19(1-0.19)}{(0.04)2}$$

The calculated sample is 369 plus a non-response rate of 5 %(because it is not sensitive question). $369 \times \frac{1}{1-non\ respnse} = 369 \times \frac{1}{1-0.5} = 388$

Considering a design effect of 1.5(388x1.5), the final calculated sample size was 582.

So that, 582 mothers who gave birth in the selected public health centers at the time of data collection and fulfill the selection criteria were included in the study.

The sample size was determined using double population proportion formula for specific objective by selected major factors that predicted for maternal satisfaction on delivery service among women's who gave birth in the previous studies.

Table 1: Sample size calculation for specific objectives.

Variables	Assumption Sample size	Sample size	By using design effect and 5% non-response
Facility cleanliness	Margin of error = 5%, P = 67.9%, CI=95%	334	334*1.5= 501+501*5/100= 501+25= 526
Pain management	Margin of error = 4%, P = 18%, CI=95%	354	354*1.5= 531+531*5/100= 531+26 = 557
Privacy in the ward	Margin of error = 5%, P = 78.9% ,CI=95%	255	255*1.5= 382+382*5/100= 382+19= 401

Since the sample size for the general objective (582) was larger than the sample size for the specific objectives, we used the general objective (582) sample size for the study.

4.7. Sampling procedure

This study included 582 selected mothers using a multistage sampling technique (two) stage sampling technique). Initially three sub cities were selected out of 10-sub city in Addis Ababa city administration using lottery method. Then from the each chosen sub-cities five health centers that provided less delivery service than expected according to 2017/18 annual performance report were selected. In total 15-health centers were selected from three sub cities. Health Centers provided low coverage of delivery service than expected were selected which have lower delivery service because the research(this study) by considering that low level of satisfaction might be contributing for low coverage of service that may result from focused on measuring the low level of maternal satisfaction in public health center, which provided lower delivery services provided. Then, the calculated sample size was distributed proportionally to the selected health centers based on their number of deliveries conducted by each of the selected health centers. Finally, systematic random sampling technique were used to select mothers. Data collectors used structured questionnaire to interview at the time of discharge from health centers after delivery. In mothers selection technique, total population of each health center divided by sample size from each health center we got the interval three then every three-interval mother were selected for interviewed.

Proportional allocation: allocating sampling proportional to the total population of each health center

Using the formula: ni= $\frac{n}{N} * Ni$

Where n=total sample size to be selected = 582

N=total number delivery in the quarter =1750, Ni=total population of each health center

$\frac{n}{N}$= the proportion of the population, $\frac{582}{1750}$ =0.33 , ni =sample size from each health center

Diagram of sampling framework

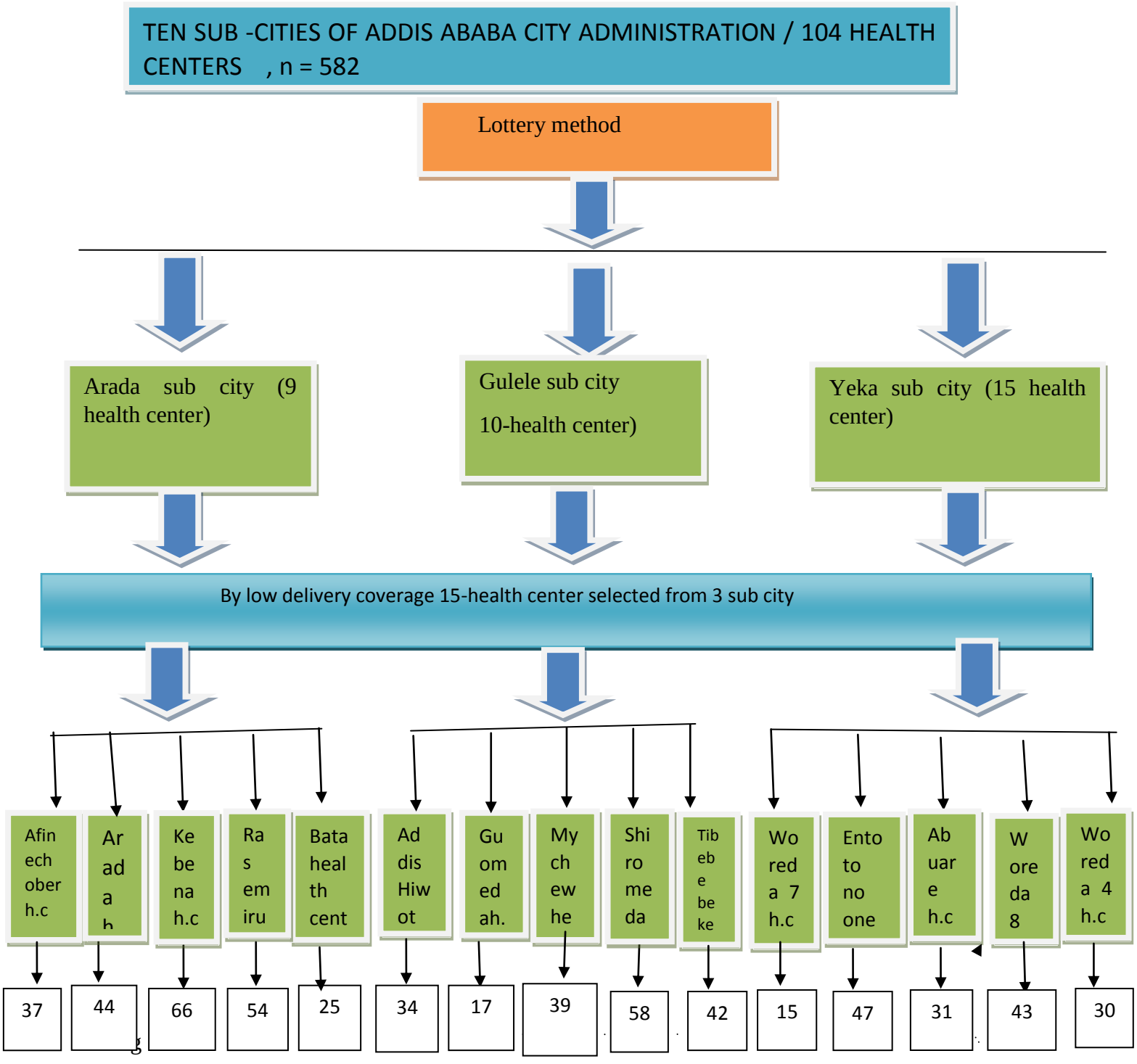

Figure 2: Schematic presentation of sampling procedure on maternal satisfaction on delivery service in Addis Ababa, Ethiopia 2019.

4.8 Variables of the study

4.8.1 Dependent variable

Mothers' satisfaction on delivery service.

4.8.2 Independent /Explanatory Variable

Structural factors

Availability of infrastructure, Cleanliness of Health facility, Availability of medicines, supplies and services.

Process factors

Client provider communication, Privacy/confidentiality, provider competency, Pain management, waiting time to see by provider, Emotional support, counseling service, Sex of service providers, delivery position of mothers.

Outcome factors

Maternal and neonatal outcome (if mother with complication or normal and neonatal outcome **(**Live birth, Stillbirth and Neonatal death).

Other factors

Socio demographic characteristics, Obstetric history, Cost of service, Time of admission, wanted status of pregnancy.

4.9 Operational definition

Maternal satisfaction; - mothers' expressed state of being satisfied with health care service in the dimension of quality of care (process, outcome and physical environment).

Satisfied: - mothers who scored all satisfaction questionaries' computed mean above 3.41 were categorized under "satisfied" for the overall satisfaction level and for each response of 'very satisfied' and 'satisfied' are classified as satisfied.

Unsatisfied: - mothers who scored all satisfaction questionaries' computed mean below 3.41 were categorized under "unsatisfied" for the overall satisfaction level and for each responses, 'very dissatisfied', 'dissatisfied' and 'neutral' as unsatisfied..

Waiting time: - the time between the facility arrivals to the time seen by health professional.

Client-provider interactions" refers to the interpersonal exchanges between a clients who receives health information and services and the clinic-based or outreach health providers who offer these services.

Privacy: - the state of being free from being observed or disturbed by other people.

Empathy: - is the "capacity" to share and understand another's "state of mind" or emotion.

Emotional support: - provision of reassurance, acceptance and encouragement during times of stress.

4.10 Data collection tool

Data was collected using a structured questionnaire adapted from Donabedian quality assessment framework(50) and from other related researches(39),(51), and having three parts, The first containing Socio demographic characteristics of delivering mothers. The second part was obstetric history of delivering mothers. The third parts contained respondents' satisfaction on health facility process, structure and outcome. It was presented using a 5- scale Likert scale (1-very dissatisfied, 2-dissatisfied, 3-neutral, 4-satisfied, and 5-very satisfied).The questioner/tool was primarily developed in English and then translated to the local language (Amharic)and was checked its consistency.

4.11 **Data collection procedure and measurement**

One day training for 10 diploma midwife nurses was given for data collection. On objective of the study, data collection tool, time of data collection, timely collection and reorganization of the collected data. Data collectors were selected from other than the study health centers. To respect the mothers' confidentiality to their response, the interview was conducted individually. The selected supervisors were trained on the objective; benefit of the study, individual's right, informed consent and techniques of the interview for one day.

4.12 **Data quality assurance**

To assure the data quality high emphasis was given in designing data collection instrument especially socio-demographic and mothers' satisfaction parts. Before starting the actual survey, the questionnaire were pre-tested until the data collector fully understood and adapted the questionnaires, respondents acquired enough awareness on value of the study to respond, genuinely. The health centers that were used for pre-tested were included in the study. The supervisors conducted supervision and the collected data were checked for completeness on the

day of data collection to insure accuracy of the data during the data collection. The collected data were reviewed and checked for completeness before data entry; the incomplete data were discarded. Data entry format template was produced and programmed. Double entry was done on 10% questionnaires to check consistency.

4.13 **Data Analysis and management procedures**

Data were checked for completeness, coded and entered to Epi-info version 7. Then exported to SPSS (Statistical Package for Social Science) version 21 for analysis.

Descriptive statistics were computed and overall level of maternal satisfaction was determined by dividing highest satisfaction Likert scale (five) equally and we got the interval from 1.81- 2.6, 2.61- 3.40, 3.41-4.2, 4.21-5.0 then categorizing mothers who scored compute mean above the 3.41 for the 27 items of satisfaction questionnaire, under "satisfied" and those who scored compute mean below the 3.41 under "unsatisfied".

During analysis, the responses of 'very satisfied' and 'satisfied' was classified as satisfied and responses of 'very dissatisfied', 'dissatisfied' and 'neutral' was classified under unsatisfied.

To identify the association of different independent variables with the outcome variable, cross tabulations and bivariate logistic analysis was carried out. In descriptive statistics tables, graphs mean and frequency were used to present the information. In addition, multivariate logistic analysis was conducted to identify the most important predictors of maternal satisfaction. To test Model fitness we used Hosmer –Lemeshow in multivariate logistic analysis.

4.14 Ethical consideration

Ethical clearance was obtained from Ethical review committee of School of Public Health College of Health Sciences Addis Ababa University. Support letter was also obtained from School of Public Health and Addis Ababa Health Buearo. Then the selected mothers were informed about the purpose of the study, the importance of their participation and their right to withdraw at any time. Data were collected after getting informed consent from mothers. To keep confidentiality, information was given for respondents appropriately and names of respondents were not registered.

4.15 Dissemination and utilization of result

The results of this study will be submitted to Addis Ababa University College of health science, School of Public Health as part a requirement of master of Public Health thesis & will be shared to Addis Ababa health Buearo. The research findings will be presented national and international scientific conferences and published on peer-reviewed journal.

5. Result

5.1 Socio demographic characteristics of the respondents

Among582mothers, 564 were responded for questionnaire of the study with 97% response rate. The mean age of the participants was 28(SD±5) years and the majority of them were in age group of 25-29yr. From the respondent mothers 496 (87.9%) were attended formal education whereas 68(12.1%) had no attended formal education. (Table 2)

Majority of the respondent mothers 176 (31.2%) were governmental and private employed, 488(86.5%) were married, 308 (54.6%) were orthodox in religion, 220(39%) were Amhara in ethnicity (Table 2). The average household income and expenditure of the respondentswas 5225(SD+1796) and 4335(SD+1397) birr, respectively (Table 2)

Table 2: Socio demographic characteristics of mothers Addis Ababa, Ethiopia, 2019.

Variable		Frequency	Percent %
Age of mothers	15-19	*12*	*2.1*
	20-24	*138*	*24.5*
	25-29	*217*	*38.5*
	30-34	*142*	*25.2*
	35-44	*55*	*9.8*
Marital status	Married	*488*	*86.5*
	Single	*57*	*10.1*
	Divorced	*18*	*3.2*
Ethnicity	Amhara	*220*	*39.0*
	Oromo	*144*	*25.5*
	Gurage	*84*	*14.9*
	Tigray	*68*	*12.1*
	Others	*48*	*8.5*
Religion	Orthodox	*308*	*54.6*
	Protestant	*131*	*23.2*
	Muslim	*113*	*20.0*
	Catholic	*12*	*2.1*
Educational status of mothers	No formal education	*68*	*12.1*

	primary education	*167*	*29.6*
	secondary education	*164*	*29.1*
	Above secondary	*165*	*29.3*
Occupation	Governmental and private employee	*176*	*31.2*
	House wife	*159*	*28.2*
	Merchant	*152*	*27.0*
	Private work	*48*	*8.5*
	Student	*29*	*5.1*
Average household income of the respondents	1000-4000	*150*	*26.6*
	4100-7000	*358*	*63.5*
	7100-10000	*49*	*8.7*
	10100-20000	*7*	*1.2*
Average household expenditure of the respondents	1000-4000	*199*	*35.3*
	4100-7000	*352*	*62.4*
	7100-15000	*13*	*2.3*

5.2 Obstetric history of the respondents

From the respondent mothers, 499 (88%) %) had 1-3 pregnancies; of which 515(91.3%) were wanted. Majority of the respondents, 548(97.2%) had ANC follow up during their current pregnancy, Four hundred seventy (84.4%) of them gave birth by spontaneous vaginal delivery. About 94(16.6%) of the deliveries were assisted by instruments and 556 (98.8%) of mothers experienced normal fetal outcome (Table 3).Half of mothers 283(50.2%) used public transport, and only 78(13.8%) mothers used government ambulance to reach the facility. For those mothers who paid for the transport, the mean paid amount of money for transport to reach the facility was 61(SD±96) birr (Table 3).

Table 3: Obstetric history of mothers Addis Ababa, Ethiopia, 2019

Variable		Frequency	Percent
Number of pregnancy	1	*192*	*34.0*
	2-3	*307*	*54.4*
	>3	*65*	*11.5*
Number of previous birth	0-1	*387*	*68.6*
	2-3	*168*	*29.8*
	>3	*9*	*1.6*
Wanted status of pregnancy	Wanted	*521*	*92.4*
	Un wanted	*43*	*7.6*
Mode of delivery	Spontaneous vaginal Delivery (SVD)	*470*	*84.4*
	Assisted delivery	*94*	*16.6*
ANC follow up	Yes	*548*	*97.2*
	No	*16*	*2.8*
Delivery use experience in health facility	Yes	*369*	*65.4*
	No	*195*	*34.5*
Time of admission in delivery room	6 am – 12 am	*129*	*22.9*
	0 pm – 6 pm	*174*	*30.9*
	6.01 pm – 12 pm	*139*	*24.6*
	0 am – 6 am	*122*	*21.6*
Type of transport used to reach the facility	Public transport	*283*	*50.2*
	On foot	*139*	*24.6*
	Ambulance	*78*	*13.8*

	Private	*64*	*11.3*
Amount paid for transport (in birr)	0	*280*	*49.7*
	1 – 10	*95*	*16.9*
	11 – 100	*51*	*9.1*
	101+	*137*	*24.3*
Maternal outcome	Normal	*552*	*97.9*
	With complication	*12*	*2.1*
Fetal outcome	Live birth	*556*	*98.8*
	Still birth	*5*	*0.9*
	Neonatal death	*2*	*0.4*

5.3 Health center structure related mothers' satisfaction

The overall level of satisfaction with health facility related delivery services in this study was 68.6 %**.** Among the respondents, 396 (87.1%) and 485 (86percentage) of them were satisfied with the availability and adequacy of medical supply and drugs and laboratory service, respectively. Majority of the participants, 541(95.9%) and 535(94.9%) were satisfied with the sufficiency of beds and space of labor and delivery room, respectively (Fig. 3).

Of the respondents, 406 (72%) and 387 (68.6%) of the delivering mothers were satisfied with the access and cleanness of toilets in the study health centers, respectively. Similarly, 351(62.2%) and 304 (53.9%) were dissatisfied with the availability and cleanness of shower rooms, respectively. Four hundred sixty six (82.6%) of the participant mothers were satisfied with the availability and comfort of waiting areas for clients and their companions (family) (Fig.3).

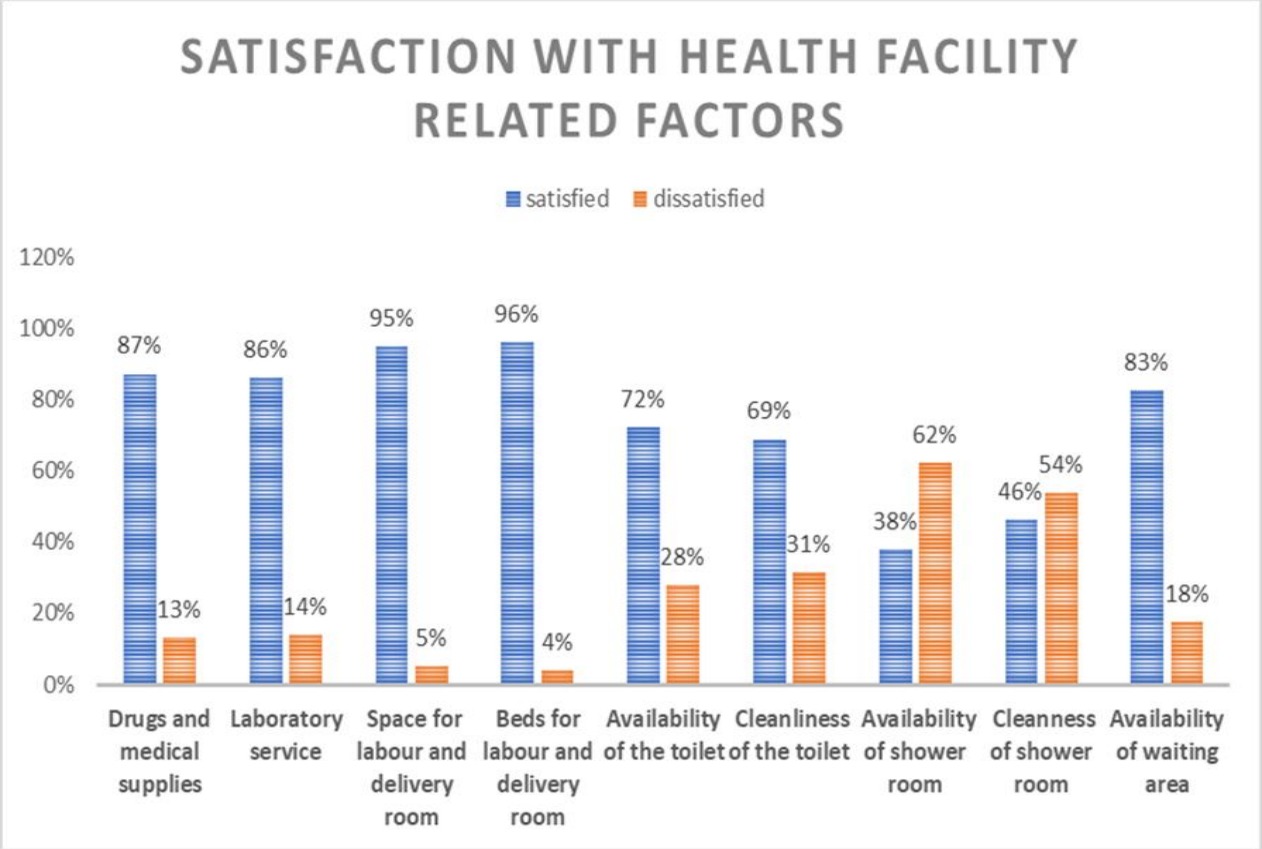

Figure 3: A Bar chart showing mothers' satisfaction with structural factors of the public health centers in Addis Ababa, Ethiopia.

5.4 Process and outcome related satisfaction of mothers

The overall level of satisfaction with health care process and outcome related delivery services in this study was 94.5%. Majority of the respondents, 510(90.2%) were satisfied with the length of time they waited to be seen by health care providers. Three hindered seven (59.7%) mothers were satisfied with health care provider introduction of themselves to the mothers. The majority 493(87.4%) of the mothers were satisfied with the health care provider's asked them for permission before applying any procedures and examinations (Fig.4).

Majority of the participants, 524(92.9%) reported that the health workers explained the labour progress by using local and clear language. Of the respondent mothers, 522(92.6%) satisfied with health workers verbally encouragement and reassurance during labour and delivery. The highest proportion 514(91.2%) of the study participants were satisfied with the competency and confidence of the health care providers. Similarly,525(93.2%)of them were satisfied with privacy measures taken by health care providers such as private rooms, curtained or screened areas during physical examinations and delivery. Four hundred twenty three (75%) of them were also satisfied with delivery position during delivery, whereas 326(42.2%) of mothers being dissatisfied with the pain management during labour and delivery (Fig. 4). The overall level of satisfaction with the delivery services in this study was 89.7% (Fig.5)

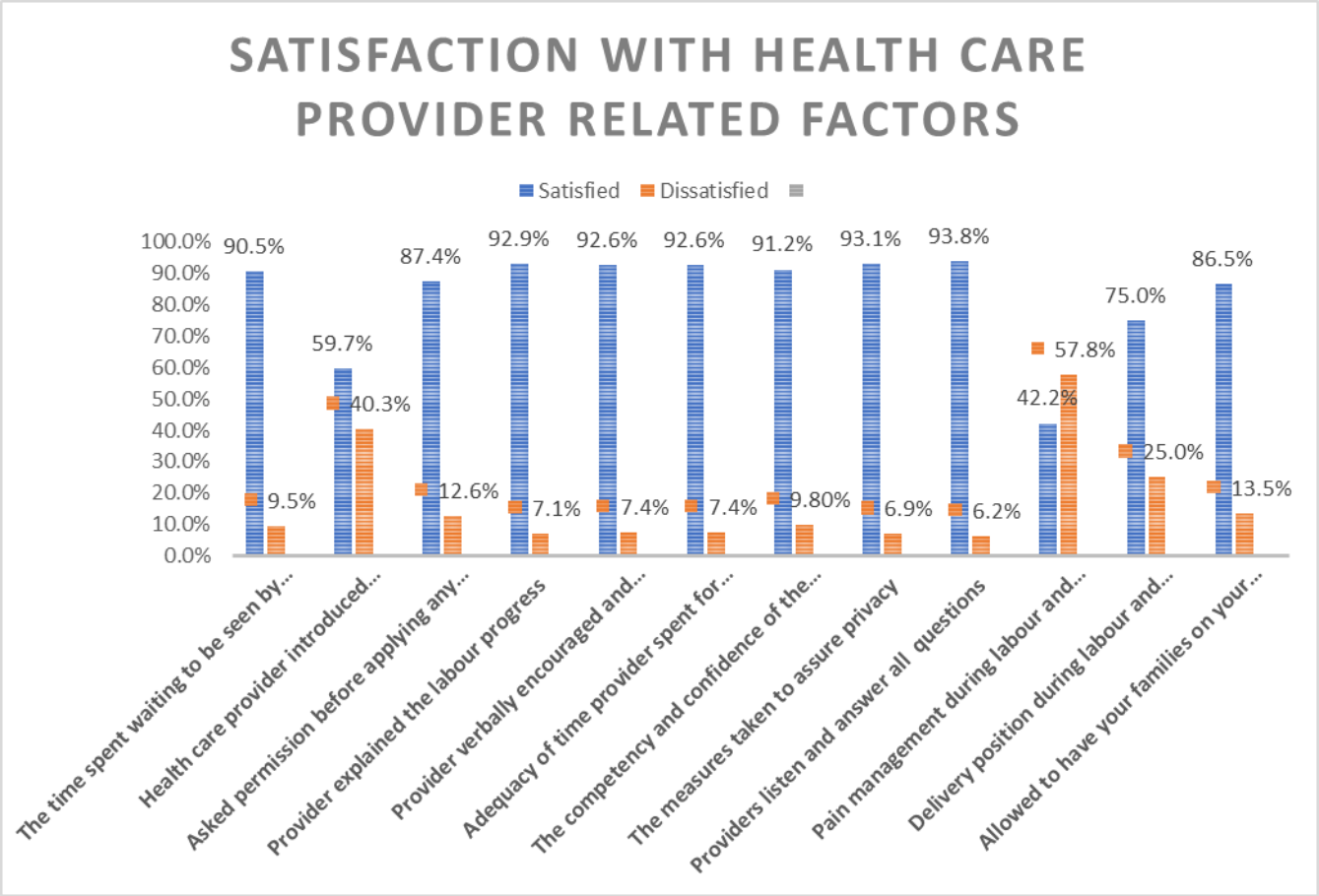

Figure 4: A Bar chart showing mothers' satisfaction with health care provider factors of the public health centers in Addis Ababa, Ethiopia.

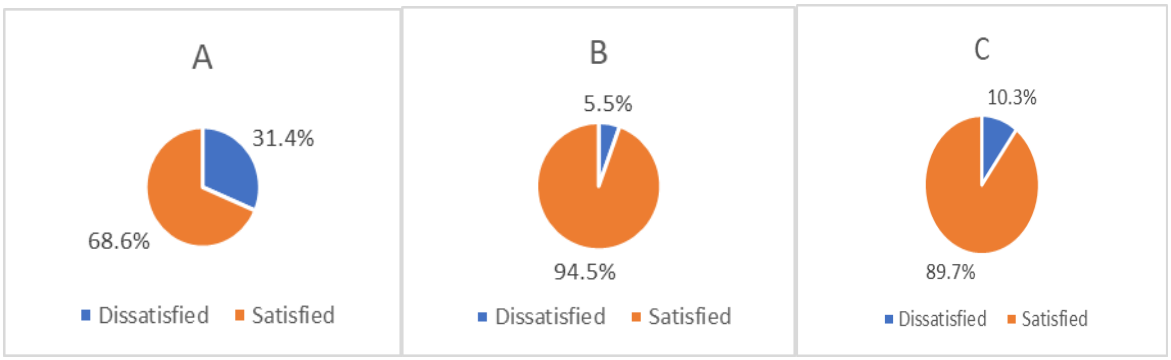

Figure 5. A Pie chart showing prevalence maternal satisfaction with the delivery services of public health centers in Addis Ababa: "A" refers the mothers satisfaction on structural factors; "B" refers mothers satisfaction on process related factors; "C" refers the overall mothers satisfaction on the combined factors of structures and process related.

5.6 Factors affecting mothers' satisfaction on health center structure which used on delivery service in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

The bivariate and multivariable logistic regression analyses were computed. The level of maternal satisfaction related with health facility (structural) factors was 68.6% .In bivariate analysis, among those factors affecting maternal satisfaction regarding to structural ethnicity, religion, marital status, age of mothers, occupation, expenditure, parity, gravida, amount of paid for transport, ANC follow up, sex of provider and fetal outcome were not strong predictors of maternal satisfaction. Whereas maternal educational status, status of the pregnancy, time of admission, waiting time, type of transport and maternal outcome were factors significantly associating with satisfaction of mothers with delivery services. (Table 4)

In multivariate analysis, educational status, type of transport, wanted status of pregnancy, time of waiting ,time of admission and maternal outcome significant association with delivery service; their p values were less than 0.05.

Mothers who attended secondary education were 2 times more satisfied than mothers who attended above secondary (AOR (95%CI):1.96(1.112-3.45). Mothers who used Private transport were less satisfied than mothers who reached the facility by walking (AOR (95%CI): 0.393(0.19-0.78).Time of waiting was significant predictor.

Mothers who waited from15 to 30 minute before seeing a health care provider were less satisfied than mothers who waited < 15 minute(AOR (95%CI):0.426(0.27-0.66). Similarly, mothers who admitted at (6am-12am) were 2 times more satisfied than mothers who admitted at (0am-6am). (AOR (95%CI):2.142(1.16-3.94). (Table 4)

The status of the pregnancy also had significant association with the level of maternal satisfaction, those mothers whose pregnancy was planned were 2 times more satisfied with services than those mothers whose pregnancy were unplanned(AOR (95%CI:2.34(1.16-4.69). (Table 4)

Table 4: Factors affecting mothers' satisfaction on health center structure which used on delivery service in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

Variables	Maternal Satisfaction			
	Dissatisfied (n, %)	Satisfied (n, %)	COR(95%CI)	AOR(95%CI)
Educational status				
No formal education	18(26.5%)	50(73.5%)	1.401(0.75-2.624)	1.708(0.82, 3.57)
Primary education	70(41.9%)	97(58.1%)	0.699 (0.44-1.09)	0.63(0.37-1.054)
Secondary education	33(20.4%)	129(79.6%)	1.97(1.19-3.25)	**1.96(1.112-3.45)**
Above secondary	56(33.5%)	111(66.5%)	1	**1**
Wanted status Of pregnancy				
Wanted	154(29.6%)	364(70.4%)	2.474(1.32-4.63)	**2.340(1.16-4.69)**
Unwanted	23(53.5%)	20(46.5%)	1	**1**
Time of admission				
6 am – 12 am	26(20.2%)	103(79.8)	2.483(1.413 -4.36)	**2.142(1.16-3.94)**
0 pm – 6 pm	58(33.3%)	116(66.7%)	1.253(0.77-2.029)	1.165(0.68-1.97)
6.01 pm –12 pm	46(33.1%)	93(66.9%)	1.267(0.76-2.105)	1.156(0.66-1.99)
0 am – 6 am	47(38.5%)	75(61.5%)	1	**1**
Type of transport				
Ambulance	28(35.9%)	50(64.1%)	0.601(0.33-1.09)	0.76(0.39-1.483)
Public transport	86(30.4%)	197(69.6%)	0.77(0.487-1.22)	0.856(0.51-1.42)
Private 28(43.8%)		36(56.3%)	0.433(0.23-0.80)	**0.393(0.19, 0.7)**
On foot	35(25.2%)	104(74.8%)	1	**1**
Time of waiting				
<15 minute	102(26.6%)	288(73.8%)	1	**1**
15 -30 minute	63(43.4%)	82(56.6%)	0.461(0.31-0.68)	**0.43(0.27, 0.66)**
30-1hr	7(43.8%)	9(56.2%)	0.455(0.17-1.25)	0.66(0.20, 2.20)
>1hr	5(38.5%)	8(61.5%)	0.567(0.11-1.77)	0.64(0.185, 2.23)
Maternal out come				
Without Complication	170(30.8%)	382(69.2%)	3.146(0.98-10.0)	**4.11(1.05-16.2)**
With Complication	7 (58.3%)	5(41.7%)	1	**1**

5.7 Factors affecting mothers' satisfaction on health care provided to mothers which given by health care provider on delivery service in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

The level of maternal satisfaction related with health care provided to mothers by health care provider (process) was 94.5%. In bivariate analysis, among those factors affecting maternal satisfaction regarding to process ethnicity, religion, marital status, age of mothers, occupation, and parity, gravida, amount of paid for transport, average house hold expenditure , ANC follow up, and time of admission were not strong predictors of maternal satisfaction . Whereas status of the pregnancy, waiting time and breast-feeding support after delivery were factors significantly associating with satisfaction of mothers with delivery services. (Table 5).

In multivariate analysis, none of them was significant; their p values were less than 0.05.(Table 5).

Table: 5 Factors affecting mothers' satisfaction on health care provided to mothers which given by health care provider on delivery service in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

Variables	Maternal Satisfaction			
	Dissatisfied (n, %)	**Satisfied (n, %)**	COR(95%CI)	**AOR(95%CI)**
Time of waiting				
<15minute	14(3.6%)	376(96.4%)	1	1
15 -30 minute	9(6.2%)	136(93.8%)	0.563(0.238,1.33)	1.592(0.232-10.9)
30-1hr	6(37.5%)	10(62.5%)	**0.062(0.02-0.195)**	0.033(0.002,0.47)
>1hr	2(15.4%)	11(84.6%)	0.205(0.041-1.013)	0.342(0.010-12.0)
Wanted status Of pregnancy				
Wanted	21(4%)	500(96%)	**7.215(3.142, 16.5)**	9.486(1.27, 70.6)
Unwanted	10(23.3%)	33(76.7%)	1	1
Breast feeding Support				
Disagree	25(73.5%)	9(26.5%)	**0.004(0.001-.012)**	0.076(0.003-1.83)
Agree	6(1.1)%	524(98.9%)	1	1

5.8 Factors affecting over all mother's satisfaction with delivery services, in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

Socio-demographic, obstetric history, structural and process related factors

The overall level of maternal satisfaction related with delivery services was 89.7%. In bivariate analysis, ethnicity, religion, marital status, age of mothers, occupation, and parity, gravida, type of transport, amount of money paid for transport, ANC follow up, average house hold expenditure, and income had no strong association with maternal satisfaction. Whereas wanted status of the pregnancy, mode of delivery, waiting time, time of admission, sex of provider, breast feeding support and baby care were factors significantly associating with satisfaction of mothers with delivery services. (Table 6).

In multivariate analysis wanted status of pregnancy, time of waiting and time of admission were significant associated with delivery service ($P<0.05$). (Table 6).

Mothers who waited < 15 minute to be seen by health care providers were 6 times more satisfied with the services than those who waited above 30 minute. AOR (95%CI) 6.07(2.1-17.15). Similarly, mothers who waited from 15 to 30 minute to be seen by health care providers were 3 times more satisfied with the services than those who waited above 30 minute. AOR (95%CI) 3.38(1.137-10.1)

Mothers who admitted at labour room from (6am-12am) were 3 times more satisfied than mothers admitted at (0 am-6am). AOR (95%CI) 3.26(1.023-10.382). Similarly, mothers who admitted at labour room from (0 pm-6pm) were 2 times more satisfied than mothers admitted at (0am-6am) (AOR 95%CI: 2.56 (1.07-6.09).

The status of the pregnancy also had significant association with the level of maternal satisfaction; mothers who had planned pregnancy were 3 times more satisfied with services than those mothers who had not (AOR 95% CI: 3.6(1.38-9.38).(Table 6).

Table 6: Factors affecting the overall mother's satisfaction who gave birth in public health centers of Addis Ababa, Ethiopia, March –April 2019 GC.

Variables	Dissatisfied (n, %)	Satisfied (n, %)	COR(95%CI)	AOR(95%CI)
Time of waiting				
<15 minutes	27(6.9%)	363(93.1%)	9.49(4.113-21.8)	**6.079(2.1-17.15)**
15-30 minutes	19(13.1%)	126(86.9%)	4.681(1.93-11.3)	**3.387(1.137-10.1)**
Above 30minute	12(41.4%)	17(58.6%)	**1**	**1**
Time of admission				
(6am-12am)	6(4.7%)	123(95.3%)	3.548(1.358-9.268)	**3.26(1.023-10.382)**
0 pm-6pm	17(9.8%)	157(90.2%)	1.598(0.788-3.244)	**2.563(1.077-6.09)**
6.01pm-12pm	17(12.2%)	122(87.8%)	1.242(0.609-2.53**)**	1.436(0.625-3.29)
(0 am-6am)	35(13.4%)	226(86.6%)	**1**	**1**
Wanted status Of pregnancy				
Wanted	45(8.6%)	476(91.4%)	4.584(2.233-9.408)	**3.608(1.387-9.38)**
Unwanted	13(30.2%)	30(69.8%)	**1**	**1**
Mode of delivery				
Spontaneous vaginal Delivery	42(8.9%)	428(91.1%)	**2.090 (1.120-3.903)**	1.32(0.630-2.77)
Assisted delivery	16(17%	78(83%)	**1**	1
Sex of provider				
Male	20(8.2%)	224(91.8%)	1.50(0.854-2.66)	1.914(0.965-3.79)
Female	38(11.9%)	282 (88.1%)	**1**	1
Baby care and Support				
Disagree	19(51.4%)	18(48.6)	**0.07(0.037-0.156)**	0.27(0.051-1.50)
Agree	39(7.4%)	488(92.6%)	**1**	1
Breast feeding support				
Disagree	17(50%)	17(50%)	**0.084(0.04- 0.176**)	0.5(0.078-3.21)
Agree	41 (7.7%)	489(92.3%)	**1**	1

6. Discussion

In this study, the overall satisfaction of mothers on delivery service was found to be 89.7%.This study revealed that mothers who had planned pregnancy, short waiting time, and admission to health centers at daytime were predictors that had positively association with maternal satisfaction.

In this study, the overall satisfaction of mothers on delivery service was found to be 89.7%, which was in line with the study conducted in Wolaita Zone in selected public health facilities (82.9%) (49) and Hawasa public health hospitals (87.7%) (36). However, this finding was much higher than the study, conducted in Felege Hiwot hospital in Amhara regional state (74.9%) (37), Nairobi (56%) (11) and St Paulo's hospital in Addis Ababa city (19%) (15).

These differences might be due the recently increased number of newly built health centers in Addis Ababa city with better functional structures and decrease workloads of health providers with better care for delivering mothers.

In addition, mother's satisfaction in this study might come as result some actions taken by the Ministry of Health such as increased number of midwives at public health centers and an increase government concern for maternal health service resulted in higher percentage of mother's satisfaction in this study...

In this study mother's satisfaction for services process was 94.5%, which was much higher than the satisfaction on the structural (68.6%). This might be due lack of quality of the infrastructures built at the public health centers.

In this study, educational status of mother was a significance predictor of women's satisfaction on structural factors. Women who attended secondary education were 1.96 times more satisfied than women who attended above secondary education (AOR= 1.96 (95% CI: 1.112-3.45).

This might be more educated mothers had more expectation on the care provided at health centers. Similar result was obtained in Gandhi Hospital delivery mothers who attended above secondary level of education were less likely satisfied than who attended secondary education (16). Additionally, a study in Wolaita, mothers who attended secondary education (9-12) were more satisfied than mothers who attended above secondary education (>12) with the service (49).

Mothers who were reached to the health centers by private transport were less satisfied than who came by walking (AOR= 0.39(95% CI: 0.19, 0.7). This might be with the discomforts of walking while mothers were in labour and it might take also long time of walking to reach the health center high expect with the infrastructures they obtained at the health centers.

Women who had planned pregnancy were more satisfied than women who had unplanned pregnancy. This is possibly connected with better knowledge and awareness of health services (AOR=3.60 with 95% CI: (1.38, 9.38). This was in line with the study at Jimma zone public health facilities and Amhara referral hospital, mothers with planned pregnancy showed increased satisfaction that might be related with better knowledge and awareness of maternal health services provided in health facilities (40).

This study revealed that the delivery mothers' satisfaction time of waiting to be seen by health care provider was significance predictor for mother's satisfaction. Women who were waiting below 30 minute to be seen by health care provider were six times more satisfied than the women who were waiting above 30 minutes. (AOR=6.07with 95% CI: (2.1, 17.15).

This finding supported by a study conducted in Amhara referral hospital that mothers who waited less than l hour were more satisfied than those mothers who waited above 1 hr(13). and study conducted in Nepal found that was longer waiting times increased the likelihood of dissatisfaction (20).

In this study those women who admitted from 6am-12am (AOR= 3.26 with 95% CI:(1.02, 10.38) and 0 pm-6pm (AOR= 2.56 with 95% CI: (1.07, 6.09) were more satisfied than women who admitted from 0 am-6am.This finding was consistent with the study done in Jimma, public health facilities that mothers delivered at day time more satisfied than those who gave birth during night time (40).

7. Strength and Limitations of the study

Strength: The study was done at health center, which had low delivery service.

Limitations: Do the cross sectional nature of the study does not allow the study to establish causal relationship between the different independent variables and the outcome variable as well as this study was in health facility setting where postnatal mothers could not freely express their satisfaction regarding the service they have received.

Conclusion: The overall mothers' satisfaction with delivery service was good. Educational status, wanted status of pregnancy, time of admission from structural was significance predictor of maternal satisfaction. Wanted status of pregnancy, time of admission and time of waiting significance predictor for overall maternal satisfaction.

Unavailability of showering and poor pain management during delivery were major sources of dissatisfaction; whereas provider interpersonal communication with mothers and assuring of privacy were major sources of satisfaction. Therefore, there is still much work needed in health improving facility infrastructure, making all pregnancies be planned, shortening mothers waiting time and services provided at night for mothers who admitted at nighttime.

Recommendation:

- Improve health care provider salary and approve their incentive to enhance health care provider motivation on working area, and to shorten the waiting time of mother.
- Provide good service during nighttime by mixing the type of health professionals as well as improve night duty payment for health care provider.
- Strengthening health promotion and behavioral change activity towards prevention of unwanted or unplanned pregnancy.
- Qualitative study such as observational research method should be carried out to assess the qualities of care given in the facilities.

8. REFERENCE

1. Weltgesundheitsorganisation, editor. Monitoring health for the SDGs: sustainable development goals. Geneva: World Health Organization; 2017. 103 p. (World health statistics).

2. WHO, UNICEF, UNFPA, World Bank Group, United Nations Population Division. Trends in Maternal Mortality: 1990 to 2015. World Health Organization; 2015.

3. World Bank. Federal Democratic Republic of Ethiopia: Evaluation of MDGs Specific Purpose Grant to Regions [Internet]. World Bank; 2016 [cited 2018 Aug 13]. Available from: http://elibrary.worldbank.org/doi/book/10.1596/24957

4. FDRE ministrof health,UNICEF,EUROPEAN UNION. Ethiopia - Maternal Health Brief;Trend of progress towards MDG 5 in Ethiopia8. Unite for asafe delivery in Ethiopia; 2012.

5. FDRE. The 2017 Voluntary National Reviews on SDGs of Ethiopia: Government Commitments, National Ownership and PerformanceTrends. Addis Ababa, Ethiopia: National Plan Commission; 2017.

6. FDRE. Ethiopia 2017 Voluntary National Review on SDGs;Government Commitments, National Ownership and Performance Trends. Addis Ababa, Ethiopia: National Planning Commission; 2017.

7. WHO, UNICEF, UNFPA, World Bank, United Nations Population Division. Trends in Maternal Mortality: 1990 to 2013. World Health Organization; 2013.

8. Mohammed K. Maternal satisfaction regarding quality of nursing care during labor and delivery in Sulaimani teaching hospital. International Journal of Nursing and Midwifery. 2015;10.

9. Ashraf M, Ashraf F, Rahman A, Khan R. Assessing women's satisfaction level with maternity services: Evidence from Pakistan. 2012;4(11):11.

10. South Australian Patient Evaluation of Health Services (PEHS). Maternity Services in South Australian Public Hospitals: Patient Satisfaction Survey Report 2007. population research and out studies unit. 2007 Mar;

11. Bazant ES, Koenig MA. Women's satisfaction with delivery care in Nairobi's informal settlements. International Journal for Quality in Health Care. 2009 Apr 1;21(2):79–86.

12. Lumadi TG. PATIENTS' SATISFACTION WITH MIDWIFERY SERVICES AT A REGIONAL HOSPITAL AND ITS REFERRING CLINICS IN THE LIMPOPO PROVINCE OF SOUTH AFRICA. Africa Journal of Nursing and Midwifery. 2011;14–28.

13. Tayelgn A, Zegeye DT, Kebede Y. Mothers' satisfaction with referral hospital delivery service in Amhara Region, Ethiopia. BMC Pregnancy and Childbirth. 2011 Dec;11(1).

14. Mesfin Tafa RA. Maternal Satisfaction with the Delivery Services in Assela Hospital, Arsi Zone, Oromia Region, Ethiopia,2013. Gynecology & Obstetrics. 2014;4(12).

15. Demas T, Getinet T, Bekele D, Gishu T, Birara M, Abeje Y. Women's satisfaction with intrapartum care in St Paul's Hospital Millennium Medical College Addis Ababa Ethiopia: a cross sectional study. BMC Pregnancy and Childbirth [Internet]. 2017 Dec [cited 2018 Aug 13];17(1). Available from: http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-017-1428-z

16. Melese T, Gebrehiwot Y, Bisetegne D, Habte D. Assessment of client satisfaction in labor and delivery services at a maternity referral hospital in Ethiopia. Pan African Medical Journal [Internet]. 2014 [cited 2018 Aug 13];17. Available from: http://www.panafrican-med-journal.com/content/article/17/76/full/

17. Srivastava A, Avan BI, Rajbangshi P, Bhattacharyya S. Determinants of women's satisfaction with maternal health care: a review of literature from developing countries. BMC Pregnancy and Childbirth [Internet]. 2015 Dec [cited 2018 Aug 13];15(1). Available from: http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-015-0525-0

18. The Federal Democratic Republic of Ethiopia Ministry of Health. HSTP Health Sector Transformation Plan 2015/16 - 2019/20 (2008-2012 EFY). Ethiopia; 2015.

19. Federal Ministry of Health, Health Services Quality Directorate. Hospital Performance Monitoring and Improvement Manual. second. Addis Ababa, Ethiopia; 2017.

20. Mehata S, Paudel YR, Dariang M, Aryal KK, Paudel S, Mehta R, et al. Factors determining satisfaction among facility-based maternity clients in Nepal. BMC Pregnancy and Childbirth [Internet]. 2017 Dec [cited 2018 Aug 13];17(1). Available from: http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-017-1532-0

21. Kebede B, Gebeyehu A, Andargie G. Use of previous maternal health services has a limited role in reattendance for skilled institutional delivery: cross-sectional survey in Northwest Ethiopia. International Journal of Women's Health. 2013 Feb;79.

22. Gebrekidan K, Worku A. Factors associated with late ANC initiation among pregnant women in select public health centers of Addis Ababa, Ethiopia: unmatched case–control study design. Pragmatic and Observational Research. 2017 Oct;Volume 8:223–30.

23. WHO. PRIMARY HEALTH CARE SYSTEMS (PRIMASYS) ;Case study from Ethiopia. Geneva: Alliance health policy and system research; 2017.

24. Addis Ababa health burea. Health managment information system 2010 report. 2010.

25. Hospital liaizon officer. Hospital liaizon report. 2010.

26. JW S. http://www.e-affect.com/aaahc-email/email-5-15/email.html. :4.

27. Marama T, Bayu H, Merga M, Binu W. Patient Satisfaction and Associated Factors among Clients Admitted to Obstetrics and Gynecology Wards of Public Hospitals in Mekelle Town, Ethiopia: An Institution-Based Cross-Sectional Study. Obstetrics and Gynecology International. 2018;2018:1–9.

28. Al-Abri R, Al-Balushi A. Patient Satisfaction Survey as a Tool Towards Quality Improvement. Oman Medical Journal. 2014 Jan 15;29(1):3–7.

29. Murante AM. Patient satisfaction: a strategic tool for health services management. :98.

30. Fathalla MF. A framework for the evaluation of quality of care in maternity services. southampton: universty of southampton; 2000.

31. Caitlin Morris, Senior Policy Analyst, Families USA Kim Bailey, Director of Research, Families USA. Measuring Health Care Quality: An Overview of Quality Measures. New York: families usa the voce of health care consumer; 2014.

32. Oikawa M, Sonko A, Faye EO, Ndiaye P, Diadhiou M, Kondo M. Assessment of Maternal Satisfaction with Facility-based Childbirth Care in the Rural Region of Tambacouda, Senegal. :10.

33. Matejić B, Milićević MŠ, Vasić V, Djikanović B. Maternal satisfaction with organized perinatal care in Serbian public hospitals. BMC Pregnancy and Childbirth. 2014 Dec;14(1).

34. The WHARC WHO FMOH MNCH Implementation Research Study Team, Okonofua F, Ogu R, Agholor K, Okike O, Abdus-salam R, et al. Qualitative assessment of women's satisfaction with maternal health care in referral hospitals in Nigeria. Reproductive Health. 2017 Dec;14(1).

35. Bitew K, Ayichiluhm M, Yimam K. Maternal Satisfaction on Delivery Service and Its Associated Factors among Mothers Who Gave Birth in Public Health Facilities of Debre Markos Town, Northwest Ethiopia. BioMed Research International. 2015;2015:1–6.

36. Agumasie M, Yohannes Z, Teferi Abegaz T x. Maternal Satisfaction and Associated Factors on Delivery Care Service in Hawassa City Public Hospitals, South Ethiopia. Gynecology & Obstetrics [Internet]. 2018 [cited 2018 Aug 13];08(05). Available from: https://www.omicsonline.org/open-access/maternal-satisfaction-and-associated-factors-on-delivery-care-service-in-hawassa-city-public-hospitals-south-ethiopia-2161-0932-1000473-102562.html

37. Mekonnen ME, Yalew WA, Anteneh ZA. Women's satisfaction with childbirth care in Felege Hiwot Referral Hospital, Bahir Dar city, Northwest Ethiopia, 2014: cross sectional study. BMC Research Notes. 2015 Dec;8(1).

38. Changee F, Irajpour A, Simbar M, Akbari S. Client satisfaction of maternity care in Lorestan province Iran. Iranian Journal of Nursing and Midwifery Research. 2015;20(3):7.

39. Asres GD. Satisfaction and Associated Factors among Mothers Delivered at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia: A cross Sectional Study. 2018;9.

40. Haile Tadesse B. Mothers' Satisfaction with Institutional Delivery Service in Public Health Facilities of Omo Nada District, Jimma Zone. Clinical Medicine Research. 2017;6(1):23.

41. Gitobu CM, Gichangi PB, Mwanda WO. Satisfaction with Delivery Services Offered under the Free Maternal Healthcare Policy in Kenyan Public Health Facilities. Journal of Environmental and Public Health. 2018;2018:1–9.

42. Murphy EM. Best Practices in Client-Provider Interactions in Reproductive Health Services: A Review of the Literature. :8.

43. Jons Hopkins universty. Respecfull maternity care. Jhpiego; 2015.

44. Tesfaye R, Worku A, Godana W, Lindtjorn B. Client Satisfaction with Delivery Care Service and Associated Factors in the Public Health Facilities of Gamo Gofa Zone, Southwest Ethiopia: *In a Resource Limited Setting*. Obstetrics and Gynecology International. 2016;2016:1–7.

45. PATH. Ensuring Privacy and Confidentiality in Reproductive Health Services: A Training Module and Guide for Service Providers. Washington, D.C.: PATH; 2003.

46. http://www.pregnancybirthbaby.org.au/. Pain relief during labour and birth.docx.

47. Ioannidou F, Konstantikaki V. Empathy and emotional intelligence: What is it really about? International Journal of Caring Sciences. 2008 Dec;1(3):118–123.

48. Hasan A. PATIENT SATISFACTION WITH MATERNAL AND CHILD HEALTH SERVICES AMONG MOTHERS ATTENDING THE MATERNAL AND CHILD HEALTH TRAINING INSTITUTE IN DHAKA, BANGLADESH. :94.

49. Yohannes B, Tarekegn M, Paulos W. Mothers‟ Utilization Of Antenatal Care And Their Satisfaction With Delivery Services In Selected Public Health Facilities Of Wolaita Zone, Southern Ethiopia: 2013;2(2):12.

50. Bacci A, Becker, G, Daniele M, Lazzerini M, Piccoli M, Stillo P. Hospital care for mothers and newborn babies: quality assessment and improvement tool; A systematic standard based participatory approach. Second Edition. EUROPE: WHO; 2014.

51. IBP. SAMPLE QUESTIONNAIRE ON MATERNAL HEALTH SERVICES. INTERNATIONAL BUDGET PARTNERSHIP OPEN Budgets, Transform lives;

9. ANNEX

Annex I

English version information sheet and consent form.

Good morning/ afternoon?

My name is _____.I am working as a data collector on behalf of woinshet Mehari who is currently a postgraduate

Student on public health at Addis Ababa University, College of Health Sciences. The objective of this study is to assess the level of mothers' satisfaction with delivery services and factors affecting the level of mothers' satisfaction at public health centers in Addis Ababa city.

This interview might take 20 - 30 minutes. Your name will not be written anywhere in the form and all the information you give us is confidential except for the purposes of this study and it will never be disclosed for the third parity. In addition, I would like to inform you that by participating in this study, you will get no short term or long term risk or benefit. I also would like to inform you that you have a full right to withdraw from the study or to stop the interview any time or to skip any question that you do not want to answer. Your cooperation and willingness for the interview is very helpful in identifying the problem related to the issue.

So do you agree to participate in this study?

Respondent agrees to be interviewed go to the next part.

Respondent does not agree to be interviewed stop interview.

Thank you in advance for your cooperation

Data collectors Name_____ sign: _____

If you have any question or doubt, you can contact as with the address below. Name of the principal Investigator: woinshet Mehari

Mobile: +251 0933225741. E-mail: woinsh27@gmail.com

Annex II

English version questionnaire

Questions on the assessment of mother's satisfaction with the quality delivery services given in the selected public health centers of Addis Ababa, Ethiopia.

Instruction; - Circle the response in the response column that best matches with the answer of the respondent.

01. Questionnaire identification number----------

02. Interviewer code ---------- and name ----------

03. Date of interview ---------- 04. Health center code ----------

Part One: Socio – Demographic Characteristic

S. No	Questions	Respond options	Code
101	What is the Age of mother's	1. _____years	|___|
102	Marital status	1. Single 2. Married 3. Divorced 1. 4. Widowed	|___|
103	Religion	1. Orthodox 2. Protestant 3. Muslim 4. Catholic 5. Others (specify)_	|___|
104	What is the educational status of mother's	1. No education 2. primary education 3. secondary education 4. Above secondary	|___|
105	Ethnicity	1.Oromo 2. Amhara 3. Tigray 4. Gurage 5. Other (specify)_____ _____	|___|
106	What is the Occupation status of household head	1. Governmental employee 2. Merchant 3. Farmer 4. House wife 5. Student 1. 6. Other (specify	

107	How much monthly income?	_____Birr	|___|
108	How much monthly expenditure?	_____Birr	

Part 2: obstetric history

S. NO	Question	Response options	Code
201	Gravid(pregnancies)	(number) _____	|___|
202	Parity	(number) _____	|___|
203	Was your pregnancy wanted or un wanted?	1. Wanted 2. Unwanted	|___|
204	What was Mode of your delivery?	1. Spontaneous vaginal Delivery (SVD) 2. Assisted delivery 3. Caesarian section(CS)	|___|
205	Do you have ANC follow up?	1. Yes 2. No	|___|
206	Do you have previous health Facility delivery use experience.	1. Yes 2. No	|___|
207	When was the time of admission?	1. 6 am – 12 am 2. 0 pm – 6 pm 3. 6.01 pm – 12 pm 4. 0am – 6 am	|___|
208	What type of transport type use to reach the facility?	1.Ambulance 2.Public transport 3.Private 4.On foot	|___|
209	How much did you pay for transport?	---------- birr	|___|
210	What was Maternal outcome?	1. Normal 2. With complication	
211	What was Fetal outcome?	1.Live birth 2, Still birth 3, Neonatal death 4, Others --- specify	

Part – three: Questions on respondents' satisfaction

A) Health facility related:

S. NO	Question	Response options	Code
301	How much are you satisfied with the health center information service at entrance?(location of delivery rom)	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
302	How much are you satisfied with the comfort of entrance to labor and delivery room starting from the gate?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
303	Were drugs and supplies ordered to you?	1. Yes 2. No	|___|
304	How much are you satisfied with the Availability of drugs and supplies?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
305	How satisfied are you with sufficiency of beds for laboring and delivering mothers?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
306	How satisfied are you with sufficiency of room spaces for laboring and delivering mothers?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
307	How satisfied are you with the availability of the requested laboratory investigations?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
308	How much are you satisfied with the availability of the toilets?	1 Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
309	How much are you satisfied with the Cleanliness of the toilets?	1. Very dissatisfied 2. Dissatisfied	

		3. Neutral 4. Satisfied 5. Very satisfied	
310	How much are you satisfied with the availability of shower rooms?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
311	How satisfied are you with the cleanness of shower rooms?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
312	How satisfied are you with the availability of hand washing area?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
313	How satisfied are you with the cleanness of hand washing area?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
314	How satisfied are you with the overall cleanness of labor and delivery room?	1.Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied	|___|
315	How satisfied are you with the availability of waiting area for clients and their companions?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|
316	Have you had to pay for any services or products during your stay?(including card ,laboratory, drug and medical supplies)	1.yes 2. No	___|
317	How much satisfied are you with the cost of the service?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	___|

B) Care provider related:

S. NO	Question	Response options	Code
401	How long did you wait before seeing a Health care provider?	1. <15 minute 2. 15-30 minute 3. 30-1 hour 4. > 1 hour	|___|
402	How much are you satisfied with the time spent waiting to be seen by the Health care provider?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
403	How much are you satisfied with the health care providers introduced themselves to you during delivery?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
404	Health providers asked permission before applying any procedures and examination.	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
405	How much are you satisfied with health worker explained the labour progress to you by using your local and clear language?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
406	How much are you satisfied with health workers verbally encouraged praised and reassured during the time of labour?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
407	How satisfied are you with the adequacy of time health workers spent for examination? .	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	|___|
408	How satisfied are you with the competency and confidence of the health care providers with their work?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied	|___|

		5. Very satisfied	
409	Were there measures taken to assure privacy during physical examinations and delivery? For example, a private room, Curtained or screened area, etc.	1.yes 2.No	|___|
410	How much are you satisfied with the measures taken to assure privacy during Your examinations?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
411	How satisfied are you with the overall care and support during the time of labor and delivery?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
412	How satisfied are you with the measures taken to assure confidentiality about Your health problem?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
413	How much are you satisfied by welcoming starting from the garden?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
414	How much are you satisfied with the care providers listen and answer all my questions during delivery?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
415	How much are you satisfied with pain management during labor and delivery?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
416	Do they respect your preferred position during labor and delivery? How much are you satisfied with your delivery position?	1.Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
417	How much are you satisfied with allowed to have your families on your side delivery during labor and delivery?	1.Very dissatisfied 2. Dissatisfied 3. Neutral	

		4. Satisfied 5. Very satisfied	
418	What was the sex of the professional Who attended your delivery?	1.Male 2.Female	
419	How much are you satisfied with the profession of the health care provider who attended your labour and delivery?	1.doctor 2.health office 3. midwife 4.student	
420	Was there any health problem on your newborn baby?	1.Yes 2. No	
421	Were you able to ask any question about your baby at any time?	1, Yes 2, No	
422	Was your baby received enough care and support?	1. Strongly disagree 2. agree 3. Neutral 4. disagree 5. Strongly agree	
423	How much are you satisfied with received enough support from the staff in breastfeeding your baby immediately after birth and how to care for your baby delivery?	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
424	Would you seek delivery service in the same facility next time if you get pregnant?	1.Yes 2, No	
425	Would you recommend this facility to your family and other relatives?	1.Yes 2, No	

ANNEX III

AMHARIC VERSION INFORMATION SHEET AND CONSENT FORM

የመረጃ መስጫ እና ስምምነት ቅጽ (ውል)

የጥናቱባለቤት፣

የጥናቱርእስ፡በአዲስ አባባ ከተማ አስተዳደር ስር በሚገኙ ጤና ጣቢያዎች በሚሰጡ የእናቶች ወሊድ አገልግሎቶች ላይ የእናቶች የእርካታ መጠን ጥናቱን የሚያሰራው፡- አዲስአበባ ዩኒቨርስቲ

ጤናይስጥልኝ! ስሜ ----------ይባላል፡፡እኔየመረጃ ሰብሳቢስሆን፣ይህንን መረጃ የምሰበስበው ወይንሸት መሃሪ (በአዲስ አበባ ዩኒቨርስቲ የጤና ሳይንስ ኮሌጅ ፣ትምህርት ክፍል ፣የድህረ ምረቃ ተማሪ) የማስተርስ ትምህርታቸውን ለማጠናቀቅ የመመረቂያ ጽሁፋቸውን ለማዘጋጀት እንዲረዳቸው ሲሆን የጥናቱ አላማ በጤና ጣቢያዎቹ በሚሰጡት የወሊድ አገልግሎት ላይ የእናቶችን የእርካታ መጠን መመዘን እና በአገልግሎቱ ላይ የሚታዩ ችግሮችን መለየት ነው፡፡ጥያቄዎቹን ለመጠየቅ 20 እስከ 30 ደቂቃ ሊፈጅ ይችላል ፡፡ በጥናቱ ላይ የእርሶ ስምና አድራሻ አይጠቀስም፡፡ የሚሰጡትም መረጃ ከዚህ ጥናት አላማ ውጭ ለሌላ አካል ተላልፎ አይሰጥም ሚስጥራዊነቱም የተጠበቀነው፡፡ በዚህ ጥናት ላይ በመሳተፍት የሚደርስቦት ጉዳት ወይም የተለየ ጥቅምአይ ኖርም፡፡ በዚህ ጥናት መሳተፍ ፈቃደኛ ካልሆኑ ፣በመጠይቁ መሀል ማቋረጥ ከፈለጉ ወይንም መመለስ የማይፈልጉት ጥያቄ ሲኖር የማቋዋረጥ ሙሉ መብት እንዳሎት ልገልጽሎት እወዳለሁ፡፡ በጥናቱ ላይ ለመሳተፍ የእርሶ ትብብር እና ፈቃደኝነት በጉዳዩ ላይ የሚነሱ ችግሮችን ለመለየት እጅግ ጠቃሚ ስለሆነ በጥናቱ ላይ በፍቃደኝነት እንዲሳተፉ በትህትና እንጠይቃለን፡፡ ከላይ በተሰጠኝ መረጃ መሰረት በዚህ ጥናት ላይ ለመሳተፍ ፍቃደኛነኝ፡፡

ፊርማ----------መጠየቅ የሚፈልጉት ወይም ግልጽ ያልሆነ ነገር ካለ ከታች በተጠቀሰው አድራሻ ማግኘትይችላሉ፡፡የጥናትአድራጊው ስም፡- ወይንሸት መሃሪ ስልክ ቁጥር- +251 — 0933— 22 — 5741**ኢ-ሜይል** - WOINSH27@GMAIL.COM

.

ANNEX IV

AMHARIC VERSION QUESTIONNAIRE

በአዲስ አባባ ከተማ አስተዳደ ር ስር በሚገኙ ጤና ጣቢያዎች ለእናቶች በሚሰጡ የወሊድ አገልግሎቶች ላይ የእናቶችን ዕርካታ መጠን ለመመዘን እና የእርካታ መጠን ላይ ተጽዕኖ የሚያሳድሩ ነገሮችን ለመለየት የተዘጋጀ መጠይቅ፡፡

መመሪያ፡- በመልስ መስጫው ከተቀመጠው ምርጫዎች ውስጥ ከእርስዎ መልስ ጋር የሚመሳሰለውን ያክብቡ

01. **የመጠይቅ መለያ ቁጥር**----------

02. **የመረጃ ሰብሳቢው ኮድ**---------- **ስም** ----------

03. **ቃለ መጠይቅ የተደረገበት ቀን**---------- 04.**የጤና ጣቢያው ኮድ**----------

ክፍል 1፡የተጠያቂዋ ማህበራዊ እና ዲሞግራፊያዊ ነባራዊ ሁኔታ

ተራ.ቁ	**ጥያቄ**	***መልስ***	***ማለፊያ***
101	**የእናትዮዋ እድሜ ስንትነው**		|___|
10\0+	**የጋብቻ ሁኔታ**	1.**ያላገባች** 2.**ያገባች** 3.**የፈታች** 4.**የሞተባት**	|___|
103	**ሀይማኖት**	1. **ኦርቶዶክስ** 2. **ፕሮቴስታንት** 3. **ሙስሊም** 4. **ካቶሊክ** 5. **ሌላካለይጥቀሱ**	|___|
104	**የትምህር ትደረጃ**	1 **ያልተማረች** 2.**የመጀመሪያ ደረጃ ትምህርት** 3.**ሁለተኛደረጃትምህርት** 4.**ከ ሁለተኛ ደረጃበላይ**	|___|
105	**ብሄር**	1. **ኦሮሞ** 2. **አማራ** 3. **ትግራይ** 4. **ጉራጌ** 5. **ሌላካለይጥቀሱ**_____	|___|
106	***ሥራ***	1. **የመንግስት ሰራተኛ** 2. **ነጋዴ** 3. **ገበሬ** 4. **የቤት እመቤት**	

		5. ተማሪ 6. ሌላ ካለ ይጥቀሱ_____	
107	አማካኝ ወርሃዊ አጠቃላይ የቤት ገቢ ብር ስንት ነው?	---------- ብር	|___|
108	አማካኝ ወርሃዊ አጠቃላይ የቤት ወጭ ብር ስንት ነው?	---------- ብር	

.

ክፍል 2፤ የ ወሊድሁኔታ

ተራ.ቁ.	ጥያቄ	መልስ	ማለፊያ
201	ስንተኛ እርግዝናሽ ነው?	(በቁጥር) _____	|___|
202	ስንት ልጅ አለሽ?	(በቁጥር) _____	|___|
203	የእርግዝናሽ ሁኔታ የታቀደነው ወይም ያልታቀደ?	1. የታቀደ/ የሚፈለግ 2. ያልታቀደ/የማይፈለግ	
204	የወለድሽበት መንገድ በምን ነበር?	1. በማህጸን 2. በመሣሪያበመታገዝ 3. በቀዶጥገና	|___|
205	የእርግዝና ክትትል ነበረሽ?	1. አዎ 2.አልነበረኝም	|___|
206	ከዚህ በፊት በጤና ተቋም ወልደሽ ታውቂያለሽ?	1. አዎ 2.አልነበረኝም	|___|
207	እዚህ የደረስሽበት ሰአት ?	1. ከጠዋት 12 - ቀን 6 ሰአት 2.ከቀኑ 6 — ምሽት 12 ሰአት 3.ከምሽት 12 ሰአት - ሌሊት 6 ሰአት 4. ከሌሊቱ 6 ሰአት - ጠዋት 12 ሰአት	|___|
208	ጤና ተቋም የመጡበት የትራንስፖርት አይነት?	1.አንቡላንስ 2.የህዝብትራንስፖርት 3.የግል 4.በእግር	|___|
209	ጤና ተቋም ለመድረስ ምን ያህል ለትራንፖርት ወጭ አወጣሽ?	---------- ብር	
210	ከወሊድ በኋላ የነበረሽ የጤና ሁኔታ እንዴት ነበር?	1. ጤናማ 2.. በጤናዬ ላይ ችግር ነበር	

211	የልጅሽ የጤና ሁኔታስ እንዴት ነበር?	1. በህይወት የተወለደ 2. ሞቶ የተወለደ 3. ከተወለደ በኃላ የሞተ 4. ሌላ ካለ ይገለጽ----------	

ክፍል 3፤ - አጠቃላይ የጤና ጣቢያውን አቋም/መዋቅርን በተመለከተ

ተራ.ቁ.	ጥያቄ	መልስ	Code
301	ወደ ጤና ጣቢያ ስትገቢ በጤና ጣቢያው መረጃ ማዕከል ምን ያህል ረክተሻል መግቢያ? (ማዋለጃክፍሉንበማሳየት)?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	|___|
302	ወደ ወሊድ ክፍል በሚያስገባው ቦታ ምቹነት ምን ያህልረክተሻል ነው ?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	|___|
303	መድሃኒትና ሌሎች የህክምና መገልገያዎች ታዘልሽ ነበር?	1. አዎ 2. አልነበረም	
304	በጤና ጣቢያው የህክምና መሳሪያዎች እና የመድሐሂት አቅርቦት ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
305	በምጥና ማዋለጃ ክፍሎች አልጋዎች ብዛት ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣምእረክቻለሁ	
306	በምጥና ማዋለጃ ክፍሎች ስፋት ላይ ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	

307	በላቦራቶሪ ምርመራዎች አቅርቦት ላይ ምን ያህልረክተሻል? .	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
308	በመጸዳጃ ቤቶች አቅርቦት ላይ ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
309	በመጸዳጃ ቤቶች ጽዳት ላይ ምን ያህልረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
310	በሻወር ቤቶች አቅርቦት ላይ ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
311	በሻወር ቤቶች ጽዳት ላይ ምን ያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
312	በእጅ መታጠቢያ አቅርቦት ላይ ምንያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	|___|
313	በእጅመታጠቢያጽዳትላይምንያህልረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
314	በአጠቃላይ በምጥ እና በማዋለጃ ክፍሉ ጽዳት ምን ያህልረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	|___|
315	ለታካሚዎች እና ቤተሰቦች መጠባበቂያ	1. በጣም አልረካሁም	|___|

	ቦታዎች አቅርቦት ላይ ምን ያህል ረክተሻል?	2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
316	ለግልጋሎቶች ወይም ለህክምና መሳሪያዎች ክፍያ ከፍለሻል? (ካረድን፤ላቦራቶሪን፤መድሃኒትና የህክምና ግብዓትንጨምሮ)	1. አዎ 2. አልከፈልኩም	
317	በከፈልሽው ክፍያ ምን ያህልረክተሻ?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	

4) በሐኪትና ውጤቶች ላይ

S. NO	ጥያቄ	መልስ	Code
401	በጤና ባለሙያዎች እርዳታ ለማግኘት ምን ያህል ጠበቅሽ?	1. < 15 ደቂቃ 2. 15-30 ደቂቃ 3. 30 ደቂቃ - 1 ሰአት 4. > 1 ሰአት	|___|
402	ጤና ባለሙያዎች ለመታየት በጠበቅሽው ሰአት ላይ የእርካታሽ መጠን?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	|___|
403	የጤና ባለሙያዎች ራሳቸውን አስተዋውቀውሻል? በዚህምንያህልረክተሻል ?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
404	ጤና ባለሙያዎች ምርመራ እና ህክምና ከማድረጋቸው በፊት ፈቃደኛነትሽን ጠይቀውሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
405	የጤና ባለሙያዎች ስለምጥሽ ሂደት በሚገባሽ ቋንቋ አስረድተውሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ	

		4. እረክቻለሁ 5. በጣም እረክቻለሁ	
406	የጤና ባለሙያዎች በምጥ እና ወሊድ ሰአት፣እያበረታቱሽ፣እያጽናኑሽ ነበር ያለሽ እርካታ ምን ያህል ነው?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
407	የጤና ባለሙያዎቹ በምርመራ ላይ በሚቆዩበት ሰአት ላይ ያለሽ እርካታ ምን ያህል ነው?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
408	በጤና ባለሙያዎቹ በሚሰሩት ስራ በራስ መተማመን እና ስራው ላይ ባላቸው ብቃትያለሽ እርካታ ምንያህልነው?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
409	በምርመራ እና በወሊድ ወቅት፤ ከሰዎች እይታውጪ እንድትሆኚ የተደረገ ነገር ነበር ለምሳሌ የተለየ ክፍል ወይም በመጋረጃ የተከለለ ስፍራ	1. አዎ 2. አልነበረም	
410	ከሰዎች እይታ ውጭ እንድትሆኝ በተደረገልሽ ነገር ምን ያህልረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
411	በምጥ እና በወሊድ ወቅት በተደረገልሽ ድጋፍ ምን ያህል እረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
412	በጤና ባለሙያዎቹ ሚስጥር ጠባቂነት ምን ያህል ረክተሽል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
413	ከጥበቃ ጀምሮ የጤና ጣቢያው አቀባበል ምን ይመስላል.?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ	

		4. እረክቻለሁ 5. በጣም እረክቻለሁ	
414	ስለምትጠይቂው ማንኛውንም ጥያቄ በተገቢው መንገድ ያዳምጡሻል እና ተገቢውን ምላሽ ይሰጡሻል ? በዚህ ምን ያህል ረክተሻል	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
415	በምጥሽ ጊዜ ህመሙን ለመቀነስ በተደረገልሽ ነገር ምንያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
416	በምጥሽ እና በምትወልጅበት ጊዜ አንች የፈለግሽው አቀማመጥ ተከብሮልሻል?	1.አዎ 2.አልነበረም	
417	በምጥሽ ጊዜ ቤተሰቦችህ ከጎንሽ እንዲሆኑ ፍቃደኞች ነበሩ ምንያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
418	ያዋለደሽ የጤና ባለሙያ ማእረግ ምንድን ነው?	1,ዶክተር 2. የጤና መኮንን 3.አዋላጅነርስ 4.ተማሪ	
419	ያዋለደሽ የጤና ባለሙያ ያታው ምንድን ነው?	1. ወንድ 2. ሴት	
420	በተወለደው ህጻን ላይ ያጋጠመ የጤና ችግር ነበር?	1.አዎ 2.አልነበረም	
421	ስለ ልጅሽ ሁኔታ ማንኛውንም ጥያቄ በማንኛውም ሰአት መጠየቅ ችለሽ ነበር ምንያህል ረክተሻል?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
422	ልጅሽ በቂ እንክብካቤ እና ድጋፍ አግኝታለች ምን ያህል ረክተሻል ?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ	

	.	4. እረክቻለሁ 5. በጣም እረክቻለሁ	
423	ልጅሽን ጡት እንድታጠቢ እና እንዴት መንከባከብ እንዳለብሽ ከጤና ባለሙያዎች በቂ ድጋፍ አግኝተሻል ?	1. በጣም አልረካሁም 2. አልረካሁም 3. ገለልተኛ 4. እረክቻለሁ 5. በጣም እረክቻለሁ	
424	ከዚህ በኋላ ለሚፈጠር እርግዝና የወሊድ አገልግሎትለማግኘት እዚህ ጤና ጣቢያ ትመርጫለሽ?	1.አዎ 2.አላደርግም	
425	ይህንን ጤና ጣቢያ ለዘመዶችሽ ወይም ለጓደኞችሽ አገልግሎት እነዲያገኙበት ትመክሪያለሽ?	1.አዎ 2.አላደርግም	

DECLARATION

I the under signed, declare that this is my original work and has not been presented for a degree in this or any other university and all sources of materials used for this thesis have been acknowledged.

Name of principal investigator: Woinshet Mehari

Signature: _____

Place: Addis Ababa

Date of submission: November 11, 2019.

This thesis has been submitted with my approval as my advisor.

Name of advisors: Meselech Assegid (MPH, PHD Candidate)

Signature: _____

Date ----------

Bezawit Ketema (MPH)

Signature: _____

Date: _____

Place: Addis Ababa University

Date of submission: November 11, 2019.

Name of examiner: _____

Signature_____

Date_____

Curriculum Vitea

Woinshet Mehari Alemu

PERSONAL PARTICULARS

- Sex: Female
- Date of Birth: November 29/1986.
- Place of Birth: Gojjam, Ethiopia
- Religion: orthodox
- Marital status: Married
- Nationality : Ethiopian
- E-mail address: woinsh27@gmail.com

Educational Background

MPH student: Addis Ababa University School of health science since Sep. 2016 up to now

BSc (Health Officer): Hawasa University, from October 2006- March., 2009.

Work Experience

- From July 2017 to now: Non-communicable diseases officer at Yeka sub-city health office, Addis Ababa.
- From July 2014 to 2017: Referral Focal Person at Yeka sub city health office, Addis Ababa.
- From January 2011 – June 2014: Head of Health Center at Gozamin Health Centre in East Gojjam.
- From April 2010 – December 2011: Health officer at yebokela health center in Gozamin Woreda, East Gojjam.

Languages

Amharic: Mother tongue

English: Very good (listening, reading, spoken and written)

Training and Certificates

- 2018: I have training on monitoring and evaluation for 3 days by ABH campus and Addis Ababa health bureau.
- 2017: I have training on National compassionate, Respectful and caring Health workforce for 6 days by Addis Ababa health bureau.

- 2016: I have training on health care financing for 2days by Addis Ababa health city administration health bureau.
- 2016: I have training on liaison officer training for 2 days by federal ministry of health.

- 2013: I have training on prevention of mother to child HIV transmission (PMTCT) for 15 days by intra health and regional.

- 2012: I have training on health post resupply system for 2 days by PFSA and Amhara regional bureau.

References

1. Meselech Assegid (Mph, Assistant, Professor, PhD Candidate, Addis Ababa**)**
   Email: meselua@yahoo.com
   Tel. +251-933-225741
2. Bezawit ketema(Mph)
   Addis Ababa University, Mph Department
   E-mail BezawitKetema@gmail.com
   Tel. +251-911-822898
3. Misganaw Tamirat
   Addis Ababa University,
   E-mail: tamratm15@yahoo.com.
   Tel. +251-912-015299

CURRICULUM VITAE

MESELECH ASSEGID RORO

Phone: +251-911-904390, Email:meselua@yahoo.com, P.O.Box 28287 Code 1000

Addis Ababa, Ethiopia

PERSONAL PARTICULARS

- Sex: Female
- Date of Birth: February 08, 1972.
- Place of Birth: Wellega, Ethiopia
- Religion: Christian
- Marital status: Married
- Nationality : Ethiopian

EDUCATION AND EXPEREINCES

a) Education

- August 2015 to present: PhD candidate at University of Bergen, Norway

- Diploma in Sexual and reproductive Health and Rights, Lund University, Malmo, Sweden. Aug.2009-Apr.2010
- Masters in Public Health (MPH), School of public health, Addis Ababa University. (2004 –2006)
- Bachelor of Science in Nursing (BSc), Department of Nursing, Jimma University. (1998-2001)
- Diploma in Midwifery Nursing, Addis Ababa Midwifery School (1996-1997)
- Diploma in Comprehensive Nursing, Nekemte school of Nursing, (1989-1992)
- Ethiopian school leaving certificate exam (ESLCE), Gidda Ayana senior secondary School, Ethiopia. (1985-1989)

b) Experiences

- August 2015 to present: PhD candidate at University of Bergen, Norway

- June 2013 to present : School of public health, Addis Ababa University, College of Health Sciences , Addis Ababa University .Reverence: Dr. Wakgari Deressa: email: deressaw@gmail.com
- 2010 – May 2013: School of public health, Addis Ababa University, Reproductive Health Training and research (Family Health and Wealth Study: A multiyear Family Planning Research and Translation Initiative) coordinator, teaching and consultancy services.References: Dr. Assefa Seme : email: assefaseme @gmail
- May 2007- June 2010: Federal Ministry of Health, Ethiopia, team leader of Maternal and child health team and reproductive health focal person. Reference: Dr. Kebede Worku, email: fmoh.md@ethionet.etDr.Neghist Tesfaye, email: netesfaye@yahoo.com
- Aug 2006 – April 2007 Haramaya University, Haramaya, Ethiopia. Lecturer: Head Department of Nursing .Reference: Dr. Nega Assefa , email: negaassefa@yahoo.com
- Dec. 2003- Sept.2004 Haramaya University, Haramaya, Ethiopia Assistant Lecturer and Coordinator of the Carter Center EPHTI Reproductive Health Project. Reference: Dr. Nega Assefa , email: negaassefa@yahoo.com
- Sept 1997- Aug 1998 Nekemte school of Nursing, Nekemte, Ethiopia. **Instructor** Reference: Mr. Samuel Temesgen Tel: +251-661- 13-98
- June 1992- May 1996Gidda Ayana Health Center, Gidda, Ethiopia Outpatient and MCH department staff. Reference: Mr. Yohannes Haile Michael Tel: +251-917810251

SHORT TERM TRAININGS

- Regional workshop on Monitoring and Evaluation of Family Planning programs for Non M& E professionals, Addis Continental Institute of Public Health and USAID's MEASURE Evaluation, Addis Ababa, Ethiopia, June 2014
- Training of trainers course on reproductive Health Commodity Security, School of Public Health Addis Ababa University, December 2011
- Training of Trainers on IMAI/IMPAC Clinical Course for Integrated PMTCT Services, WHO. Jinja, Uganda, July- Aug. 2009.
- Master Trainer Training on Long term Family Planning Methods: Federal Ministry of Health and Bayer Health Care, Bayer Schering Pharma, Jan 2009
- Strengthening Leadership for the Health of the Nation: USAID, FMoH of Ethiopia, June 2008.
- Training of Trainers Course on Community Based Maternal and Newborn Care: UNICEF and WHO, Addis Ababa, Ethiopia, April-May 2008.
- Data Use and Data Management; Stata software use: Tulane University, Ethiopia November 2007.
- Curriculum and Teaching/Training and Learning Materials (TTLM) Development on Health Sector Occupations: MoE/ECBP and MoH, Aug.-Sept. 2007
- Implanon insertion and removal : by Federal Ministry of Health, March 2007
- Training of Trainers on Adolescent and Youth Reproductive Health Services: Federal MOH, Adama, Ethiopia, December 2007
- Strengthening School Health, Nutrition and HIV Prevention Programmes: Kenya Medical Research Institute, Nairobi, Kenya, July 2007.
- Essential Nutrition actions: The Carter Center (EPHTI) in collaboration with The LINKAGES Project, February. 2004.
- Teaching methodology (Teaching -learning): The Carter Center and USAID, July 2003.
- Treatment of severe malnutrition: UNICEF, June 2003.
- IUCD insertion and removal Norplant insertion and removal: Haramaya University and the Carter Center Reproductive Health Project, January 2002
- Post abortion care and its components: EPHTI Council Carter Center and IPAS Ethiopia, June 2002.
- Refreshment training on TB control: MOH- MSF TB Control Program, May 2002.
- Neonatal resuscitation: Tropical Health Education Trust (THET) in collaboration with Jimma Institute of Health Sciences (JIHS), March 1999.
- Family Planning: Family Guidance Association of Ethiopia (FGAE), April 1997.

RESEARCH EXPERIANCES AND INVITED BOOK CHAPTERS, TEACHING MATERIALS AND MANUALS

RESEARCH

1. Gari T, Loha E, Deressa W, Solomon T, Atsbeha H, Assegid M, et al. Anaemia among children in a drought affected community in south-central Ethiopia. PLoS ONE March 14, 2017; 12(3).

2. Neetu A. John, Assefa Seme, Meselech Assegid Roro, Amy O.Tsui. Understanding the meaning of marital relationship quality among couples in peri-urban Ethiopia, Culture, Health and Sexuality, An International Journal for Research, Intervention and Care,16 Aug 2016
3. Meselech A., Neetu A Seme A., Tsui A. The influence of contraceptive use on women's ability to work and generate income in Peri-urban Ethiopia, 2012
4. Meselech Assegid, Emebet Mohamud., Alemayehu Mekonnen., Seifu Hagos, Mesganaw Fantahun. *Why do women not deliver in health facilities: a qualitative study of the community perspectives in south central Ethiopia?BMC Research Notes 2014,7:556*
5. Mesganaw Fantahun Afework, Seifu Hagos, Meselech Assegid, Alemayehu Mekonen and Saifuddin Ahmed **.***Does a health and demographic surveillance system (HDSS) benefit the local population. The case of maternal Health service utilization in the Butajira Health and Demographic Surveillance System, Ethiopia. Global Health Action 2014, 7:24228*
6. Seifu Hagos, Debebe Shaweno, Meselech Assegid, Alemayehu Mekonen, Mesganaw Fantahun Afework, and Saifuddin Ahmed**.** *Utilization of Institutional Delivery service at Wukro and Butajera districts in the Northern and south central Ethiopia. BMC Pregnancy and Childbirth* 2014, 14:178
7. Mesganaw Fantahun Afework, Kesteberhan Admassu, Alemayehu Mekonen, Seifu Hagos, Meselech Asegid and Saifuddin Ahmed. *Effect of an innovative community based health program on maternal health service utilization in north and south central Ethiopia: a community based cross sectional study.BMC Reproductive Health* 2014, 11:28.
8. Alemayehu Mekonnen, Emebet Mahmoud, Mesganaw Fantahun, Seifu Hagos, Meselech Assegid.
9. *2013. Maternal morbidity in Butajira and Wukro districts, north and south central Ethiopia***.** *Ethiop Med J, Vol. 51, No. 4*
10. Neetu A. Assefa S. Meselech A. Amy T.*Does a Couple's Marital Relationships quality influence their contraceptive use* , Sebeta town , Ethiopia(Submitted)
11. Meselech Assegid. Ruman Abdulrashed. Dereje Abebe .*Awareness creation improves contraceptive use, a qualitative study in Hawassa University 2010.*

12. Situation Analysis of the National PMTCT of HIV/AIDS Programme Response in the Broader RH/MNCH Context in Ethiopia, Federal Ministry of Health, March 2009.
13. National Reproductive Health Commodity Security Situational Analysis in Ethiopia, USAID|DELIVER PROJECT and UNFPA CO Ethiopia, 2009.
14. Assessment of intention and practice of VCT and infant feeding in the context of HIV among lactating mothers in Harar town**.** Oct. 2006

NATIONAL AND INTERNATIONAL PRESENTATIONS

- **3rd**International conference on Family Planning, November 2013. Does a Couple's Marital Relationships quality influence their contraceptive use? , Addis Ababa, Ethiopia

- Ethiopian Public Health Association 21st annual conference, February 2013.Maternal Health Study in Ethiopia: Demand, accessibility, and effectiveness of services, Addis Ababa, Ethiopia

- National Family Planning symposium, November 2012, Awareness creation improves